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There is no Arthropoda (General) in Vol. 52.

P. CHALMERS MITCHELL,

Secretary,

ZOOLOGICAL SOCIETY OF LONDON,

REGENT'S PARK,

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THE
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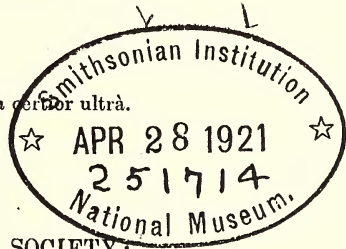
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REGIONAL BUREAUS OF THE INTERNATIONAL CATALOGUE.

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EXPLANATORY.

This Volume is printed in the Divisions enumerated on p. vi.

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 1915 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.

The Literature indexed is mainly that of 1915 but includes entries for earlier years that have been received too late for inclusion in previous volumes.

On account of the present international situation, the Royal Society of London found itself unable to undertake at present any financial responsibility for any volumes of the International Catalogue subsequent to those of the Fourteenth Annual Issue.

Under these circumstances the Zoological Society of London arranged to undertake the issue of the present volume, which is the fifty-second of the Zoological Record, and would have been N. Zoology of the Fifteenth Annual Issue of the International Catalogue. Its preparation has been conducted as closely as possible on the model of the previous volumes prepared jointly by the International Catalogue and the Zoological Society.

It can now be purchased from the Zoological Society of London at the price of £2, either in the binding of the Zoological Record or in series with the International Catalogue.

Volume 53, dealing with the Literature of 1916, is in preparation.

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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. A few memoirs included in the special records are repeated in this division.

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- Adams, C. C.** Guide to the study of animal ecology. New York (Macmillan) 1913 (xii+183 with pls.). 18.3 cm. **2**
- [**Aleksandrov, A.**] Александровъ, А. Краткій отчетъ о поѣздѣ на Черноѣ и Азовское морѣ. [Compte-rendu préliminaire de l'expédition dans la mer Noire et la mer d'Azov.] Petrograd Ann. Mus. zool. Ac. sc. **19** 1914 (1915). **3**
- Alphandéry, P.** Certaines mentions de migrations d'animaux à l'époque des Croisades. Institut français d'anthropologie, comptes rendus des séances. Paris (Mason) **1** 1911-1913 [1914] (73-74). **4**
- Amans.** Sur la recherche des coefficients d'élasticité dans les nervures animales. Montpellier Bul. Acad. sci. let. **1914** (138-145). **5**
- Amans.** Sur quelques formes et mouvements de remiges. Montpellier Bul. Acad. sci. let. **1914** (146-154 av. fig.). **6**
- Anderson, F. M. and Martin, B.** Neocene record in the Temblor basin, California, and Neocene deposits of the San Juan district, San Luis Obispo county. San Francisco Proc. Cal. Acad. Sci. **4** 1914 (15-112) pls. i-x. **7**
- Anthony, R.** La disparition des espèces et l'extinction des phylums. Rev. anthr. Paris **24** 1914 (245-254) **8**
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- Bateson, W.** Address [presidential]. London Rep. Brit. Ass. **84** 1915 (3-38). **12**
- Battendier, A.** Le milieu agent modificateur des espèces. Alger Bul. soc. hist. nat. **5** 1914 (32-36). **13**
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- Becquerel, P.** Latent life: its nature and its relations to certain theories of contemporary biology. Washington D.C. Smithsonian. Inst. Rep. **1914** 1915 (537-551). **16**
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- Bigelow, H. B.** Oceanographic cruise of the U. S. Bureau of fisheries schooner "Grampus," July and August, 1914. Science New York (N. Ser.) **40** 1914 (881-883). **17**
- Birge, E. A. and Juday, C.** A limnological study of the Finger lakes of New York. Washington D.C. Dept. Comm. Bull. U. S. Bur. Fish. **32** (1912) 1914 (525-609) pls. cxi-cxvi. **18**
- Blanchard, R.** Souvenirs d'Allemagne Paris Bul. soc. zool. **40** 1915 (3-26). **19**
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- Bouet, G. et Roubaud, E.** Etudes sur la faune parasitaire de l'Afrique occidentale française. Paris 1914 [une suite de fascicules]. 27 cm. **21**
- Brachet, A.** L'action de l'acide butyrique et le premier temps de la fécondation. Paris C. R. Acad. sci. **159** 1914 (642-644). **22**

- Brachet, A.** Sur l'évolution cyclique du cytoplasme de l'œuf activé. Paris C. R. Acad. sci. **161** 1915 (359-361). **23**
- Brachet, A.** L'évolution d'une science, l'Embryologie. Rev. gén. sci. Paris **26** 1915 (512-517). **24**
- Brachet, A.** Différenciations (spontanées), différenciations (provoquées) et leurs intermédiaires au cours du développement embryonnaire. Paris C. R. soc. biol. **77** 1914 (557-559). **25**
- Butterfield, W. R.** Notes on the local fauna, etc., for the year 1914. Hastings Natural. **2** 1915 (170-177). **26**
- Cabrera, D. A.** Code de nomenclature et règles internationales de la nomenclature zoologique. Insecta Rennes **5** 1915 (24-36 75-80). **27**
- Cameron, A. T.** Contributions to the biochemistry of iodine. 1. The distribution of iodine in plant and animal tissues. J. Biol. Chem. Baltimore **18** 1914 (335-380). **28**
- Cary, L. R.** and **Spaulding, H. M.** Further contributions to the marine fauna of the Louisiana coast. Cameron La. Gulf Biol. Sta. Bull. No. **12** [1909] (1-21). **29**
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- Chaîne, J.** Observations sur l'étude du développement phylogénique des parties molles et des parties dures des organismes. Paris C. R. Acad. Sci. **159** 1914 (371-373). **36**
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- Clarke, J. M.** Tenth report of the Director of the State museum and Science department, including the 67th report of the State museum, the 33rd report of the State geologist, and the Report of the State paleontologist for 1913. Albany Univ. St. N. Y. Mus. Bull. No. **173** 1914 (1-159). **45**
- Coca** *vide* Champy, Chr.
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- Couffon**, O. Contribution à l'étude des faluns de l'Anjou. iv. Miocène supérieur. Bull. Soc. Sci. Angers **44** 1915 (31-56). **50**
- Dall**, W. H. Spencer Fullerton Baird; a biography, including selections from his correspondence with Audubon, Agassiz, Dana, and others. Philadelphia; London (Lippincott) 1915 (xvi+462) 19 pls. 23.5 cm. **51**
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- Dustin**, A. P. La parthénogenèse expérimentale de Delage et son mode d'application. Paris C. R. Acad. sci. **161** 1915 (356-359). **58**
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- Fabiani**, R. Il paleogene. Monografia sui terreni terziari del Veneto. Padova Mem. Ist. geol. Univ. **3** 1915 (3-336) pls. **62**
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- Farran**, G. P. Results of a biological survey of Blacksod Bay, Co. Mayo. Dublin Fish. Ireland Sci. Investig. **1914** iii (1915) (72 pp.) 1 pl. **65**
- Faust**, E. E. *vide* Zeleny, C.
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- Ganong**, W. F. Notes on the natural history and physiography of New Brunswick. Saint John N.B. Bull. Nat. Hist. Soc. New Brunsw. **6** [1913] (17-39 85-109 199-218 321-337 419-451) 8 maps. **66**
- Gerould**, J. H. Species-building by hybridization and mutation. Amer. Nat. New York **48** 1914 (321-338). **67**
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- Godman**, F. D. Biologia Centrali-americana. Introductory vol. London 1915 (viii+149) 2 pls. 8 maps. **70**
- Göthlin**, Gustaf F. Ljusproduktion hos levande organismer. [Lichtproduktion bei lebenden Organismen.] Upsala Läkuef. Förh. N.F. **19** 1913-14 (99-125) pls. iv-v. **71**
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- Gravier**, C. Les recherches océanographiques actuelles. Rev. sci. Paris **52** (2. semestre) 1914 (680-685). **73**

- Gregory, J. W.** The correlation of the Australian marine kainozoic deposits. Evidence of the Echinoids, Bryozoa and some Vertebrates. London Rep. Brit. Ass. **84** 1915 (376). **74**
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- Gudger, E. W.** George Macgrave, a postscript [to author's paper in Pop. Sci. Mon. Vol. 81 1912 pp. 250-274]. Science New York (N. Ser.) **40** 1914 (507-509). **77**
- Guenther, K.** Die lebenden Bewohner der Kanten der insektenfressenden Pflanze *Nepenthes destillatoria* auf Ceylon. (Mit einer Neubeschreibung von A. C. Oudemans). Zs. wiss. Insekt. biol. Berlin-Schöneberg **11** 1915 (241-243). **78**
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- Hadding, A.** Undre och mellersta dicellograptus-skifferna i Skane och å Bornholm. The silurian *Dicellograptus*-schists in Scania (Sweden) and Bornholm. København Medd. Geol. **4** 1915 (361-382). **81**
- Hagedoorn, A. L.** Wetten en regels in genetica en eugenetica. [Gesetze und Regeln in Genetik und Eugenetik.] Amsterdam Werk. Gen. Nat. Geneces. Heelk. (Ser. 2) **8** 1915 (49-60). **82**
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- Henderson, L. J.** The fitness of the environment; an inquiry into the biological significance of the properties of matter. In part delivered as lectures in the Lowell Institute, February, 1913. New York (Macmillan) 1913 (xv+317). 19 cm. **85**
- Herwerden, M. A. van.** Über die Nuklease als Reagens auf die Nukleinsäureverbindungen der Zelle. Anat. Anz. Jena **47** 1914 (312-325). **86**
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II. PROTOZOA

ARRANGED BY

R. W. HAROLD ROW.

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Descriptions of British Freshwater Rhizopoda (*continued*); WAILES British Fresh-water Rhizopoda and Heliozoa 3.

List of Danish Rhizopoda; ELLINGER Vidensk. Meddel. Naturk. Foren. Kjøbenhavn 66 pp. 205-208.

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Amœbaea Classification; CALKINS Trans. 15th Int. Cong. Hyg. Demog. 2 pp. 287-305.

List of parasitic *Amoebae*, alphabetically arranged; CRAWLEY Trans. 15th Internat. Congr. Hyg. Demogr. Washington 2 pp. 179-185.

Compendium of all *Amoebae*, arranged according to their hosts; HASSALL Trans. 15th Int. Cong. Hyg. Demogr. 2 pp. 194-198.

Amoeba clavellinae sp. n., from stomach of *Clavellina lepadiformis*; HUXLEY Science New York (n.s.) 41 p. 26; *A. diplogena*, sp. n., from Danube; BÉLAÏ Arch. Protistenkunde Jena 36 p. 14; *A. meleagridis*, from the turkey, redescribed; SMITH J. Med. Res. Boston 33 pp. 243-270; *A. proteus*, cyst described; CARTER Proc. R. Phys. Soc. Edinburgh 19 pp. 204-212.—Sphaeroplasts described; VONWILLER Anat. Anz. Leipzig 48 pp. 485-488.—*A. sp.* infected with *Spirillae*; GAUDUCHEAU Bul. Soc. Méd.-chirurg. Indochine 5 p. 337.—? *A. sp.* in osteoperiostitis of Inferior Maxilla; LYNCH J. Amer. Med. Assoc. 65 1915 p. 2077.—*Amoeba* and its allies, classification discussed; CRAIG Arch. Internal Med. 13 pp. 737-769.—*Amoeba*, differentiated from allied forms; CRAIG Amer. J. Trop. Dis. Prevent. Med. 1 p. 352.

Castellania, gen. n., for *C. castellanii*, sp. n., from human intestine; PAUL [in] CASTELLANI C.R. 3e Congrès Internat. Biennal à Saigon 1913 p. 115.

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Endamoeba v. *Entamoeba*.

Entamoeba brasiliensis sp. n., from human intestine, Brazil [original reference, not hitherto recorded]; ARAGÃO Brazil-Medico 26 p. 61.—*E. cercopitheci* sp. n., from *Cercopithecus petaurista*, Gold Coast, associated with Spirochaetes and causing dysentery; MACFIE Ann. Trop. Med. London 9 p. 508.—

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stygicus p. 33, *galliveri*, from gut of *Gryllus abbreviatus* p. 33, *illinensis*, from gut of *Ischnoptera pennsylvanica* p. 34, *gracilis*, from larvae of *Elateridae*, p. 32, *tenebrionella*, from larvae of *Tenebrionidae*, p. 32, spp. n.; WATSON J. Parasitol. Urbana Ill. 2.

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(c) Haemosporidia.

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(d) Myxosporidia (including Microsporidia).

Myxosporidia auf Salmoniden von Kamtechatka; ZSCHOKKE und HEITZ Revue Suisse Zool. 22 pp. 195-256.

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[Nothing.]

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(g) Haplosporidia.

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Telosporidium [apparently gen. n.] for unidentifiable telosporidian spores] and *typographus* sp. n., from *Ips typographicus*; FUCHS Zool. Jahrb. Jena Abth. Syst. 38 p. 163.

Toxoplasma ratti sp. n., from lung-smears of *Mus rattus albinus*; SANGIORGI Torino Giorn. Acc. Med. 77 p. 83.—*T. gondii*, structure, life-history and artificial infection of various Muridae; LAVERAN Paris Bul. Soc. path. exot. 8 p. 58.—*T.* spp., re-described; MIGLIANO Os toxoplasmas, Rio de Janeiro.

4. MASTIGOPHORA.

(a) Flagellata.

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Bodo edax, Bau, Teilung und Encystierung; KÜHN Arch. Protistenkunde Jena 35 p. 212.—*B. ovatus* recorded from *Lagopus mutus*; GALLI-VALERIO Centralbl. Bakt. Jena 1 Abth. Originale 75 p. 47.

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Calonympha grassii A. Fôa, from the gut of *Calotermes (Cryptotermes) grassii*, from Iquique, Chile, redescribed; JANICKI Zeit. wiss. Zool. 112 p. 620.

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Chilomitus gen. n., *caviae* sp. n., from caecum of *Cavia* spp., DA FONSECA T.c. p. 139.

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possibility of infection of young by the mother's milk; LANFRANCHI Paris Bul. Soc. path. exot. 8 pp. 438-442.

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(b) **Silicoflagellata.**
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(c) **Dinoflagellata.**

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Dinophysis dens sp. n.; Golfe de Lion; PAVILLARD Paris C. R. soc. biol. 78 p. 122.

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Pachydinium gen. n., for *P. mediterraneum* sp. n., Golfe de Lion; PAVILLARD T.c. p. 121.

Peridinium longicollum, *saltans* spp. n., Golfe de Lion; PAVILLARD T.c. p. 122.

(d) **Rhynchoflagellata.**
(Vacant.)

5. CILIOPHORA (INFUSORIA).

(a) **Ciliata.**

Ciliata of the North Sea and North-Eastern Atlantic; LEEGAARD Nyt. Mag. Naturv. Kristiania 53 pp. 1-37.

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Cycloposthium hydrochoeri p. 140, *incurvum*, *compressum* p. 141, spp. n., from *Hydrochoerus capybara*, Brazil; DA CUNHA Rio de Janeiro Mem. Inst. Oswaldo Cruz 7.

Dictyocysta tiara, probable origin discussed; KOFOID Berkeley Univ. Cal. Pub. Zool. 16 No. 5 p. 63.

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Diplodinium aniracanthum sp. n., from stomach of *Bos taurus*; DA CUNHA Brazil-Medico 28 p. 31.

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III. PORIFERA OR SPONGIDA

ARRANGED BY

R. W. HAROLD ROW.

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†*Stauroderma birneusdorfense, sp. n.*, Jurassic of Switzerland, OPPLIGER, Abhandl. Schweizer. Paläont. Ges. Genève **40** p. 39.

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†*Trochobolus salinensis*, p. 51, *cylindricus*, p. 52, *granulosus*, p. 53, **spp. n.**, Jurassic of Switzerland, OPPLIGER, Abhandl. Schweizer. Paläont. Ges. Genève **40**.

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(ii) ASTROTETRAXONIDA.

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†*Arthaberia*, gen. n., *balinensis*, sp. n., Polish Jurassic, SIEMIRADZKI Wien Beitr. Pal. Geol. ÖstUng 36 p. 190.

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†*Cliona entrerriana*, p. 345, *ameghinoi*, p. 346, Miocene, *americana*, p. 346, *pampeana*, *rovetoi*, p. 347, Quaternary, spp. n., PRINCIPI Roma Rend. Acc. Lincei (ser. 5) 24 I.

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Coppatias investigatrix sp. n., parasitic on *Thoosa investigatoris*, off Ceylon, 703 fms., ANNANDALE T.c. p. 460.

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Geodia littoralis, p. 431, Saldanha Bay, *libera*, p. 423, Saldanha and Table Bays, spp. n., STEPHENS Trans. R. Soc. Edinburgh, 50.

Latrunculia normani sp. n., 50 miles W.N.W. of Eagle I., STEPHENS Dublin Fish. Ireland Sci. Invest. 1914 No. 4 p. 22.

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p. 45; *L. durus*, p. 37, *incrustans*, p. 36, spp. n., Irish Coasts, STEPHENS, Dublin, Fish. Ireland Sci. Invest. 1914 No. 4.

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(iii) SIGMATOTETRAXONIDA.

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Clathria raphidotoxa, sp. n., Saldanha Bay, STEPHENS Trans. R. Soc. Edinburgh 50 p. 445.

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Esperiopsis informis, sp. n., Table Bay, STEPHENS Trans. R. Soc. Edinburgh 50 p. 450; *E. scotiae*, sp. n., Antarctic Ocean TOPSENT Trans. R. Soc. Edinburgh 51 p. 38.

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Hymedesmia parva, sp. n., Saldanha Bay, STEPHENS Trans. R. Soc. Edinburgh 50 p. 441.

Kirkpatrickia gen. n., for *Tedania variolosa* Kirkpatrick and *T. coulmani* Kirkpatrick, TOPSENT Bul. Inst. océan. Monaco No. 252 p. 3.

Leucophloeus styliiferus, sp. n., Saldanha Bay, STEPHENS, Trans. R. Soc. Edinburgh 50 p. 439.

Microciona similis, p. 441, *tenuis*, p. 443, Saldanha Bay, spp. n., STEPHENS T.c.

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Rhabderemia prolifera, sp. n., from dead coral, in galleries of *Cliona viridis*, Bay of Bengal, ANNANDALE Rec. Ind. Mus. 11 p. 464.

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Spongilla nana, sp. n., from fresh and brackish waters, East Coast of India, ANNANDALE Mem. Ind. Mus. 5 p. 32.

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†*Corallidium cylindricum*, sp. n., Polish Jurassic, SIEMIRADZKI T.c. p. 168.

†*Cylindrophyma calloviense*, sp. n., Polish Jurassic, SIEMIRADZKI T.c. p. 165.

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†*Tretotoechus* gen. n., p. 56, *coniformis*, sp. n. p. 57 Jurassic of Switzerland, OPPLIGER Abhandl. Schweizer. Paläont. Ges. Genève 40.

EUCERATOSA.

[Nothing.]

INCERTAE SEDIS.

†*Aulocopium (Aulocopella?) gigantea*, sp. n., Ordovician, Canada, PARKS, (a) Toronto Trans. Canad. Inst. 11 p. 8; (b) Toronto Univ. Studies Geol. Ser. No. 9.

IV. COELENTERATA

ARRANGED BY

F. W. EDWARDS.

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V. ECHINODERMA

ARRANGED BY

H. B. PRESTON.

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(N-8913 m)

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†*Amblypygus merrilli* sp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. **54** p. 165 pls. lxxvi figs. 1a-d; lxxvii figs. 1a-b 2a-b; lxxviii figs. 1a-b.

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†*Ananchytes*, CLARK & TWITCHELL **49**.

†*Anisester souverbiei*, LAMBERT **117**.

†*Astrodapsis tumidus* with *A. t. cierboensis* subspp. n. *A. altus* sp. n. *A. whitneyi* Miocene, California Kew Bull. Geol. Univ. California **8** pp. 370-372 pls. xxxix figs. 5a, b, 7a-c; xl figs. 3a, b, 4; *A.* with *A. arnoldi* sp. n. Cainozoic U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. **54** pp. 197-203, 217 pl. xcv fig. 1; *A.* with *A. whitneyi* Raymond, Tertiary, California figured CLARK Bull. Dept. Geol. Univ. California **8** pl. xlii fig. 1.

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†*Brissoides*, LAMBERT **117**.

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†*Cardiaster* with *C. curtus* sp. n. Mesozoic U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 83-84 pl. xxxvii figs. 1a-h.

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†*Catopygus*, CLARK & TWITCHELL 49.

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†*Chirodota*, CLARK & TWITCHELL 49.

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†*Cidaris* with *C. pratti*, *smithi*, *georgiana* spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 113-116, 158-159, 179 pls. lv fig. 3; lxxii figs. 2a-c, 3, 4; *C.* with *C. shastensis*, *dilleri*, *plumasensis*, *tehamensis* spp. n. Mesozoic U.S.A. CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 23, 31, 44 pl. i figs. 5, 6; iv fig. 3; ix fig. 1.

Clypeaster pallidus West Indies; *europacificus* Tropical Pacific; *oclerus* Mexico spp. n. *C. lampus* nom. n. for *C. latissimus* A. Agassiz, 1883, CLARK Mem. Mus. Comp. Zool. Harvard Coll. 46 pp. 25-42 pl. 141 figs. 1-3; *C.* with *C. joubini* sp. n. W. Indies, LAMBERT Lyon Ann. soc. linn. 51 p. 285.

†*Clypeaster* with *C. Dandolei* sp. n., Miocene Sardinia, LOVISATO Roma. Boll. Comitato geol. 44 pp. 179-193 figs. 1-4 c; *C. pomai*, *canali*, *zambellii*, *scarsellinii*, *tazzolii*, *griolii*, *sperii* spp. n. Miocene Sardinia, LOVISATO Riv. ital. paleont. Perugia 20 pp. 89-90 pl. 1 figs. 1-7d; *C. gippstandicus*, GREGORY 86; *C.* AIRAGHI, 1; CLARK, 41 & 45; CLARK & TWITCHELL, 49; SPENGLER, 199.

†*Clypeus mulleri* ODLING 158.
(N-8913 m)

†*Coelophorus* with *C. aldiehi*, *sloan*, spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 117, 158, 180-181 pls. lxxiii figs. 6a-b, 7a-c; lxxxiv figs 5a-b.

†*Coelopleurus anaudi* LAMBERT 117.

†*Collyrites elliptica* PETITCLERCQ 167.

†*Conoclypeus stefaninii* sp. n. Eocene Italy, DAINELLI L'Eocene friulano Florence 1915.

†*Coptechinus bitneri* sp. n. Eocene, Italy, DAINELLI L'Eocene friulano Florence 1915.

†*Coptosoma* CLARK & TWITCHELL 49.

†*Cottaldia rotula* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 57 pl. xx figs. 1a-d.

†*Cyphosoma* CLARK & TWITCHELL 49.

†*Dendraster* with *D. arnoldi*, *coalingensis* spp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 190-197, 216, 223 pls. lxxxviii figs. 4a-d; xc figs. 2a-c.

Diadema setosum JACOBS 108.

†*Diplopodia* CLARK & TWITCHELL 49.

†*Diplothechanthus* with *D. dalli* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 218-219 pls. xcix figs. 2a-b; c. figs. 1a-b; *D.* BROWN 20.

†*Discoidea cylindrica* BROOKS, 19; NORTH, 156.

†*Duncanaster* GREGORY 86.

†*Echinanthus* with *E. georgiensis* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 67, 139 pl. lxv fig. 1a-d; *E.* LAMBERT 120.

Echinarachnius parma var. *obesa* var. n. N. Pacific, CLARK Mem. Mus. Comp. Zool. Harvard Coll. 46 p. 67 pi 143 figs. 5-8.

†*Echinarachnius* CLARK & TWITCHELL 49.

†*Echinobrissus* with *E. angustatus* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 69-70 pl. xxvii figs. 2a-c; *E. woodwardi*, *clunicularis*, ODLING 158.

Echinocardium cordatum MEDES, 138; PIXELL-GOODRICH, 170.

†*Echinocardium* with *E. depressum* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 213-214 pl. xcvi figs. 3a-c.

†*Echinocardis* CLARK & TWITCHELL 49.

†*Echinocorys vulgaris* BROOKS 19.

†*Echinocrinus* GIRTY 77.

Echinocyamus megapetalus Mauritius; *elongatus* Hawaiian Islands; *platytatus* Victoria; *incertus* Hawaiian Islands; spp. n., CLARK Mem. Mus. Comp. Zool. Harvard Coll. 46 pp. 60-64 pls. 127 figs. 1-6 pl. 128 figs. 1-3 & figs.; *E. pusillus* MEDES 138.

†*Echinocyamus* with *E. texanus*, *vaughani* spp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 119-120, 160 pl. lvii figs. 2a-d; lxxiv figs. 1a-d; *E. pusillus* COUFFON 63.

Echinodiscus auritus CLARK 41.

†*Echinodiscus* LAMBERT 120.

Echinoidea CLARK, 44 & 45; CLARKE & WHEELER, 48; FABIANI, 66; HOFSTEN, 103; MONTUORI, 145; MORTENSEN, 150; TERNI, 206; WESTER, 216.

†*Echinoidea* LAMBERT, 119; SCHOEN-DORF, 189.

Echinolampas CLARK 41.

†*Echinolampas* with *E. alrichi* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 149, 173 pl. lxxxi figs. 1a-d, 2; *E. similis* LAMBERT, 120 & 117; BROWN, 20; COOKE, 50.

Echinometra mathuei CLARK 41; JACOBS, 108.

Echinostrephus molare CLARKE 41.

Echinothrix diadema CLARK 41.

Echinus acutus GRAY, 85; HERDMAN, 95; *Echinus esculentus* MEDES, 138; MOORE, WHITLEY & ADAMS, 147; MOORE, WHITLEY & WEBSTER, 148; RETZIUS, 179; *E. e. var depressus* MEYER, 139; *E. micraturerculatus* HERBST, 94; RUNN-STRÖM, 183; *E. miliaris* SCHUMALZ, 186; MILLIGAN, 144.

†*Echinus* CLARK & TWITCHELL 49.

†*Enallaster* CLARK & TWITCHELL 49.

†*Eucope* CLARK & TWITCHELL 49.

†*Eoscutum dubaleni* LAMBERT 120.

†*Eupatagus carolinensis floridanus* spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 153, 176 pls. lxxi figs. 3a-d, 4; lxxxii figs. 3a-d; lxxxiii figs. 1a-c, 2a-d; *E.* COOKE 50.

†*Euspatangus* SPENGLER 199.

Fibularia volva CLARK 41.

†*Fibularia affinis* LAMBERT 120.—F' CLARK & TWITCHELL, 49; LAMBERT 117.

Fibulariidae CLARK 45.

†*Gagaria americana* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 159 pl. lxxxiii figs. 8a-b.

†*Galerites* CLARK & TWITCHELL 49.

†*Goniopygus* CLARK & TWITCHELL 49.

Gymnechinus robillardi CLARK 41.

Heliocidaris MORTENSEN 149.

†*Hemiaster* with *H. bexari*, *comanchei*, *beecheri* spp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 88-98 pl. xlvi figs. 1a-e, 2a-d, 1 figs. 2a-c.

†*Hemicidaris bravenderi* ODLING 158; *H.* CLARK & TWITCHELL 49.

†*Hemipatagus argutus, subrostratus* spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 150-151 pl. lxix figs. 1a-d, 2a-b.

†*Hemipedina* CLARK & TWITCHELL 49.

†*Heterodiadema ornatum* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 56 pl. xviii figs. 2a-f.

Hipponoë (Tripneustes) esculenta TENNENT 205.

†*Holaster* CLARK & TWITCHELL 49; GREGORY 86.

†*Holactypus* with *H. pealei*, *cragini* spp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 33-34, 65 pl. v figs. 3a-b, 4; *H. depressus* PETTOLERO 167.

Holopneustes purpurascens MORTEN-SEN 149.

†*Hypodiadema elegans* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 52 pl. xiv figs. 2a-b.

†*Hypsopatangus meneghini* LAMBERT 120.

†*Lagana tenuissima* LAMBERT 120.

Laganidae CLARK 45.

Laganum depressum CLARK 41; *L. MEDES* 138.

†*Laganum* with *L. eldridgei*, *archerensis*, *johnsoni*, *floridanum*, *dalli* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 122, 160-164 pl. lxxiv figs. 1a-d, 2a-d; lxxv figs. 1a-d, 2a-d, 3a-d, 4a-d.

†*Leiocidaris* CLARK & TWITCHELL 49.

†*Leptarhacia argutus* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 53 pl. xvi figs. 1a-f.

†*Linthia* with *L. alabamensis*, *wilmingtonensis* spp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 99, 152-153, 214 pl. lxx figs. 3a-c, lxxi figs. 1a-d, 2a-d; *L. LAMBERT* 117.

Lovenia elongata CLARK 41.

†*Lovenia forbesi* GREGORY 86.

†*Macropneustes* with *M. carolinensis* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 154-153 pl. lxxi figs. 5a-d.

Maretia alta CLARK 41.

†*Mellita* CLARK & TWITCHELL 49.

†*Metalia* BROWN 20; *M. CLARK & TWITCHELL* 49.

†*Micropsis lineatus* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 63 pl. xxv. figs. 1a-c.

†*Monostychia australis* GREGORY 86.

†*Mortonella* CLARK & TWITCHELL 49.

†*Nucleopygus delfortriei* LAMBERT 117.

†*Oligopygus* with *O. floridanus* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 166-169 pl. lxxix figs. 1a-f.

†*Oligopygus* COOKE 50.

†*Orthechinus pretiosus* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 118 pl. lvi figs. 2a-b.

†*Orthopsis* with *O. planulata* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 54 pl. xvi figs. 2a-c.

†*Palæechinus* CHAPMAN 24.

Paracentrotus HERLANT 96; RUNNSTRÖM 183 & 184.

†*Pedinopsts* CLARK & TWITCHELL 49.

†*Periarchus* with *P. protuberans* sp. n. Cainozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 130-136 pl. lxii figs. 3a-f.

Phyllacanthus imperialis CLARK 41; *P. parispinus* MORTENSEN 149.

†*Præscutella degrangei* LAMBERT 120.

Prionocidaris baculosa CLARK 41.

†*Psammechinus* CLARK & TWITCHELL 49.

†*Pseudodiadema* CLARK & TWITCHELL 49.

Pseudoboletia maculata CLARKE 41.

Pseudomaretia alta, CLARK 41.

†*Pygurus*, CLARK & TWITCHELL 49; *P. michelini*, ODLING 158.

†*Pyrina damesi* sp. n. Eocene, Italy, DAINELLI L'Eocene friulano Florence 1915; *P. CLARK & TWITCHELL* 49.

†*Salenia*, CLARK & TWITCHELL 49.

Salmacis, CLARKE 41.

†*Sarsella gregoryi* sp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 p. 155 lxxvii figs. 2a-d.

†*Schizaster otteii* sp. n. Eocene, Italy, DAINELLI L'Eocene friulano Florence 1915; *S. with S. armiger, floridanus, americana* spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 151-152, 175-176, 221, 227 pls. lxx figs. 1a-d; lxxxii figs. 1a-c, 2a-d; *S. arnaudi*, LAMBERT 117; *S. BROWN* 20.

†*Scutaster*, CLARK & TWITCHELL 49.

†*Scutella gabbi* with *S. g. var. n. tenuis*, *S. pabloensis* sp. n. Miocene, California, Kew Bull. Geol. Univ. California 8 pp. 367-369 pl. xxxix figs. 1-4, 6a, 6b; *S. montanarii, graziolii, frattinii* spp. n. Miocene, Sardinia, LOVISATO Riv. ital. paleont. Perugia 20 pp. 110-112 pl. ii figs. 1-3; *S. with S. mississippiensis; tuorneyi andersoni* spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 124-127, 182-189 pls. lix figs. 1a-f, 2; lx figs. 1a-d; lxxxv figs. 3a-d; *S. marginalis*, LAMBERT 120.—*S. CLARK* 40; LAMBERT 117.

†? *Scutellaster*, CLARK & TWITCHELL 49.

Scutellidae, CLARK 45.

†*Sismondia* with ? *S. arnoldi*, *coalingaensis* spp. n. Cainozoic U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 121, 182-183 pl. lxxv figs. 1a-b, 2a-c; *S. marginalis*, LAMBERT 120; S. BROWN 20.

Spatangus purpureus, MEYER 139; PIXELL-GOODRICH 170.

†*Spatangus ornatus*, LAMBERT 120; S. CLARK & TWITCHELL 49.

Sphaerechinus granularis HERBST 94; NOLF 155.

†*Stomechinus*, CLARK & TWITCHELL 49.

Stomopneustes variolaris, CLARK 41.

Strongylocentrotus purpuratus, *franciscanus* 88; *S. lividus*, VAN HERWERDEN 101; HERBST 94.

†*Strongylocentrotus*, CLARK & TWITCHELL 49; LOEB 129; MORTENSEN 149.

Temnopleurus toreumaticus, CLARKE 41.

†*Tournoueraster*, LAMBERT 117.

Toxocidaris erythrogrammus, MORTENSEN 149.

Toxopneustes pileolus, CLARK 41; *T. (Lytechinus) variegatus*, TENNENT 205; T. GOLDFARB 82; JACOBS 108; MEDES 138.

†*Toxopneustes*, CLARK & TWITCHELL 49.

†*Trematopygus*, CLARK & TWITCHELL 49.

Triopneustes gratilla, CLARK 41.

D. ASTEROIDEA.

Acanthaster planci, *echinus*, *echinites*, VERRILL 214.

†*Agalmaster*, SCHUCHERT 190.

†*Anorthaster* gen. n. Type *Palaeaster miamiensis*, Mill, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp. 125-127 pls. xiii fig. 4; xx fig. 1.

†*Anorthasterinae* subfam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 125.

Anseropoda luna, VERRILL 214.

†*Archaster patersoni* sp. n. Tertiary S. Africa, SPENCER Rec. Albany Mus. 3 pp. 65-69 pl. ii.

Asterias tenuispina, CROZIER 57; *A. rubens*, DUBOIS 63; GEMMILL 71 & 76; MILLIGAN 142; RETZIUS 179; VER-

RILL 214; *A. tenuispina*, KRUEGER, 116; A. GLASER 79 & 80; HERDMAN 95.

†*Asterias*, CLARK & TWITCHELL 49; POMPECKJ 171.

Asterina minuta, *gibbosa*, VERRILL 214; A. H. 87; ZELAROVICH 222.

Asteroidea, CLARKE & WHEELER 48; FOSSE 70; MILLIGAN 143; MONTUORI 145; MORTENSEN 150; WESTER 216.

†*Asteroidea*, STAUFFERT 201.

Astropecten irregularis, GEMMILL 71; A. CLARK 41; H., 87; ZELAROVICH 222.

†*Astropecten*, CLARK & TWITCHELL 49; SCHUCHERT 190.

†*Ataxaster*, SCHUCHERT 190.

†*Australaster* gen. n. Type *Palaeaster (Monaster) giganteus*, Eth. SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 72.

Brachiolaria hibernica sp. n. West of Ireland, GEMMILL Edinburgh Proc. R. Phys. Soc. 19 1911 pl. vi.

†*Calliastrella* nom. n. for *Calliaster mirus* (Trantschold), SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 190.

†*Calliasterellidae* fam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 190.

†*Calliderma* with *C. lamberti* sp. n. Upper Cretaceous, France, VALETTE Auxerre Bull. soc. sci. hist. nat. 1914 pp. 20-25.

†*Cheiropteraster*, SCHUCHERT 190.

†*Compsaster*, SCHUCHERT 190.

†*Compsasteridae* fam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 191.

†*Crateraster*, VALETTE 212.

†*Cryptozonia*, SCHUCHERT 190.

Cuenotaster nom. n. for *Leucaster* Koehler THIÉRY Rev. paleozool. 18 p. 49.

Culcita schmideliana, CLARK 41.

†*Devonaster* with *D. chemungensis* gen. & sp. n. Devon, N. America, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp. 97 101 pls. xi-xii.

Echinaster eridanella, CLARK 41; *E. sepositus*, NACHTSHEIM 152; NUSBAUM & OXNER 157.

†*Echinasterella*, SCHUCHERT 190.

- †*Echinasterias*, SCHUCHERT 190.
 †*Echinodiscaster*, SCHUCHERT 190.
 †*Echinostella*, SCHUCHERT 190.
 †*Eifelaster*, SCHUCHERT 190.
 †*Goniaster*, CLARK & TWITCHELL 49.
 †*Helianthaster*, SCHUCHERT 190.
Hippasterias phrygiana, MEYER 139.
 †*Hudsoniaster* with *H. milleri* Ordovician, N. America; *H. batheri* Ordovician, Scotland **spp. n.**, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp. 60, 65 pls. iv fig. 2; iii fig. 3.
 †*Hudsonasteridae* fam. n. *Phanerozonia*, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 53.
 †*Huræaster* gen. n. *H. sellatus* sp. n. Upper Cretaceous, France, VALETTE Auxerre Bul. soc. sci. nat. 1914 pp. 32-35.
 †*Jaekelaster*, SCHUCHERT 190.
 †*Lepidaster*, SCHUCHERT 190.
 †*Lepidasterella* with *L. babcocki* gen. & sp. n. Devonian, America, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 160 pl. xxv fig. 2.
 †*Lepidasteridae*, SCHUCHERT 190.
Linckia laevigata, CLARK 41; H. 87.
 †*Lindströmster*, SCHUCHERT 190.
 †*Lophidiaster* with ? *L. mirabilis* sp. n. Upper Cretaceous, France, VALETTE Auxerre Bul. soc. sci. hist. nat. 1914 pp. 62-65.
 †*Loriolaster*, SCHUCHERT 190.
Luidia ciliaris (Larval stage) fig. GEMMILL Edinburgh Proc. R. Phys. Soc. 19 p. 193 pl. vi; *L. maculata*, CLARK 41. *L. sarsi*, GEMMILL 73; *L. GRAY* 85.
 †*Medusaster*, SCHUCHERT 190.
 †*Metopaster*, LAMBERT 119; VALETTE 212.
Metrodora subulata, CLARK 41.
 †*Mesopalæaster* with *M. intermedius*, *M. (?) lanceolatus*, *M. proavitus*, *M. (?) cataractensis* gen. & spp. n. Ordovician and Silurian, N. America, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp. 74, 79, 82-83, 89 pls. vii-xi, iv fig. 3.
 †*Mesopalæasterinae* subfam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 74.
 †*Miomaster*, SCHUCHERT 190.
 †*Mitraster*, VALETTE 212.
 †*Monaster*, SCHUCHERT 190.
 †*Monasteridae* fam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 170.
 †*Neopalæaster* gen. n. Type *Palæaster crawfordsvillensis*, Mill. SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp. 134-137 pls. xviii fig. 5; xxiii fig. 4.
 †*Neopalæasteridae* fam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 134.
 †*Ophryaster*, VALETTE 212.
Oreaster, CLARK 41.
Orthasterias, H. 87.
 †*Palæaster niagarensis*, PARKS 161; P. CHAPMAN 24; SCHUCHERT 190.
 †*Palæocoma*, CHAPMAN 24.
 †*Palæosolaster*, SCHUCHERT 190.
 †*Palæosolasteridae* fam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 207.
 †*Palæostella*, SCHUCHERT 190.
 †*Palasterina*, SCHUCHERT 190.
 †*Palasterinidae*, SCHUCHERT 190.
 †*Palasteriscidae*, SCHUCHERT 190.
 †*Palasteriscus*, SCHUCHERT 190.
Palmipes membranaceus, BAUER 12; P. ZELAROVICH 222.
 †*Pentaceros*, CLARK & TWITCHELL 49.
 †*Pentagonaster*, CLARK & TWITCHELL 49.
 †*Petraster*, SCHUCHERT 190.
 †*Phanerozonia*, SCHUCHERT 190.
Pisaster, H. 87.
Porania pulvillus, GEMMILL 71, 72 & 75.
 †*Promopalæaster* with *P. prenutius*, *bellulus* gen. & spp. n. Ordovician, America, SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp. 102-125 pls. xiii-xxiii, xxv.
 †*Promopalæasteridae* fam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 73.
 †*Promopalæasterinae* subfam. n., SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. 88 p. 102

- †*Pseudopalasterina*, SCHUCHERT 190.
Pteraster hastatus sp. n. S. Greenland
 MORTENSEN Kjöbenhavn Nath. Medd. 66
 p. 37; *P. militaris*, HERDMAN 95.
 †*Pycinaster* with *P. lamberti* sp. n.
 Upper Cretaceous, France, VALETTE
 Auxerre Bul. soc. sci. hist. nat. 1914 pp.
 35-43; *P. FILLIOZAT* 68.
 †*Rhenaster*, SCHUCHERT 190.
 †*Schœnaster*, SCHUCHERT 190.
 †*Schœnasteridae* fam. n., SCHUCHERT
 Smiths. Inst. U.S. Nat. Mus. Bull. 88 p.
 202.
 †*Schuchertia* with *S. laxata* Ordovi-
 cian, America; *S. ordinaria* Silurian,
 America spp. n., SCHUCHERT Smiths.
 Inst. U.S. Nat. Mus. Bull. 88 pp. 195-
 199 pls. xxxii-xxxiii.
 †*Schuchertiidae* fam. n., SCHUCHERT
 Smiths. Inst. U.S. Nat. Mus. Bull. 88 p.
 194.
 †*Siluraster*, SCHUCHERT 190.
Siraster tuberculatus gen. & sp. n.
 Ceylon, CLARK Spol. Zeylan 10 pp. 86-
 88.
Solaster papposus, GEMMILL 71.
 †*Spaniaster* SCHUCHERT 190.
 †*Spenceria*, LAMBERT 119.
 †*Stauranderaster*, VALETTE 212.
Stellaster squamulosus (Studer) should
 be placed in *Siraster* gen. n., CLARK
 Spol. Zeylan 10 p. 88.
 †*Stenaster*, SCHUCHERT 190.
 †*Stenasteridae* fam. n. SCHUCHERT
 Smiths. Inst. U.S. Nat. Mus. Bull. 88 p.
 163.
 †*Tetraster wyville-thomsoni* = *Hudso-*
naster batheri, BATHER Geol. Mag. 2 p.
 426; *T. SCHUCHERT* 190.
 †*Trimeraster*, SCHUCHERT 190.
 †*Uranaster*, SCHUCHERT 190.
 †*Urasterella* with *U. ulrichi*, Paleo-
 zoic, America, *U. girvanensis* Ordo-
 vician, Scotland spp. n., SCHUCHERT
 Smiths. Inst. U.S. Nat. Mus. Bull. 88 pp.
 173-189 pls. xxvii-xxx.—*U. pulchella*
 HUDSON 104; *U. CHAPMAN* 24.
 †*Urastrellide* fam. n., SCHUCHERT
 Smiths. U.S. Nat. Mus. Bull. 88 p. 172.
 †*Valeitaster*, VALETTE 212.
 †*Xenaster*, SCHUCHERT 190.

E. OPHIUROIDEA.

- †*Aganaster*, SCHUCHERT 190.
 †*Aganasteridae*, SCHUCHERT 190.
 †*Alepidaster*, SCHUCHERT 190.
Amphiacis gen. n. *A. umbonata*
 sp. n., Sagami Sea, MATSUMOTO Proc.
 Acad. Nat. Sci. Philad. 47 pp. 66-67.
Amphilepididae fam. n., MATSUMOTO
 Proc. Acad. Nat. Sci. Philad. 47 p. 66.
Amphilepis, MATSUMOTO 136.
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Amphicoenida inequalis sp. n. Hong
 Kong, CLARK Mem. Mus. Comp. Zool.
 Harvard 25 p. 236 pl. ix figs. 5, 6.
Amphiodia gyraspis Porto Rico; *A.*
mesopoma Torres Straits spp. n., CLARK
 Mem. Mus. Comp. Zool. Harvard 25 pp.
 245-247 pls. vi figs. 11, 14; vii figs. 1,
 4; *A. MATSUMOTO* 136.
Amphiophiura gen. n., MATSUMOTO
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A. metabula, oedignatha spp. n. W.
 Indies, CLARK Mem. Mus. Comp. Zool.
 Harvard 25 pp. 311-312 pl. xvii figs. 1-
 3, 10-12.
Amphioplus asterictus Japan; *A.*
cyrtacanthus Philippines; *A. lobatodes*
 Japan; *A. parviclypeus* Torres Straits
 spp. n., CLARK Mem. Mus. Comp. Zool.
 Harvard 25 pp. 252-255 pl. vii figs. 5,
 8, 9, 11-15; *A. MATSUMOTO* 136.
Amphipholis with *A. japonica* sp. n.
 Japan, MATSUMOTO Proc. Acad. Nat. Sci.
 Philad. 47 pp. 69, 71; *A. pentacantha*
 sp. n. West Indies, CLARK Mem. Mus.
 Comp. Zool. Harvard 25 p. 241 pl. vi
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Amphipholizona gen. n. (*Ophio-*
lepididae) *A. delicata* sp. n. W. Indies,
 CLARK Mem. Mus. Comp. Zool. Harvard
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Amphiura goniodes off Barbodos: *A.*
leptopholida Japan; *A. leptotata*
 Philippines; *A. microsoma* Torres
 Straits; *A. multispina* Japan; *A. poecila*
 Victoria; *A. septemspinosa* Torres
 Straits; *A. syntarachna* Japan spp. n.,
 CLARK Mem. Mus. Comp. Zool.
 Harvard 25 pp. 225, 226-232 pls. iv
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 5, 7, 12, 13; *A.* with *A. vadicola*,

- aestuarii* spp. n. Japan, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** pp. 67, 69, 71-73; A. ZERNOW **223**.
- †*Amphiura* with *A. senonensis* sp. n. Upper Cretaceous, France, VALETTE Auxerre Bull. soc. sci. hist. nat. **1914** pp. 14-18; A. CLARK & TWITCHELL **49**.
- Anthenea*, CLARK **41**.
- Anthophiura*, MATSUMOTO **136**.
- Aspidophiura* gen. n. with *A. watasei* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** pp. 76-77.
- †*Aspidura* (?) *idahoensis* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. **54** p. 23 pl. i fig. 4.
- Asteronychinae* n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** pp. 51-52.
- Asteronyx*, MATSUMOTO **136**.
- Asteropora pulchra* sp. n. Off Barbados, CLARK Mem. Mus. Comp. Zool. Harvard **25** p. 182 pl. ii fig. 7; A. MATSUMOTO **136**.
- Asteroschema*, MATSUMOTO **136**.
- Asteroschematinae*, MATSUMOTO **136**.
- Astroboa*, MATSUMOTO **136**.
- Astrocaneum*, MATSUMOTO **136**.
- Astrocera*, MATSUMOTO **136**.
- Astrochalcis*, MATSUMOTO **136**.
- Astrochele*, MATSUMOTO **136**.
- Astrochlamys*, MATSUMOTO **136**.
- Astrocladus* with *A. arctos* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** pp. 56-57.
- Astroclon*, MATSUMOTO **136**.
- Astrocnida*, MATSUMOTO **136**.
- Astrocomus*, MATSUMOTO **136**.
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- Astrodactylus*, MATSUMOTO **136**.
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- Astrodia*, MATSUMOTO **136**.
- Astrogomphus*, MATSUMOTO **136**.
- Astrogordius*, MATSUMOTO **136**.
- Astrophium cavellae* sp. n. Atlantic Coast of S. Africa, KOEHLER Bull. Inst. Ocean. Monaco **311** pp. 1-16 figs. and C. R. Ac. Sci. **161** pp. 604-606; A. MATSUMOTO **136**.
- Astrophytum*, MATSUMOTO **136**.
- Astrospartus*, MATSUMOTO **136**.
- Astrothamnus* gen. n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 59.
- Astrothorax*, MATSUMOTO **136**.
- Astrothrombus*, MATSUMOTO **136**.
- Astroloma*, MATSUMOTO **136**.
- Astrotominae* n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** 55-56, 59.
- Bathypectinura* with *B. gotoi* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 87.
- †*Bdellacoma* SCHUCHERT **190**.
- †*Bohemura* SCHUCHERT **190**.
- †*Bundenbachia* SCHUCHERT **190**.
- Chilophiurida* n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 74.
- †*Cholaster* SCHUCHERT **190**.
- †*Cholasteridae* SCHUCHERT **190**.
- Conocladus*, MATSUMOTO **136**.
- †*Cribellites* SCHUCHERT **190**.
- Crypoptelma* MATSUMOTO **136**.
- Ctenamphiura* MATSUMOTO **136**.
- Diopederma* MATSUMOTO **136**.
- †*Eucladia* with *E. (?) beecheri* sp. n. Lower Devonian America SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. **88** pp. 276-278 pls. xxxvii-xxxviii.
- †*Eucladiidae* SCHUCHERT **190**.
- †*Enerinaster* SCHUCHERT **190**.
- †*Enerinasteridae* nom. n. for *Aspidosomatidae* SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. **88** p. 241.
- †*Eoluidia* SCHUCHERT **190**.
- †*Eoluidiidae* SCHUCHERT **190**.
- †*Eophiura* SCHUCHERT **190**.
- †*Eospondylus* SCHUCHERT **190**.
- †*Eugasterella* nom. n., for *Eugaster logani* SCHUCHERT Smiths. Inst. U.S. Nat. Mus. Bull. **88** p. 237.
- Euryala* MATSUMOTO **136**.
- †*Euthemon* SCHUCHERT **190**.
- †*Furcaster* SCHUCHERT **190**.
- Gnathophiurida* n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 66.
- Gorgonocephalidae* CLARK **47**; MATSUMOTO **136**.
- Gorgonocephalinae* MATSUMOTO **136**.
- Gorgonocephalus* MATSUMOTO **136**.

†*Gregoriura spryi* CHAPMAN 24; G. SCHUCHERT 190.

Gymnolophus MATSUMOTO 136.

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†*Hallaster* SCHUCHERT 190.

Haplophiura gen. n., for *Ophiozona gymnopora* MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 76.

Hemieuryalidae with gen. n. *Ophioholcus* (Type *Sigsbeia sexradiata*, Koehler) CLARK Mem. Mus. Comp. Zool. Harvard 25 pp. 190-193; *Hemieuryatidae* MATSUMOTO 136.

Hemieuryalinae n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 65-66.

Hemipholis MATSUMOTO 136.

Homalophiura gen. n. (Type *Ophioglypha inornata*, Lyman CLARK Mem. Mus. Comp. Zool. Harvard 25 p. 325.

†*Lapworthura* SCHUCHERT 190.

†*Lapworthuridae* SCHUCHERT 190.

Lemophiurida n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 61.

Lutkenia MATSUMOTO 136.

†*Lysophiuræ* SCHUCHERT 190.

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†*Miospondylus* SCHUCHERT 190.

Myophiuroida n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 45.

Ogophinroida n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 45.

†*Onychaster* SCHUCHERT 190.

†*Onychasteridae* SCHUCHERT 190.

Ophiacantha with *O. bisquamata* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 62; *O. curima*, Gulf of Mexico; *O. lasia* Japan; *O. macroplaca* Hawaii; *O. mesembria*, *metallaeta* W. Indies spp. n. CLARK Mem. Mus. Comp. Zool. Harvard 25 pp. 197, 199-202 pls. iii figs. 1-2; i figs. 5, 6-7.

Ophiacanthella MATSUMOTO 136.

Ophiacanthidae CLARK 47; MATSUMOTO 136.

Ophiactininae subfam. n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 69.

Ophiactis delicata, *hemiteles*, *luteo-maculata* Torres Straits; *O. quadrispina* Philippines spp. n. CLARK Mem. Mus.

Comp. Zool. Harvard 25 pp. 260-264 pls. x figs. 7-10; xi figs. 7-10; *O. saviguyi* CLARK 41; *O.* MATSUMOTO 136; POTTS 174.

Ophiarachna MATSUMOTO 136.

Ophiarachnella marmorata CLARK 41; *O.* MATSUMOTO 136.

Ophiarachninae subfam. n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 83.

Ophiarthrum MATSUMOTO 136.

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Ophiobyrsella MATSUMOTO 136.

Ophiobyrsinae n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 50.

Ophiocamax plesiotaaxis sp. n. Andaman Isds., CLARK Mem. Mus. Comp. Zool. Harvard 25 p. 213 pl. iii figs. 9-10; *O.* MATSUMOTO 136.

Ophiocampsis MATSUMOTO 136.

Ophiocantha MATSUMOTO 136.

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Ophiochaeta MATSUMOTO 136.

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Ophiochitonidae fam. n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 88; *O.* CLARK 47; MATSUMOTO 136.

Ophiochitoninae subfam. n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 88.

Ophiochondrus MATSUMOTO 136.

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Ophiocytra MATSUMOTO 136.

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†*Ophiocistia* SCHUCHERT 190.

Ophiocnemis mermorata CLARK 41; *O.* MATSUMOTO 136.

Ophiocnida brachiata HERDMAN 95; *O.* MATSUMOTO 136.

Ophiocoma parva sp. n. Torres Strait CLARK Mem. Mus. Comp. Zool. Harvard 25 p. 292 pl. xiv figs. 8-9; *O.* MATSUMOTO 136; POTTS 174.

- Ophiocomidae* CLARK 47; MATSUMOTO 136.
- Ophiocominae* subfam. n. MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 91, 92.
- Ophiocondrella* MATSUMOTO 136.
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- Ophioconis* MATSUMOTO 136.
- Ophiocopa* MATSUMOTO 136.
- Ophiocormus* gen. n. (*Ophiocanthidae*) *O. notabilis* sp. n. New Zealand, CLARK Mem. Mus. Comp. Zool. Harvard 25 p. 219 pl. iii figs. 11-12.
- Ophiocrasis* with *O. marktanneri* sp. n. Japan, MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 90.
- Ophiocrates*, MATSUMOTO 136.
- Ophiocrene*, MATSUMOTO 136.
- Ophiocryptus maculosus* gen. & sp. n. California, CLARK J. Ent. Zool. Claremont Cal. 7 1915 pp. 64-66.
- Ophiocten*, MATSUMOTO 136.
- Ophiocymbium*, MATSUMOTO 136.
- Ophioderma*, MATSUMOTO 136.
- †*Ophioderma*, CLARK & TWITCHELL 49.
- Ophiodermatidae*, CLARK 47; MATSUMOTO 136.
- Ophiodermatinae* subfam. n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 83, 87.
- Ophiodoris*, MATSUMOTO 136.
- Ophioglypha*, MATSUMOTO 136; ZELAROVICH 222.
- †*Ophioglypha* with *O. gracilis, pulchra* spp. n. Upper Cretaceous, France, VALETTE Auxerre Bull. soc. sci. hist. nat. 1914 pp. 6-14; *O. utahensis* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U. S. Geol. Surv. 54 pp. 29, 43 pl. iii fig. 5.
- Ophiogona*, MATSUMOTO 136.
- Ophiogymna*, MATSUMOTO 136.
- Ophiogyptis*, MATSUMOTO 136.
- Ophiohyalus* gen. n. with *O. gotoi* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 48-49.
- Ophiolebes pachyphylax* sp. n. N.E. America, CLARK Mem. Mus. Comp. Zool. Harvard 25 p. 194 pl. ii figs. 8, 9; *O. tuberosus* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 62, 64.
- Ophiolepididae*, CLARK 47; MATSUMOTO 136.
- Ophiolepidinae* subfam. n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 75, 81.
- Ophiolepis superba* nom. n. for *Ophiura annulosa*, Bl., CLARK Spol. Zeylan. 10 p. 89; *O. carinata*, MATSUMOTO 136.
- Ophioleuce*, MATSUMOTO 136.
- Ophioleucidae* fam. n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 74-75, 83; CLARK 47.
- Ophiolimna*, MATSUMOTO 136.
- Ophiolipus*, MATSUMOTO 136.
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- Ophiolophus*, MATSUMOTO 136.
- Ophiomaeris* with *O. projecta* sp. n. Japan, MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 p. 65.
- Ophiomastine* subfam. n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. 47 pp. 75, 76.
- Ophiomastix corallicola* sp. n. Torres Strait, CLARK Mem. Mus. Comp. Zool. Harvard 25 p. 294 pl. xvi figs. 1-2; MATSUMOTO 136.
- Ophimastus* MATSUMOTO 136.
- Ophiomaza* MATSUMOTO 136; POTTS 174.
- Ophiomedeia* MATSUMOTO 136.
- Ophiomesa cacaotica* POTTS 173.
- Ophiomidas* MATSUMOTO 136.
- Ophiomisidium* MATSUMOTO 136.
- Ophiomitra* MATSUMOTO 136.
- Ophiomitrella* MATSUMOTO 136.
- Ophiomusium monoplax, oligoplacum* spp. n. W. Indies, CLARK Mem. Mus. Comp. Zool. Harvard 25 pp. 331-332 pl. xx figs. 7-10; *O. MATSUMOTO* 136.
- † ? *Ophiomusium vermiculatum, rugosum* spp. n. Upper Cretaceous France, VALETTE Auxerre Bul. soc. sci. hist. nat. 1914 pp. 18-25.
- Ophiomyces* MATSUMOTO 136.
- Ophiomytis* MATSUMOTO 136.
- Ophiomyxa* with *O. brevirima* sp. n. New Zealand, CLARK Mem. Mus. Comp.

- Zool. Harvard **25** pp. 168-170 pl. i figs. 3, 4.
- Ophiomyxidae* CLARK **47**; MATSUMOTO **136**.
- Ophiomyxinae* MATSUMOTO **136**.
- Ophioncus* MATSUMOTO **136**.
- Ophionema* MATSUMOTO **136**.
- Ophioneplithys octacantha* sp. n. Torres Straits, CLARK Mem. Mus. Comp. Zool. Harvard **25** p. 239 pl. ix figs. 9, 10.
- Ophionereidinae* MATSUMOTO **136**.
- Ophionereis* MATSUMOTO **136**.
- Ophionotus* MATSUMOTO **136**.
- Ophiopallas* MATSUMOTO **136**.
- Ophiopenia* MATSUMOTO **136**.
- Ophioperla* MATSUMOTO **136**.
- Ophiopeza* MATSUMOTO **136**.
- Ophiopezella* MATSUMOTO **136**.
- Ophiopholis* MATSUMOTO **136**.
- Ophiophragmus brachyactis* sp. n. Florida, CLARK Mem. Mus. Comp. Zool. Harvard **25** p. 238 pl. x figs. 13, 14; *O.* with *O. japonicus* sp. n. Japan, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** pp. 69, 70.
- Ophiophrizus* MATSUMOTO **136**.
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- Ophioplax* with *O. lamellosa* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 88.
- Ophiopleura* MATSUMOTO **136**.
- Ophioplinthaca* MATSUMOTO **136**.
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- Ophioplocus imbricatus* CLARK **41**; MATSUMOTO **136**.
- Ophiopæpale* MATSUMOTO **136**.
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- Ophiopristis* MATSUMOTO **136**.
- Ophioprium* gen. n. (Type *Ophiacantha cervicornis*, Lyman) *O. imperfectum* sp. n. W. Indies, CLARK Mem. Mus. Comp. Zool. Harvard **25** pp. 214-215.
- Ophiopsammium* MATSUMOTO **136**.
- Ophiopsila polycantha* Dutch E. Indies; *O. polysticta* off Barbados spp. n.; CLARK Mem. Mus. Comp. Zool. Harvard **25** pp. 297-298 pl. xiv figs. 3-5, 6-7; *O.*, MATSUMOTO **136**.
- Ophiopsilinae* subfam. n., MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 92.
- Ophiopteris* MATSUMOTO **136**.
- Ophiopteron* MATSUMOTO **136**.
- Ophiopus* MATSUMOTO **136**.
- Ophiopyren* MATSUMOTO **136**.
- Ophiopyrgus* MATSUMOTO **136**.
- Ophioscalus* MATSUMOTO **136**.
- Ophioschiza* MATSUMOTO **136**.
- Ophioscolex* with *O. discanthus* sp. n. off W. Cuba, CLARK Mem. Mus. Comp. Zool. Harvard **25** pp. 172-174 pl. ii figs. 3, 4.
- Ophiosmilax* gen. n. with *O. mirabilis* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 50.
- Ophiosphæra* MATSUMOTO **136**.
- Ophiosteira* MATSUMOTO **136**.
- Ophiostiba* gen. n. with *O. hidekii* sp. n. Sagami Sea, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** p. 47.
- Ophiostigma* MATSUMOTO **136**.
- Ophiothamnus* with *O. venustus* sp. n. Japan, MATSUMOTO Proc. Acad. Nat. Sci. Philad. **47** pp. 62-63.
- Ophiothela caerulea* Arabian Gulf; *O. hadra* Torres Straits spp. n., CLARK Mem. Mus. Comp. Zool. Harvard **25** pp. 283-284 pl. xiv figs. 1, 2; *O.*, MATSUMOTO **136**.
- Ophiothrix brachyactis* Florida; *O. dyscrita*, *liodisca* Torres Straits; *O. hybrida* Pacific; *O. poecilodisca* Zanzibar; *O. rhabdota* Torres Straits spp. n. CLARK Mem. Mus. Comp. Zool. Harvard **25** pp. 269-278 pls. xii figs. 1-2, 3, 5 xiii figs. 3-5; *O. fragilis* MILLIGAN **141**; *O.* CLARK **41**; MATSUMOTO **136**; ZIEGLER **224**.
- Ophiothyreus* MATSUMOTO **136**.
- Ophiotjalpa vivipara* gen. & sp. n. ? S. Greenland, MORTENSEN Kjöbenhavn Nath. Medd. **66** pp. 40-43; *O.*, MATSUMOTO **136**.
- Ophiotoma* MATSUMOTO **136**.
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Ophiotrichidae CLARK 47; MATSUMOTO 136.

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Ophiozoidea gen. n. (*Ophiolepididae*)
O. pieta sp. n. New Zealand, CLARK
Mem. Mus. Comp. Zool. Harvard 25 p.
340 pl. xviii figs. 3, 4.

Ophiozonia tjalstiana sp. n. S. Green-
land, MORTENSEN Kjöbenhavn Nath.
Medd. 66 p. 38; *O.* MATSUMOTO 136.

Ophiozonella gen. n., MATSUMOTO Proc.
Acad. Nat. Sci. Philad. 47 p. 81, 82.

Ophiura brevispina GRAVE 84; *O.*
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†*Ophiurina* SCHUCHERT 190.

†*Ophiurinidae* SCHUCHERT 190.

Ophiurochæta gen. n. for *Ophiochæta*
mixta Lyman, MATSUMOTO Proc. Acad.
Nat. Sci. Philad. 47 pp. 83, 86.

Ophiuroconis gen. n. with *O. mono-*
lepis sp. n. Sagami Sea, MATSUMOTO
Proc. Acad. Nat. Sci. Philad. 47 pp. 83,
85.

Ophiurodon gen. n. for *Ophioconis*
grandisquama Koehler, MATSUMOTO Proc.
Acad. Nat. Sci. Philad. 47 pp. 83, 86.

Ophiuroidea BEAUCHAMP & ZACHS 13;
CLARKE & WHEELER 48; LICHTI 121;
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†*Ophiuroidea* SCHUCHERT 190.

Ophiurolepis gen. n. for *Ophiolepis*
camata MATSUMOTO Proc. Acad. Nat.
Sci. Philad. 47 p. 80.

Ophiuroopsis MATSUMOTO 136.

†*Palæophiomysca* SCHUCHERT 190.

†*Palæophiura* SCHUCHERT 190.

†*Palæophiuridae* SCHUCHERT 190.

†*Palæura* SCHUCHERT 190.

†*Palastropecten* SCHUCHERT 190.

Paramphiura MATSUMOTO 136.

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Phrynophiurida n., MATSUMOTO Proc.
Acad. Nat. Sci. Philad. 47 p. 46.

†*Protaster brisingoides* CHAPMAN 24;
P. stellifer PARKS 161; *P.* SCHUCHERT
190.

†*Protasteridae* SCHUCHERT 190.

†*Ptilonaster* SCHUCHERT 190.

†*Rhopalocoma* SCHUCHERT 190.

†*Squamaster* SCHUCHERT 190.

†*Stegophiura* gen. n. with *S. vivipara*
sp. n. Sagami Sea, MATSUMOTO Proc.
Acad. Nat. Sci. Philad. 47 pp. 78-79;
S. macarthurra sp. n. off Georgia, CLARK
Mem. Mus. Comp. Zool. Harvard 25 p.
315 pl. xix figs. 7, 8.

Stenocephalus MATSUMOTO 136.

†*Strettophiura* SCHUCHERT 190.

†*Stürtzaster* SCHUCHERT 190.

†*Sturtzura leptosomoides* CHAPMAN 24;
S. SCHUCHERT 190.

†*Sympteryra* SCHUCHERT 190.

†*Tæniaster* SCHUCHERT 190.

†*Træmataster* SCHUCHERT 190.

Trichaster MATSUMOTO 136.

Trichasteridæ CLARK 47; MATSUMOTO
136.

Trichasterina n. MATSUMOTO Proc.
Acad. Nat. Sci. Philad. 47 p. 52.

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†*Actinocrinus* [ANON.] 2.

Antedon CLARK 36; HERDMAN 95.

†*Anthrocantha* with *A. eupelmatus*
tenispinata spp. n. Devonian Germany,
SCHMIDT Centralb. Min. Stuttgart 1915
pp. 119-125.

†*Antinocrinus* PRELLER 175.

†*Apiocrinus parkinsoni* ODLING 158;
A. [ANON.] 2.

†*Archæocrinus desideratus* BATHER
10.

†*Botryocrinus longibrachiatus* CHAP-
MAN 24.

†*Bourguetierinus danicus* NIELSEN 154.

Cupillaster multiradiata CLARK 42.

†*Carabocrinus vancouverlandi* FOERSTE
69; C. BATHER 10.

Cenometra herdmanni CLARK 41.

†*Cleioocrinus regius* FOERSTE 69.

Comanthus with *C. callipeplum, luteo-*
fuseum spp. n. Torres Straits, CLARK
Washington D.C. Papers Dept. Mar.
Biol. Carnegie Inst. Washington 8 pp.
101-103; C. CLARK 41; POTTS 174.

Comatella CLARK 42.

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†*Crinoidea* CLARK 34; CHAPMAN 24; DIENER 62; NEWTON 153; STAUFFERT 201.

†*Cromyocrinus* GIRTY 77.

†*Delocrinus* GIRTY 77.

Dichrometra CLARK 41.

†*Eucalyptocrinus caelatus* PARKS 161.

†*Eucrinus hyatti* sp. n. Mesozoic, U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 22 pl. 3a-b.

†*Eupachrynus* GIRTY 77.

†*Gastrocrinus patulus* with var. n. *fallmanni*, *G. brancai*; *rugosus*; *G. ? drevermanni* spp. n. Devonian Germany, SCHMIDT Wilh. Branca Eine Festschr. s. Schüler 1914 pp. 216-225 pls. iv & ivA.

†? *Gissocrinus* CHAPMAN 24.

†*Glyptocrinus ramulosus* FOERSTE 69.

†*Hapalocrinus victoriae* CHAPMAN 24.

†*Helicocrinus plumosus* CHAPMAN 24.

†*Herpetocrinus brachiatus, convolutus*, PARKS 161.

Heterometra delicata sp. n. Torres Strait, CLARK Washington D.C. Papers Dept. Mar. Biol. Carnegie Inst. Washington 8 p. 105.—*H. reynaudii*, CLARK 41.

†*Homocrinus cylindricus*, PARKS 161.

†*Hyboocrinus conicus*, BATHIER 10.

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†*Ichthyocrinus laevis*, PARKS 161.

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†*Isocrinus* with *I. smithi, californicus* spp. n. Mesozoic U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 pp. 21-22 pl. i figs. 1a-b 2a-c.

†*Isselicrinus insculptus* sp. n. Oligocene Italy, ROVERETO "Nuovi studi sulla Stratigrafia et sulla Fauna dell'Oligocene Ligure" Genoa 1914; *I. insculptus*, COSSMANN 52.

Lamprometra with *L. brachypecha, callipecha* spp. n. Torres Strait, CLARK Washington D.C. Papers Dept. Mar. Biol. Carnegie Inst. Washington 8 p. 104.

†*Lebetodiscus* with *L. loriformis, youngi, chapmani, platys, multibrachhiatus, inconditus* spp. n. Silurian N. America, RAYMOND Ottawa Nat. 29 pp. 53-62 pl. i.

†*Lecanocrinus macropetalus* PARKS 161.

†*Lichenocrinus* FOERSTE 69.

†*Lyriocrinus dactylus* PARKS 161.

†*Marsupites* BROOKS 19; CLARK & TWITCHELL 49.

Oligometra anisa sp. n. Torres Strait, CLARK Washington D.C. Papers Dept. Mar. Biol. Carnegie Inst. Washington 8 p. 105.

Pentacrinus meneghini sp. n. Eocene Italy, DAINELLI L'Eocene friulano Florence 1915.—*P.* with *P. shastensis, tehamaensis, bryoni* sp. n. Mesozoic U.S.A., CLARK & TWITCHELL U.S. Geol. Surv. 54 p. 28 pl. iii fig. 4; vi figs. 1, 2a-b; *P.*, [ANON.] 2; SPITZ & DYHRENFURTH 200.

†*Perieshocrinus speciosus* PARKS 161.

†*Phialocrinus* HUMMEL 106.

Phrymocrinus nudus fig., CLARK Smiths. Inst. U.S. Nat. Mus. Bull. 82 p. 61.

†*Poroocrinus smithi* HUDSON 105.

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†*Reteocrinus alveolatus* FOERSTE 69.

†*Rhizocrinus maximus* sp. n. p. 392 Upper cretaceous Denmark, NIELSEN København Medd. Geol. 4 pp. 391-394 figs.; *R.*, CLARK & TWITCHELL 49.

†*Scaphiocrinus* GIRTY 77.

†*Stephanocrinus angulatus* PARKS 161.

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Tropiometra afra CLARK 42; *T.*, CLARK 36 & 41.

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ARRANGED BY

R. W. HAROLD ROW.

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5. PTEROBRANCHIATA.

[Nothing.]

VII. BRACHIOPODA AND BRYOZOA

ARRANGED BY

F. W. EDWARDS.

(a) BRACHIOPODA

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†*Molopophorus (?) howardi* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 301; *M. tejonensis* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 66.

Murex alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 59; *M.* with *M. permæstus* sp. n. Queensland, HEDLEY Proc. Linn. Soc. N.S.W. 39 p. 745.

†*Murex packardi* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 69; *M. sexangula* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 pp. 74; *M. (Ocinebra) dalli*, *packardi selbyensis* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 501-502; *M. (Ocinebra) stazzanensis* sp. n. *M. (Hadriana) craticulatus* var. n. *ornata* Tortonian Italy, BONGO Boll. Soc. geol. ital. 33 pp. 405, 407.

Murexul gen. n. for *Hexaplex octogonus* (Q & G), IREDALE Trans. N. Z. Inst. 47 p. 471.

Nassa with *N. fossae* sp. n. Calcutta, PRESTON Rec. Ind. Mus. 11 p. 479; *Nassa*, HEDLEY 186.

†*Nassa moraniana* sp. n. California Pliocene. MARTIN Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 183; *N. pabloensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 493; *N. (Desmoulea?) turrita* var. n. elongata Tortonian Italy, BONGO Boll. Soc. geol. ital. 33 p. 430.

Nodopelagia gen. n. Genotype *Peristernia brazieri*, Ang., HEDLEY Proc. Linn. Soc. N.S.W. 39 p. 731.

Pentadactylus fusco-imbriatus sp. n. Hawaii, SOWERBY Ann. Mag. Nat. Hist. 15 p. 166.

Peristernia brazieri, HEDLEY 186.

Pisania reticulata & *P. schoutanica* referred to *Colubraria*, HEDLEY Proc. Linn. Soc. N.S.W. 39 p. 733.

Prosipho mundus, tuberculatus, cancellatus, congenitus spp. n. Antarctic, SMITH Brit. Ant. Exp. 2 pp. 70-71.

†*Pseudoliva inornata, tejonensis* spp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 pp. 62-63; *P. reticulata* sp. n. California Eocene, WARING J. Geol. Chicago 22 p. 783.

Purpura lapillus. COOKE 89.

†*Purpurina indica* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost-Ung. 26 p. 222.

Pyrene felina sp. n. Queensland, HEDLEY Proc. Linn. Soc. N.S.W. 39 p. 739.

†*Rapana biconica* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 79.

†*Siphonalia bicarinata* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 66; *S. danvillensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California p. 497.

Sistrum alfredensis sp. n. S. Africa. BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 60.

Thais with *T. crassulnata* sp. n. Queensland, HEDLEY Proc. Linn. Soc. N.S.W. 39 pp. 747-751; *T. (Nucella)* with *T. (N.) lamellosa* varr. n. francis-

cana, neptunea, cynica, silkana T. (N.) *canaliculata* var. n. *compressa* T. (N.) *emarginata* var. n. *projecta* W. Coast N. America, DALL U. S. Nation. Mus. Proc. 49 pp. 557-572.

†*Tritonalia scabrosa* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 77.

Tritonidea australis, HEDLEY 186.

†*Tritonofusus fortunensis, riversi* spp. n. California Pliocene, MARTIN Univ. Cal. Pub. Bull. Dept. Geol. 8 pp. 189, 190.

Trophon pelseneri sp. n. W. of Falkland Isds., SMITH Brit. Ant. Exp. 2 p. 92.

†*Trophon* with *T. gracilis* Perry var. *pabloensis*, *T. dickersoni*, *lawsoni*, *pouderosum* Gabb. var. *pabloensis* spp. & varr. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 498-500.

Troschelia, Mörch, IREDALE 209.

†*Typhis siphonifera* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 77.

†*Urosalpinx hannibali* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 69.

†*Volutopsius curekaensis* sp. n. California Pliocene, MARTIN Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 190.

Xymene gen. n. Type *Fusus plebeius*, Hutt. with *X. quirindus* nom. n. for *Trophon paivae* Suter non Crosse, IREDALE Trans. N. Z. Inst. 47 p. 471.

Zafra with *Z. avicennia* N.S. Wales; *Z. almiranta, debilis* Queensland spp. n. HEDLEY Proc. Linn. Soc. N.S.W. 39 pp. 740-745. ; *Z. kermadecensis, fuscolineata*, spp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 540.

LOTORIIDAE, CASSIDIDAE, DOLIIDAE, CYPRÆIDAE, STROMBIDAE, APORRHAIIDAE AND STRUTHIOLARIIDAE.

Amphiperas smithi sp. n. S. Africa, BARTSCH Smiths. Inst. U.S. Nat. Mus. Bull. 81 p. 96.

†*Anchura englishi, gabbi* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 144.

Aporrhais pes-pellicani, RETZIUS 332.

†*Aporrhais trichinopolitensis*. A. (*Arrhoges*) *indica* spp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 pp. 226-227.

†*Argobuccinum arnoldi, scotiaensis* spp. n. California, Pliocene. MARTIN Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 192.

†*Bursa trampasensis* sp. n. Tertiary California CLARK Bull. Dept. Geol. Univ. California 8 p. 492.

Caducifer decapitata HEDLEY 186.

Charonia poecilostoma sp. n. S. Africa SMITH Proc. Malac. Soc. 11 p. 285.

Cymatium australasiae HEDLEY 186.

Cypraea lamarekii var. n. *phyllidis* Aden, SHAW Proc. Malac. Soc. 11 p. 210; *C. variolaria* var. n. *amiges* Hawaiian Isds. MELVILL & STANDEN J. Conch. Leeds 14 p. 323.

†*Cypraea ballista* sp. n. Oligocene Florida DALL Smiths Inst. U.S. Nat. Mus. Bull. 90 p. 85.

Erato voluta, Mont. Iredale 209.

Eugyrina geminifera lepta subsp. n. S. Africa, BARTSCH Smiths Inst. U.S. Nat. Mus. Bull. 91 p. 93.

†*Ficus rodeoensis* sp. n. California, Miocene, ENGLISH Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 246.

†*Gyrineum elsmereense* sp. n. California Pliocene, ENGLISH Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 215.

Lotorium (Cymatium) kiiensis sp. n. Japan, SOWERBY Ann. Mag. Nat. Hist. 15 p. 165.

Nyctilochus alfredensis sp. n. S. Africa, BARTSCH Smiths Inst. U. S. Nat. Mus. Bull. 91 p. 94.

†*Nyctilochus kevi* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 64.

†*Ovula martini* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 145.

Ranella leucostoma Lk. = *Charonia australasiana*, Perry SMITH. 373.

†*Rimella indica, trichinopolitensis* spp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 pp. 229-230.

†*Rostellaria turonica* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 p. 229.

†*Seraphs (?) thompsoni* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 144.

Strombus bituberculatus, REINKE 331.

†*Strombus liocyclus* sp. n. Oligocene Florida DALL Smiths Inst. U. S. Nat. Mus. Bull. 90 p. 88.

†*Struthiolaria parva* sp. n. Tertiary New Zealand, SUTER N.Z. Geol. Surv. Pal. Bull. 3 p. 7.

†*Tritonium* spp. n. *buwaldi, martinezensis* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 pp. 145-146.

Trivia jouensis, (Pernant), IREDALE 209.

CERITHIIDAE, PLANAXIDAE, TRICHOTROPIDIDAE, VERMETIDAE, TURRITELLIDAE AND CAECIDAE.

Bittium, HEDLEY 186.

†? *Bittium pabloensis, B. trampasensis* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 489; *B. (priscum var?) sora* var. n. *B. adela* sp. n. Oligocene Florida, DALL Smiths Inst. U. S. Nat. Mus. Bull. 90 p. 89.

Caecum solitarium sp. n. Kermadec Isds., OLIVER Trans N. Z. Inst. 47 p. 523.

Callostracum, SMITH 374.

Cerithiidae, IREDALE 209.

Cerithiopsis (Cerithiopsis) alfredensis, C. erna, C. (C.) nina, nisaba, saba, spp. n. S. Africa, BARTSCH Smiths Inst. U. S. Nat. Mus. Bull. 91 pp. 109-112.

†*Cerithiopsis silicata* sp. n. Oligocene Florida, DALL Smiths Inst. U. S. Nat. Mus. Bull. 90 p. 93; *C. turneri, bolingerensis* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 490.

Cerithium tomlini sp. n. Queensland, HEDLEY Proc. Linn. Soc. N.S.W. 39 p. 717.

†*Cerithium archiaci* sp. n. Célèbes Oligocène, DOLLFUS Paléont. de Célèbes p. 30; *C. butterworthi* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 301; *C. plectrum* sp. n. Oligocene Florida, DALL Smiths Inst. U. S. Nat. Mus. Bull. 90 p. 90; *C. rodeoensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 491; *C. (Sandbergeria) postallierianum* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 p. 225.

Chasteria gen. n. (Type *C. danielsenii* Friele = *Cerithium procerum*, Jeff), IREDALE Proc. Malac. Soc. 11 p. 334.

Eglisia with operculum of *E. spirata* fig., SMITH Ann. Mag. Nat. Hist. 15 pp. 361-365.

Eumeta bia sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 116; *E. arctica*, (Mörch), IREDALE 209.

Mesalia with operculum of *M. brevisalis* fig., SMITH Ann. Mag. Nat. Hist. 15 pp. 366-372, 277.

Plesiotrochus with *P. ceylonicus* sp. n. Ceylon, SOWERBY Proc. Malac. Soc. 11 pp. 215-216.

Seila alfredensis, *africana*, *smithi* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 113-115.

†*Seila huttoni* nom. mut., for *Bitium cinctum*, Hutt., SUTER N. Z. Geol. Surv. Palaeont. Bull. 3 p. 6.

Sinistroseila gen. n. Type *Triforis incisus* Pease, OLIVER Trans. N. Z. Inst. 47 p. 522.

Sundaya exquisita gen. and sp. n. Kermadec Ids., OLIVER Trans. N. Z. Inst. 47 p. 522.

Tachyrhynchus with *T. lacteola* fig. SMITH Ann. Mag. Nat. Hist. 15 pp. 373-377.

Trichotropis planispira sp. n. Antarctic, SMITH Brit. Ant. Exp. 2 p. 67.

†*Triforis* [vide etiam *Triphoris*] *washingtoniana* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 63.

Triphoris [vide etiam *Triforis*] *atea*, *helena*, *smithi*, *elsa*, *milda*, *oreada*, *africana*, *capensis*, *madria*, *sabita*, *nina*, *ima* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 98-108.

Turritella stimpsoni sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 118.

†*Turritella clarki* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 142; *T. krooni* sp. n. Cretaceous Célèbes, DOLLFUSS Paléont. de Célèbes p. 7; *T. maccreadyi* sp. n. California Eocene, WARING J. Geol. Chicago 22 p. 783; *T. (tampac* var. ?) *medioconstricta*, *systemolata*, *litharia*, *atacta* spp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 pp. 98-100; *T. uasana* varr. n. *bicarinata* (n-8913 r)

tricarinata Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 58.

Turritellopsis SMITH 374.

MELANIIDAE, PSEUDOMELANIIDAE, PLEUROCERIDAE, LITTORINIDAE & FOSSARIDAE.

Chilkaia imitatrix gen. and sp. n. (*Fossaridae*) E. India PRESTON Rec. Ind. Mus. 11 p. 291.

Cithna africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 120.

†*Fossarus odiensis* sp. n. Cretaceous S. India SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 p. 216.

†*Holopea media* sp. n. Palaeozoic Canada PARKS Trans. Can. Inst. 11 p. 18.

Io ADAMS 1.

Lacuna pallidula var. n. *imperfurata* Guernsey, MARSHALL J. Conch. Leeds. 14 p. 328.

†*Lacuna mariana* sp. n. Tertiary CERULLI-IRELLI Paleontogr. Ital. 20 p. 186; *L. precursor* sp. n. Oligocene Florida DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 94.

Litorina [vide etiam *Littorina*] *litore*, *rudis* BATCHELDAR 24.

†*Littorina trichinopolitensis* sp. n. Cretaceous S. India SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 p. 221.

Littorina [vide etiam *Littorina*] *africana*, *tryphena* subsp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 120; *L. eudeli* sp. n. Pondicherry SOWERBY Ann. Mag. Nat. Hist. 15 p. 167; *L. obtusata* with varr. n. *lutea*, *castanea*, *balteata*, *ambigua*, *ornata*, *lineolata*, *tessellata*, DAUTZENBERG & FISCHER J. conchyliol. Paris 62 pp. 87-110; *L. obtusata littoralis* with varr. n. *minima*, *pachychila*, *olivacea*, *alternata*, *inversicolor*, *inversicolor-reticulata*, *rhabdota*, *ziczac* and *monstr. n. contabulatum*, *carinatum*, *exsertum*, *umbilicatum*, DAUTZENBERG & FISCHER J. conchyliol. Paris 62 pp. 111-128; *L. littorea* COOKE 87; *L. SCHEFMAN* 354.

†*Littorina pittsburgensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 484.

Melania with *M. (Tiaropsis) rudis* var. n. *cylindrica* CERAM SCHEFMAN a 15

Amsterdam Bijdr. Dierk. Af. 20 pp. 23-27.

†*Melania packardi, vaderensis* spp. n. Eocene N. America, DIKERSON P. Calif. Ac. 5 p. 59.

Melanopsis diabetensis sp. n. Morocco PALLARY Bull. Mus. Paris 1915 p. 28.

†*Melanopsis* with *M. nodosa* varr. n. *ovoidalis, anodifera, transiens* Tertiary, CERULLI-IRELLI Palontogr. Ital. 20 pp. 183-185.

Paludomus rotungensis sp. n. Upper Rotung PRESTON Rec. Ind. Mus. 8 p. 539; *Paludomus zeylanica* Lea fig., PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 p. 46; *P. (Philopotamis) trifasciata* Reeve fig., PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 p. 54.

Tiara (Pachychilus) limborgi Han., fig. PRESTON Fauna Brit. Ind. Moll. Gast. Pel. 1915 p. 29.

Tiarinae CONNOLLY 86.

SOLARIIDAE, SKENEIDAE, LITIOPIIDAE, RISSOIDAE, HYDROBIIDAE, VIVIPARIIDAE, VALVATIDAE, AMPULLARIIDAE, & ASSIMINEIDAE.

Alabina alfredensis, africana spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 121.

Alvania cruenta sp. n. Spitzbergen, ODNER Stockholm Vet.-Ak. Handl. 54 No. 1 p. 167; *A. nemo, alfredensis, almo, ima* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 127-129.

†*Ammicola adesta* sp. n. Oligocene Florida DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 102.

Amphithalamus sundayensis sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 521; *A. burtoni, africanus* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 126-127.

Ampullaria megastoma DOELLHO-JURADO 117.

Anculosa arkansensis sp. n. Arkansas, HINKLEY Washington U. S. Nation. Mus. Proc. 49 p. 587.

Assiminea capensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 125.

†*Assiminea aldra* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 101.

Barleeia smithi sp. n. S. Africa BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 134.

Bithynia dibrugarhensis sp. n. N. E. Assam, PRESTON Rec. Ind. Mus. 8 p. 540.

Blanfordia PILSBRY 310.

Campeloma with *C. lewisii* nom. n. for *Melantho coarctata* Walker Nautilus 28 pp. 125-127; *C. lewisii* BAKER 14.

†*Campeloma calamodontis* sp. n. Eocene New Mexico, COCKERELL Bull. Amer. Mus. Nat. Hist. 34 p. 120.

Cerostraca iredalei gen. & sp. n. (Rissoidae) Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 521.

Dardanula gen. n. (Rissoidae) IREDALE Trans. N. Z. Inst. 47 p. 452.

Diala africana, capensis, almo spp. n. S. Africa BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 122-123.

Epigrus insularis, gracilis spp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 pp. 520-521.

Estea gen. n. (Rissoidae), IREDALE Trans. N. Z. Inst. 47 p. 451; *E. roseola* nom. n. for *Rissoa rosea*, HUTTON IREDALE Trans. N. Z. Inst. 47 p. 453.

†*Euomphalus bullæformis* sp. n. Bornholm Silurian, HADDING Lund Univ. Årsskr. N.F. 11 Afd. 2 No. 4 p. 27; *E. rotundus, minor*, spp. n. Palaeozoic Canada, PARKS Trans. Can. Inst. 11 p. 61.

Fenella almo sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 134.

Haurakia gen. n. (Rissoidae), IREDALE Trans. N. Z. Inst. 47 p. 449; *H. Kermadecensis* sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 518.

Heliacus africanus sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 123.

Iravadia princeps sp. n. Calcutta, PRESTON Rec. Ind. Mus. 11 p. 480.

Isselia chiltoni sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 520.

Katyama nosophora gen. & sp. n. Japan, ROBSON Brit. Med. Journal 1915 pp. 201-203; *Katyama PILSBRY* 310.

Lironoba gen. n. (Rissoidae), IREDALE Trans. N. Z. Inst. 47 p. 450.

Litiopa copiosa sp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 292.

Littorinida limosa, lioneli, faminensis, angustiarum Straits of Magellan, PRESTON IN ADAMS J. Conch. Leeds 14 pp. 351-352.

Merclina gen. n. (*Rissoidae*), IREDALE Trans. N. Z. Inst. 47 p. 449.

Microsetia gisna, halia, helga, irma spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 123-133.

Nodulus africanus sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 125.

Notosetia gen. n. (*Rissoidae*), IREDALE Trans. N. Z. Inst. 47 p. 452; *N. electra* sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 519; *N. subflavescens* nom. n. for *Rissoa atomus*, Suter, IREDALE Trans. N. Z. Inst. 47 p. 453.

Nozeba gen. n. (*Rissoidae*), IREDALE Trans. N. Z. Inst. 47 p. 452.

Obortio lutosus sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. W. 39 p. 716.

Pachydrobia (Delavaya) pallidula sp. n. Indo-China, BAVAY & DAUTZENBERG J. Conchyliol. Paris 62 p. 149.

Paludestrina salsa, LONG 253.

Petterdiana brazieri, HEDLEY 186.

†*Pleuronotus ussiensis* sp. n. Devonian Siberia, TOLMATCHOFF Petrograd Trans. sect. Geol. Cab. de sa Majesté 8 pp. 198, 217.

Pyrgulopsis ozarkensis sp. n. Arkansas, HINKLEY Washington U. S. Nation. Mus. Proc. 49 p. 588.

Rissoella, Gray, IREDALE 209.

Rissoia demissa, regularis spp. n. Antarctic, SMITH Brit. Ant. Exp. 2 p. 65.

†*Rissoia* with *R. vitrea* var. n. *serrata*, *R. (Hyala) subglobulosa*, *R. (Cingulina) ventricosella* spp. n. Tertiary, CERULLI-IRELLI Paleontogr. Ital. 20 pp. 189-201.

Rissoidae, IREDALE 209.

Rissoina calia, eucosmia spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 130-131; *R. miltozona* sp. n. Lifu, TOMLIN J. Couch. Leeds 14 p. 321; *R.* with *R. excolpa, gisna, favilla, mazatlanica, helena, io, dina, peninsularis, adamsi, townsendi, barthelowi, lapazana, histia, burragei*, (N-8913 r)

nercina, effusa, californica, mexicana, cleo, dalli, coronadensis, signae spp. n. W. Coast of N. & C. America, BARTSCH Proc. U. S. Nat. Mus. 49 pp. 33-62.

†*Rissoina pleistocena* sp. n. Pleistocene California, BARTSCH Proc. U. S. Nat. Mus. 49 p. 54; *R. supralaevigata* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 101.

Sabanaea pyrcha, thalia spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 125-126.

Skenca Fleming, IREDALE 211.

Skencopsis gen. n. (Type *Turbo planorbis*), IREDALE Proc. Malac. Soc. 11 1915 p. 292.

Somatogyrus crassilabris sp. n. Arkansas, HINKLEY Washington U. S. Nation. Mus. Proc. 49 p. 558; *S.* with *S. wheeleri, annicoloides, crassilabris* spp. n. Arkansas, WALKER Nautilus 29 pp. 51-53; *Somatogyrus*, WALKER 433.

Stenothyra trigona, obesula spp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 293.

Subonoba gen. n. (*Rissoidae*), IREDALE Trans. N. Z. Inst. 47 p. 450.

Tropidorissoia gen. n. (*Rissoidae*) *T. taphrodes* sp. n. São Thomé, TOMLIN & SHACKLEFORD J. Conch. Leeds 14 p. 307.

Valvata tricarinata var. n. *infracarinata, basalis* N.E. United States, VANATTA Nautilus 28 pp. 104-105.

†*Valvata gregorii* sp. n. Mesozoic Arizona, ROBINSON Amer. J. Sci. 40 pp. 649-650.

Viviparus malleatus, JOHNSON 223.

Zebina cooperi sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 520.

CYCLOPHORIDAE, CYCLOSTOMATIDAE & TRUNCATELLIDAE.

Acmea Hartm. IREDALE 209.

Cyclophorus aborensis, C. (Glossostylus) bapuensis, sidiensis, kobocensis, oakesi spp. n. Abor Country, GODWIN-AUSTEN Rec. Ind. Mus. 8 pp. 494-495, 502.

Cyclotus, SCHEPMAN 354.

Diplopoma torrci sp. n. Cuba, RAMSDEN Nautilus 28 p. 134.

Diplommatina perobesa sp. n. Upper Rotung, PRESTON Rec. Ind. Mus. 8 p. 540.

Leptopoma with *L. diplochilus* varr. [n. ?] *typica*, *maculata*, *unicolor* Malay Archipelago, SCHEPMAN Amsterdam Bijdr. Dierk. Af. 20 pp. 28-30.

†*Pomatias saueri*, *salomoni* spp. n. Pleistocene Bavaria, GEYER Nachr. Bl. D. Malak. Ges. 47 pp. 65, 67.

Pterocyclos aborensis, *miriensis*, *spiramentum*, *brahmakundensis* spp. n. *P. magnus* Abor Country, GODWIN-AUSTEN Rec. Ind. Mus. 8 pp. 498-500; *P. prestoni*, B. & D. = *P. cochinchinensis*, Pfr. FULTON 149.

Rhytidopoma tollini sp. n. Cuba, RAMSDEN Nautilus 28 p. 135.

Schistoloma with *S. (Schistoloma) alta mindoroensis*, *romblonensis*, *sibuyanensis pygmaea*, *S. (S.) mcgregori tablasensis*, *webbi*, *S. (Holoma) quadrasi coronensis* sub spp. n. Philippines, BARTSCH. Proc. U. S. Nat. Mus. 49 pp. 198-204.

Spiraculum oakesi, *kempi*, *planum*, ? *S. luyorensis*, *S. minimum* spp. n. *S. nevilli* Abor Country; *S. putaensis* sp. n. Upper Burma, GODWIN-AUSTEN Rec. Ind. Mus. 8 pp. 496-497, 500-501.

CAPULIDAE, XENOPHORIDAE, ADEOBIDAE, LAMELLARIIDAE, NATICIDAE AND JANTHINIDAE.

†*Amanropsis martinezensis* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 142.

†*Brocchia laevis* varr. n. *pileata*, *lunulata* Tertiary B. I. var. *contii* nom. mut. for *Pileopsis depressa*, CERULLI-IRELLI Paleontogr. Ital. 20 pp. 207-209.

Calyptraea sinensis, GIESE 157.

†*Calyptraea diabloensis*, *martini* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 485.

Capulus hungaricus, GIESE 157.

Crepidula fornicata [ANON] 9; ORTON 295 & 296; ROBSON, 339; *C. unguiformis*, GIESE 157.

†*Crepidula pabloensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 485.

†*Euspira variabilis*, NEWTON 284.

Janthina nitens. BALDASSERONI 18.

†*Lunatia cowlitzensis* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 57.

Natica stimpsoni, *alfredensis*, *africana*, *nemo*, *saldontiana* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 137-140; *N. (Polinices) tenuicula* sp. n. Japan, SOWERBY Ann. Mag. Nat. Hist. 15 p. 166.

†*Natica pinyonensis* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 302; *N. pseudonutabilis* sp. n. Célèbes Oligocène, DOLLFUS Paléont. de Célèbes p. 34; *N. (Amauropsis) ariyalarensis* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 p. 218; *N. (Euspira) diabloensis*, *kirkensis*, (*Neverita*) *arnaldi*, *pabloensis* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 486-488; *N. (Gyrodex) lineata* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 pl. xiii.

Neoconcha insignis sp. n. Antarctic, SMITH Brit. Ant. Exp. 2 p. 68.

†*Neverita weaveri* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 57.

†*Orthonychia canavarii* sp. n. Palaeozoic Austria, GORTANI Pal. Ital. 21 p. 160.

†*Platyceras taramellii* sp. n. Palaeozoic Austria, GORTANI Pal. Ital. 21 p. 163; *P. yulei* sp. n. Ordovician Shan States, REED Pal. Ind. 6 (1) p. 20; *P. nasutum*, GIRTY 159.

Polinices ephelus sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. W. 39 p. 720.

Sigapatella hedleyi sp. n. New Zealand, SMITH Brit. Ant. Exp. 2 p. 84.

†*Sigarelus ceomanensis* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. 26 p. 217.

†*Sinum imperforatum* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 109.

†*Strophostylus* with *S. splendens* sp. n. Carboniferous Arkansas, GIRTY U. S. Geol. Surv. Bull. 593 pp. 124-125.

Vanikoro africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 140.

SCALIDAE.

†*Aclis supranitida* varr. n. *planata*, *interposita* Tertiary, CERULLI-IRELLI Paleontogr. Ital. 20 pp. 243-244.

Acrilla thalia sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 64.

Epitonium africanum, *aglaia* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 62-63; *E. hamatulæ* sp. n. E. India, PRESTON Rec. Ind. Mus. **11** p. 294.

Graphis africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 64; *Graphis*, Jeff., IREDALE **209**.

†*Scala* with *S. (Spiniscalæ) spinifera* var. n. *afinis*, *S. (S.) frondosa* var. n. *turriculata*, *S. (S.) muricata* var. n. *elongatula*, *reflexespinosa*, *S. (Gyroscalearia) pseudoscalaris* var. n. *spinosella*, *ventricosella*, *pseudocommutata*, *S. (G.) intricata*, *mariana* spp. n. Tertiary, CERULLI-IRELLI Paleontogr. Ital. **20** pp. 221-242.

EULIMIDÆ AND PYRAMIDELLIDÆ.

Burkillia gen. n. (Type *Odostomia fenestrata*, Jeff.), IREDALE Proc. Malac. Soc. **11** p. 337.

Chrysallida (Mormula) with *C. (M.) humilis chilkaënsis*, *C. (M.) ecclesia*, *nadiensis* spp. & subsp. n. E. India, PRESTON Rec. Ind. Mus. **11** pp. 294-296.

Cithna wallacei sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 533.

Cremula gen. n. (Type *Turbonilla clavula*, Lovén), IREDALE Proc. Malac. Soc. **11** p. 336.

Eulima exulata, *solitaria* spp. n. Antarctic, SMITH Brit. Ant. Exp. **2** p. 64; *Eulima*, JONKER **228**.

†*Eulima* with *E. bipartita*, *E. (Subularia) distincta* & var. *abbreviata* spp. & var. n. Tertiary CERULLI-IRELLI Paleontogr. Ital. **20** pp. 244-249; *E. bowdichi* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 82.

Eulimella macandrewi, (Forbes), IREDALE **209**.

Evalea, A. Ad., IREDALE **209**.

Hinemoa punicea gen. & sp. n. (Pyramidellidae) Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 531.

Leiostraca diauges sp. n. São Thomé, TOMLIN & SHACKLEFORD J. Conch. Leeds. **14** p. 308.

Melanella carifa, *icafra*, *alfredensis*, *iota*, *farica*, *thalia*, *asser*, *acrifia*, *cifara*,

irafea spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 65-69; *M. kermadecensis*, *perplexa*, *spinosa* spp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 532.

Menestho truncatula sp. n. Spitzbergen, ODNER Stockholm Vet. Ak. Handl. **54** No. 1 p. 175.

Mucronalia exquisita sp. n. Ceylon, SOWERBY Proc. Malac. Soc. **11** p. 214.

Niso alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 70.

†*Niso marianum* sp. n. Tertiary, CERULLI-IRELLI Paleontogr. Ital. **20** p. 251.

Noemiamea, IREDALE **209**.

†*Odostomia* with *O. lineolata* sp. n. Tertiary, CERULLI-IRELLI Paleontogr. Ital. **20** pp. 252-256.

Odostomia pithus sp. n. São Thomé, TOMLIN & SHACKLEFORD J. Conch. Leeds **14** p. 308; *O. (Odostomella) farica*, (*Equilina*) *turtoni*, (*Pyrgulina*) *africa*, (*Miralda*) *agana*, (*Menestho*) *carifa*, *rifaca*, *ficara*, (*Evalia*) *aethra*, *gea*, *cifara*, *acrifia*, (*Odostomia*) *irafea*, *icafra* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 85-92.

†*Parthenina* with *P. indistincta* var. n. *transiens*, *P. nassoides*, *semiornata*, *cylindrata* spp. n. Tertiary, CERULLI-IRELLI Paleontogr. Ital. **20** pp. 259-266.

Pyramidella (Orinella) africana *alfredensis*, *ima*, *P. (Actaeopyramis) norma*, *P. (Syrnola) pyrria* spp. n. *P. (S.) aganea* nom. n. for *Eulimella nivca*, Smith *P. (S.) tarpeia*, *hera* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 71-74.

†*Pyramidella plicosa* var. n. *lineolata*. Tertiary, CERULLI-IRELLI Paleontogr. Ital. **20** p. 252.

Pyramidellidae, IREDALE **209**.

Pyrgisculus, Monterosato, IREDALE **209**.

Pyrgulina insularis sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 531.

Raoulostraca inexpectata gen. & sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 532.

Scalenostoma suteri sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 533.

Stilifer, JONKER **228**.

Strombiformis, IREDALE **211**.

Subeulima magnifica sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 70.

Subularia perspicua sp. n. Kermadec Isds. OLIVER Trans. N. Z. Inst. **47** p. 533.

Synoia thomensis sp. n. São Thomé, TOMLIN & SHACKLEFORD J. Couch. Leeds **14** p. 308.

Tuyca, JONKER **228**.

Turbonilla oceanica, sculpturata spp. n. Kermadec Isds. OLIVER Trans. N. Z. Inst. **47** p. 530; *T. pyrgidium* sp. n. São Thomé, TOMLIN & SHACKLEFORD J. Couch. Leeds **14** p. 309; *T. (Ptycheulimella) erna*, (*Pselliogyra*) *adaba* spp. n. *T. (Strioturbonilla) secura* nom. n. for *Turbonilla obeliscus*, Gld. *T. (Pyrgolampros) angea*, (*Pyrgiscus*) *helena*, *atossa*, *tritonis*, *zenobia*, *maia*, *tefunta*, *apsa*, (*Cingulina*) *aglaia*, *callista*, (*Careliopsis*) *carifa*, (*Mormula*) *cifana* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 75-84; *T. phrikalea*, TOMLIN **406**.

†*Turbonilla* with *T. obliquata* var. n. *transiens*, *T. rufa* varr. n. *depressocostata*, *ventricosa*, *T. (Pyrgostylus) interposita* sp. n. Tertiary, CERULLI-IRELLI Paleontogr. Ital. **20** pp. 267-277; *T. (Ptycheulimella) ethellina* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 84.

Zastoma gen. n. (Type *Brachystomia rissoides*, (Hanley), IREDALE Proc. Malac. Soc. **11** p. 336.

HELICINIDAE.

†*Helicina posti* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 113.

Helicinidae, FULTON, **149**; **150**.

NERITIDAE, NERITOPSIDAE, TURBINIDAE, AND CYCLOSTREMATIDAE.

Alcyna exigua, HEDLEY **186**.

†*Amberleya di Stefanoi* sp. n. Jura Italy, ONETTI Rev. ital. paleont. Parma **21** p. 63.

Argalista gen. n. Type *Cyclostrema fluctuata*, Hutt., IREDALE Trans. N. Z. Inst. **47** p. 445.

†*Astraliium raymondi* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California **8** p. 480; *A. (Bolma) affine* var. n. *basituberculata*. Turonian Italy, BONGO Boll. Soc. geol. ital. **33** p. 466.

Calliostoma eucosmia, africana spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 161-162.

†*Calliostoma bicarinatum, splendens*, Cpr. var. *diabloensis* sp. & var. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California **8** pp. 481-482; *C. tampicum* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 111.

Cantharidus with *C. oliveri* nom. n. for *C. pupillus*, IREDALE Trans. N. Z. Inst. **47** p. 438.

Caporbis gen. n. (*Cyclostrematidae*) *C. africana* sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. p. 170.

Charisma gen. n. Genotype *C. compacta* sp. n. Port Macquarie, HEDLEY Proc. Linn. Soc. N. S. W. **39** pp. 711-712.

Clanculus alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 150.

Cyclostrema alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 169; *C. (Tubiola) innocens* sp. n. E. India, PRESTON Rec. Ind. Mus. **11** p. 296.

Cyclostremella farica, africana spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 169-170.

Cynisca gloriosa, alfredensis, africana spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 163-165.

Discopsis alfredensis, africana, turtoni spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 172-173.

Elachorbis gen. n. Type *Cyclostrema tatei*, Ang. IREDALE Trans. N. Z. Inst. **47** p. 443.

Gibbula thalia, hera, aglaia, medusa, rifaca spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 157-160; *G. strangei*, HEDLEY **186**; *G. dacostana*, HEDLEY **186**.

Leptogyra africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 173.

Leptothyra africana, carminea, alfredensis spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 147-149.

†*Leptothyra danvillensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California **8** p. 481.

Liotella gen. n. (*Liotiidae*), IREDALE Trans. N. Z. Inst. **47** p. 442.

Liotia botanica sp. n. N. S. Wales., HEDLEY Proc. Linn. Soc. N. S. W. **39** p. 710.

Lissotesta gen. n. Type *Cyclostrema micra*, T. Wds., IREDALE Trans. N. Z. Inst. **47** p. 442.

Margarites gemma sp. n. Antarctic *M. iris* W. of Falkland Isds., SMITH Brit. Ant. Exp. **2** p. 62, 91.

Minolia liricineta sp. n. Bitter Lakes Suez, SOWERBY Ann. Mag. Nat. Hist. **15** p. 167.

†*Nerita* (?) *biangulata* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. **8** p. 141; *N. cowlitzensis* sp. n. Eocene N. America DICKERSON P. Calif. Ac. **5** p. 58.

Neritina fluviatilis, S. **346**; *Neritina*, SCHEPMAN **354**.

†*Neritina martini* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. **5** p. 59; *N. serratiliniiformis* sp. n. Pleistocene Bavaria, GEYER NachrBl. D. Malak. Ges. **47** p. 66.

Phasianella africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 145.

Philorene, gen. n. with *P. texturata* sp. n. Kermadec Isd., OLIVER Trans. N. Z. Inst. **47** p. 517.

Pondorbis gen. n. (*Cyclostrematidae*) *P. alfredensis* sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 171.

Rhodinoliota gen. n. (*Liotiidae*), TOMLIN J. Conch. Leeds **14** p. 267.

Septaria, SCHEPMAN **354**.

Solariellopsis glyptus, HEDLEY **186**.

Tallorbis ampullus, HEDLEY **186**.

†*Tegula* (*Chlorostoma*) *danvillensis, nashi* spp. n. Tertiary California, CLARK

Bull. Dept. Geol. Univ. California **8** p. 482.

Teinostoma alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 165.

Thorista nom. n. for *Anthora*, IREDALE Trans. N. Z. Inst. **47** p. 436.

Thoristorella gen. n. (*Trochidae*), IREDALE Trans. N. Z. Inst. **47** p. 436.

†*Trochus* (?) *volaianus* sp. n. Ordovician Austria, VINASSA DE REGNY Pal. Ital. **21** p. 113.

Vitriulla rifaca, cifara, ficara, facira, V. (Docomphala) arifca spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** pp. 167-168.

Zalipais gen. n. for *Cyclostrema lissum* Suter, IREDALE Trans. N. Z. Inst. **47** p. 442.

STOMATIDAE, HALIOTIDAE, PLEURO-TOMARIIDAE BELLEPHONTIDAE AND FISSURELLIDAE.

†*Bellerophon buccinalus* sp. n. Sweden Silurian, HEDE Lund Univ. Årsskr. N.F. **11** Afd. 2 No. 6 p. 36; *B. taramelli* sp. n. Devon Austria, GORTANI Boll. Com. Geol. Ital. **43** p. 250; *B. striatus*, KIRCHNER **237**.

Diodora Gray, IREDALE **209**.

Emarginula, HEDLEY **186**.

†*Fissurella* (?) *behri* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. **8** p. 141; *F. (Cremides) ceryx* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 115.

Fissuridea bollonsi sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 515.

Haliotis alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 175; *H. (Padollus) pourtalesii* & *H. (P.) dalli* nom. n. for *H. pourtalesii*? Dall, HENDERSON Proc. U. S. Nat. Mus. **48** pp. 660-661.

Hemitoma, HEDLEY **186**.

†*Hormotoma acuminata* sp. n. Palaeozoic Canada, PARKS Trans. Can. Inst. **11** p. 17.

Lucapina, DALL **99**.

Montfortia, HEDLEY **186**.

Montfortula gen. n., IREDALE Trans. N. Z. Inst. **47** p. 433.

†*Murchisonia (Goniostropha) vinassai* sp. n. Devon Austria, GORTANI Boll. Com. Geol. Ital. **43** p. 251.

†*Pleurotomaria* with *P. arkansana* sp. n. Carboniferous Arkansas, GIRTY U. S. Geol. Surv. Bull. **593** pp. 113-114; *P. (?) trichinopolitensis* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. **26** p. 215.

Puncturella africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 177.

Schismope pacificus sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 514.

ACMAEIDAE AND PATELLIDAE.

Acmaea with *A. mufria* sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. W. **39** pp. 712-713.

†*Acmaea martinezensis* sp. n. California Eocene, DIKERSON Univ. Cal. Pub. Bull. Dept. Geol. **8** p. 140.

Ansates, Sowerby, IREDALE **209**.

Atalaemea gen. n. (*Acmaeidae*), IREDALE Trans. N. Z. Inst. **47** p. 427.

Cellana with *C. craticulatus prolexus*, *hedleyi corrugata* & *C. vulcanicus scopulinus* subsp. & spp. n. Kermadec Isds., IREDALE Trans. N. Z. Inst. **47** pp. 311-314; *C.* with *C. radians* var *perana* nom. n. for *argentea* Q. & G., IREDALE Trans. N. Z. Inst. **47** pp. 430-433.

Helcioniscus variegatus, HEDLEY **186**.

Notoacmea gen. n. (*Acmaeidae*) with *N. suteri* nom. n. for *Acmaea roseoradiata* Suter, IREDALE Trans. N. Z. Inst. **47** p. 428.

Patella, HEDLEY **186**.

Radiaemea gen. n. (*Acmaeidae*), IREDALE Trans. N. Z. Inst. **47** p. 427.

Tectura, Gray, IREDALE **209**.

INOERTAE SEDIS.

†*Archinacella dubiosa* sp. n. Sweden Silurian, HEDE Lund Univ. Årsskr. N.F. **11** Afd. 2 No. 6 p. 35.

†*Callonema blanfordi* sp. n. Silurian Shan States, REED Pal. Ind. **6** (1) p. 79.

Duplicaria ballina sp. n. Trial Bay, HEDLEY Proc. Linn. Soc. N. S. W. **39** p. 730.

†*Eotomaria (?) hopkinsi* sp. n. Palaeozoic Canada, PARKS Trans. Can. Inst. **11** p. 60.

†*Liospira stevensoni* sp. n. Palaeozoic Canada, PARKS Trans. Can. Inst. **11** p. 68.

†*Maclurea subovata* nom. prov. *acuta* sp. n. Palaeozoic Canada, PARKS Trans. Can. Inst. **11** pp. 19-21.

Miralda austro-pacifica sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. **47** p. 531.

Mollusque énigmatique commensal, HERPIN **193**.

†*Pycnomphalus colemani* sp. n. Palaeozoic Canada, PARKS Trans. Can. Inst. **11** p. 65.

Opisthobranchia (INCLUDING PTEROPODA AND HETEROPODA).

†*Actaeon sublaevigatus* sp. n. Cretaceous S. India, SPENGLER Beitr. Pal. Geol. Ost. Ung. **26** p. 234.

Actaeonidae, VON JHERING **217**.

Acteocina smithi sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 4.

†*Acteocina squarrosa* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 33.

†*Acteon tampæ* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 32.

Aeolididae VON JHERING **217**.

Aeolis papillosa, RETZIUS **332**.

Amphorina alberti, VAYSSIÈRE **421**.

Brocktonia gen. n. (Type *Cryptaxis crebripunctatus*, Jeff.), IREDALE Proc. Malac. Soc. **11** p. 340.

†*Bullaria (Haminea?) sulcobasis* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 35.

Bullidae, VON JHERING **217**.

†*Conularia haydeni* sp. n. Carboniferous Kashmir, DIENER Pal. Ind. **5** (2) p. 116.

Cylichna africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 5.

Cylichnina strigella, (Lovén), IREDALE **209**.

Cylindrobulla turtoni sp. n. S. Africa,
BARTSCH Smiths. Inst. U. S. Nat. Mus.
Bull. **91** p. 8.

Dorididae, VON JHERING **217**.

Doriopsididae, VON JHERING **217**.

Doris verrucosa, FODERÀ **136**.

Haminea alfredensis sp. n. S. Africa,
BARTSCH Smiths. Inst. U. S. Nat. Mus.
Bull. **91** p. 6.

Hermaca dendritica, CUCAGNA &
NUSBAUM-HILAROWICZ **93**; *Hermaca*
dendritica, CUCAGNA & NUSBAUM **94**.

†*Hyalolithes* with *H.* (*Orthotheca*)
irravadicus, *loczyi*, *advena* spp. n.
Ordovician Shan States REED Pal. Ind.
6 (1) pp. 18-20.

†*Hyalolithes fabaceus*, HEDE **184**.

Leuconopsis pacifica sp. n. Kerimadec
Isds., OLIVER Trans. N. Z. Inst. **47** p.
545.

Limacina, IREDALE **211**.

Pleurobranchidae, VON JHERING **217**.

Pleurophyllidiidae, VON JHERING
217.

Pteropoda, VAYSSIÈRE **422**.

Ptisamula limnaeoides, ODHNER **288**.

Retusa iredaleana sp. n. N. S. Wales,
HEDLEY Proc. Linn. Soc. N. S. W. **39** p.
752.

Ringicula truncata sp. n. Ceylon,
SOWERBY Proc. Malac. Soc. **11** p. 214;
R. turtoni, *africana* spp. n. S. Africa.
BARTSCH Smiths. Inst. U. S. Nat. Mus.
Bull. **91** p. 7; *Ringicula*, HEDLEY **186**.

Runcina, SALVADORI & CAMERANO **351**.

Styliola africana sp. n. S. Africa,
BARTSCH Smiths. Inst. U. S. Nat. Mus.
Bull. **91** p. 3.

Tethyidae, VON JHERING **217**.

Tethys (*Neaplysia*) *californica*,
COCKERELL **75**.

Tornatina estriata Preston = *T. soror*,
Preston, PRESTON Rec. Ind. Mus. **11** p.
297; *Tornatina* A Ads., IREDALE **211**.

Tornatinidae, VON JHERING **217**.

Triopha, COCKERELL **79**.

Tritoniidae, VON JHERING **217**.

Pulmonata.

APERIDAE TESTACELLIDAE AND SELENITIDAE.

Apera with *A. gibbonsi rubella*, *A. g.*
gracilis, *A. g. lupata* & var. n. *duplex*
subsp. n. *A. parva*, *dimidia*, *sexangula*
spp. n. S. Africa *A. gibbonsi*, *purcelli*,
burnupi fig., WATSON Ann. Natal Govt.
Mus. **3** pp. 193-219.

Ennea affectata, FULTON & E.
rosenbergiana, PRESTON FULTON **149**.

Glandina guttata, VIGNAL **424**.

†*Spiraxis* ? *tampae* sp. n. Oligocene
Florida, DALL Smiths. Inst. U. S. Nat.
Mus. Bull. **90** p. 31.

Streptaxis gudei sp. n. Tonkin, FULTON
Proc. Malac. Soc. **11** p. 222.

Testacella maugei, WATSON **438**; *T.*
scutulum, OLDHAM **290**.

Varicella nemorensis Ads. fig. WATSON
Ann. Natal Govt. Mus. **3** p. 250.

LIMACIDAE, PHYLAMYCIDAE AND ZONITIDAE.

Arion empiricorum, KÖNIG **239**.

Atopos subgen. n. *Parapodangia* A.
(*P.*) *gravelyi* sp. n. Lower Burma, GHOSH
Rec. Ind. Mus. Calcutta **11** p. 153.

Dyakia venator sp. n. Borneo, GUDE
Proc. Malac. Soc. **11** p. 321.

Hemiplecta, SHEPMAN **354**.

Hyalinia cheliella var. n. *atlasica*, *H.*
(*Zonitoides*) *aguergourensis* sp. n.
Morocco, PALLARY Bull. Mus. Paris **1915**
p. 21; *H. excavata*, BOYCOTT **46**;
Hyalinia, BOYCOTT **45**.

Limax flavus, maximus, COCKERELL
76; *L. flavus*, S. **346**.

Megaustenia nom. nov. for *Cryptosoma*,
Theob. *praeocc*, COCKERELL Nautilus **1912**
p. 70. [Previously imperfectly re-
corded.]

Nanina (*Xesta*) *dejeani* sp. n. Thibet,
DAUTZENBERG J. conchyliol. Paris **62** p.
154.

Peltatus polystephes sp. n. British
East Africa, TOMLIN Proc. Malac. Soc. **11**
p. 319.

Suterella gen. n. (*Zonitidae*), IREDALE
Trans. N. Z. Inst. **47** p. 478.

Vitrea with *V. cryptomphala* sp. n.
Alabama, CLAPP Nautilus **29** p. 25.

Vomanus subgen. n. (*Janellidae*),
IREDALE Trans. N. Z. Inst. 47 p. 483.

Xesta, SOHEPMAN 354.

Zonites leopoldianus, HESSE 197.

Zonitoides excavatus, S. 346.

ENDODONTIDAE.

Cavellia gen. n. Type *Helix biconcava*,
Pfr., IREDALE Trans. N. Z. Inst. 47 p.
481.

Egestula gen. n. Type *Helix egesta*,
Gray, IREDALE Trans. N. Z. Inst. 47 p.
481.

Fectola gen. n. Type *Helix infecta*,
Rve., IREDALE Trans. N. Z. Inst. 47 p.
481.

Mocella gen. n. Type *Helix cornicul-*
um, Rve., IREDALE Trans. N. Z. Inst. 47
p. 481.

Phelussa gen. n. (*Eudodontidae*),
IREDALE Trans. N. Z. Inst. 47 p. 479.

HELICIDAE.

Acanthinula, HESSE 195.

Alba marocana sp. n. Morocco
PALLARY Bull. Mus. Paris 1915 p. 22.

Albersia, SOHEPMAN 354.

Archelix ahmarina var. n. *ksebiana*.
Morocco, PALLARY Bull. Mus. Paris 1915
p. 27.

Ashmunella with *A. tetrodon*, *A. t.*
mutator, *inermis*, *A. danielsi*, *A. d.*
dispar, *A. mogollonensis* spp. & subspp.
n. New Mexico, PILSBRY & FERRISS
Nautilus 29 pp. 15, 29-35, 41-42.

Buliminopsis abbreviatus sp. n. Ton-
kin, BAVAY & DAUTZENBERG J. conchy-
liol. Paris 62 p. 150.

Chloritis verrucosa sp. n. Tenimber
Isds. FULTON Proc. Malac. Soc. 11 p. 323;
Chloritis, RIDDLE 334.

†*Dimorphoptylchia*, WENZ 439.

Dorcasia with *D. rogersi* sp. n. *D.*
alexandri, Gray var. *perspectiva* var.
n. S. Africa, CONNOLLY Ann. S. Af. Mus.
13 pp. 161-172, 177.

Dorcasinae subfam. n. (*Helicidae*),
CONNOLLY Ann. S. Af. Mus. 13 p. 134.

Eremina duroi, BETTGER 35.

Euparypha pisana varr. n. *ampul-*
lacea, *gracilis*, *E. dehnei* var. n. *turgida*
Morocco, PALLARY Bull. Mus. Paris 1915
p. 22.

Helicella gigaxii varr. n. *alba*, *hyalo-*
zonata England, OLDHAM J. Conch.
Leeds 14 p. 306; *H. gigaxii* BOYCOTT &
JACKSON 48; OLDHAM 289; *H. virgata* m.
sinistrorsum GYNGELL 173.

†*Helicella* (*Candidula*) *crayfordensis*
sp. n. Pleistocene England, KENNARD &
WOODWARD Proc. Malac. Soc. 11 p. 270.

Helicogena pomatia, HILBERT 199.

Helix aspersa & var. *exalbida*, STELFOX
390; *H. bulbus*, CONNOLLY 86; *H. car-*
piensis, BOFILL Y POCH 36; *H. hortensis*,
JOHNSON 222 & 224; *H. hortensis* var.
fascialba, JOLLIFFE 227; *H. nemoralis*,
ARKELL 12 & MATTHEW 263; *H. nodifera*,
Pfr. FULTON 150; *H. obvia*, LA BAUME
243; *H. pisana*, CHACE 60; *H. pomatia*,
BOULANGÉ 41 & FLOSSNER 135; *H. rud-*
erata, *diodonta*, *tecta*, *zelebori*, *redten-*
bacheri, *joppensis*, *simulata*, *cretica*,
instabilis, HESSE 197; *H. (Ganesella?)*
mellea sp. n. Indo-China, BAVAY &
DAUTZENBERG J. conchyliol. Paris 62 p.
147; *H. (Macularia) pauli* sp. n.
Morocco, DAUTZENBERG J. conchyliol.
Paris 62 p. 153.

†*Helix veterana veterina* subsp. n.
Eocene Wyoming, COCKERELL Bull.
Amer. Mus. Nat. Hist. 34 p. 117.

Hygromia hispida var. *nana*, BOWELL
43.

Massylaea rerayana var. n. *alta*
Morocco, PALLARY Bull. Mus. Paris 1915
p. 27.

Metatheba subgen. n. Type *Theba*
samsunenensis, Pfr. HESSE NachrBl. D.
Malak. Ges. 47 p. 55.

Oreohelix cooperi berryi subsp. n.
Montana, PILSBRY *Nautilus* 29 p. 48; *O.*
(*Radiocentrum*) *hachetana*, *O. (R.) h.*
cadaver, *O. (R.) ferrissi*, *O. (R.) f.*
morticina spp. & subspp. n. Florida,
PILSBRY Philadelphia Proc. Acad. Nat.
Sci. 67 pp. 330-334.

Papuina, SOHEPMAN 354.

Paratheba subgen. n. Type *Theba*
fruticola, Kryn., HESSE NachrBl. D.
Malak. Ges. 47 p. 55.

Planispira subatacta sp. n. West
Celebes, FULTON Proc. Malac. Soc. 11 p.
322; *P.* with *P. (Cristigibba) leptocheila*
var. [n?] *efasciata* Waigeu, SOHEPMAN
Amsterdam Bijdr. Dierk. Af. 20 pp. 20-
21; *P. quadrifasciata*, GUILLOU, FULTON
150.

Plectopylis (Endothyra) oakesi, gregorsoni, miriensis, P. (Chersaccia) williamsoni, bedfordi, P. (Endoflon) aborensis, P. (Sinicola) babbagei spp. n. Abor Country, GUDE Rec. Ind. Mus. 8 pp. 504-512.

Plectotropis austeni sp. n. Upper Rotung, PRESTON Rec. Ind. Mus. 8 p. 537; *Plectotropis*, SCHEPMAN 354.

†*Pleurodonte eohippina* sp. n. Eocene Wyoming, COCKERELL Bull. Amer. Mus. Nat. Hist. 34 p. 119.

Polygyra inflecta mobilensis var. n. Alabama, CLAPP Nautilus 28 p. 128.

Praticolella with *P. mobiliana floridana* var. n. *P. bakeri* sp. n. *P. jejuna clavis* var. n. Florida, VENATTA Philadelphia Proc. Acad. Nat. Sci. 67 pp. 194-198.

Pyramidula rupestris, BOWELL 42.

Sonorella hachitana flora, S. h. peloncilensis subspp. n. Florida, PILSBRY Philadelphia Proc. Acad. Nat. Sci. 67 pp. 347-340; *Sonorella ferrissi, dragonensis, apache, bartschi, santantana, walkeri & v. aquacalientensis, clappi, granulatissima occidentalis, tumamocensis, papagorum, eremita, sitiens & s. arida & s. comobabiensis, aslmini copax & a. ambigua, vespertina, baboquivariensis & b. depressa* spp. & subspp. n. Arizona, PILSBRY & FERRISS Philadelphia Proc. Acad. Nat. Sci. 67 pp. 368-371, 384, 393-398, 401-411, 414-417.

Stenopylis, FULTON 149.

†*Strobilops* with *S. (S.) cossmanni* Upper Eocene France; *S. (S.) uniplicata* var. *depressa, S. (S.) fischeri* Tertiary Germany; *S. (S.) romani* Tertiary France spp. & var. n., WENZ N. Jahrb. Min. Stuttgart 2 1915 pp. 72-86.

Tachea, FRANKENBERGER 140.

†*Tachea*, FRANKENBERGER 140.

Theba melitensis Upper Euphrates; *T. hemitrichia* Bulgaria spp. n., HESSE NachrBl. D. Malak. Ges. 47 pp. 58-60; *Theba*, HESSE 195.

Trigonephrus with *T. namaquensis (M. & P.)* var. n. *procerus, T. ambiguosus (Fér.)* var. n. *compactus* S. Africa, CONNOLLY Ann. S. Af. Mus. 13 pp. 140-161, 176.

Trochula antoniae sp. n. Morocco, PALLARY Bull. Mus. Paris 1915 p. 26;

T. filocincta sp. n. Asia Minor, HESSE NachrBl. D. Malak. Ges. 47 p. 61.

Tulbaghinia, CONNOLLY 86.

Vallonia sonorana sp. n. Florida, PILSBRY Philadelphia Proc. Acad. Nat. Sci. 67 p. 345.

†*Vallonia moguntiacca* sp. n. Cainozoic Germany, WENZ NachrBl. D. Malak. Ges. 47 p. 41.

Xanthomelon, RIDDLE 334.

Xerophila brivesi, lamprierei, goundafiana, thomsoni, embareki, hassaniana, taiebi, youssefi spp. n. Morocco, PALLARY Bull. Mus. Paris 1915 pp. 23-26.

BULIMIDAE AND BULIMULIDAE.

Bulimulus schiedeanus, CLAPP 68.

†*Bulimulus (Hyperaulax) tampae, ballistae, tortilla, remolina* spp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 pp. 26-27.

†*Grangerella megastoma* gen. & sp. n. (*Bulimulidae*) Eocene Wyoming, COCKERELL Bull. Amer. Mus. Nat. Hist. 34 p. 116.

Placostylus (Callistocharis) subroseus sp. n. Viti Isds., FULTON Proc. Malac. Soc. 11 p. 242.

BULIMINIDAE, UROCOPTIDAE AND PUPIDAE.

Bifidaria (Bensonella) landurensis sp. n. India, PILSBRY Nautilus 29 p. 73.

Buliminus (Mauronapacus) issarnensis sp. n. Morocco, PALLARY Bull. Mus. Paris 1915 p. 27.

Cerion, BARTSCH 22.

Clausilia duporti, flaveola spp. n. Tonkin, BAVAY & DAUTZENBERG J. conchyliol. Paris 62 pp. 151-152; *C. marteli* sp. n. Thibet, DAUTZENBERG J. conchyliol. Paris 62 p. 155; *C. (Phaedusa) annandalei* sp. n. Upper Rotung, PRESTON Rec. Ind. Mus. 8 p. 538; *C. falciformis* var. *montana*, MILDFF., FULTON 149; *C. bidentata*, BOYCOTT 47; *Clausilia*, COOKE 88 & SMITH 372.

†*Clausilia*, COOKE 88.

†*Eucaelodium eophilum* sp. n. Eocene Wyoming, COCKERELL Bull. Amer. Mus. Nat. Hist. 34 p. 117.

Holospira bilamellata longa form. n.
H. b. heliophila, insolata, media subspp.
 n. Florida, PILSBRY Philadelphia Proc.
 Acad. Nat. Sci. **67** pp. 337-339; *H.*
danielsi, campestris & c. cochisei, mil-
lestriata, arizonaris mularis, ferrissi
fossor, f. sanctaecrucis spp. & subspp.
 n. Arizona, PILSBRY & FERRISS Philadel-
 phia Proc. Acad. Nat. Sci. **67** pp. 373-
 380, 386-388.

Microceramus longus sp. n. Cuba,
 HENDERSON Nautilus **28** p. 136.

†*Microcerion floridanum* gen. & sp. n.
 (Cerionidae), Oligocene Florida, DALL
 Smiths. Inst. U. S. Nat. Mus. Bull. **90** p.
 29.

Orcula bulgarica sp. n. Bulgaria,
 HESSE NachrBl. D. Malak. Ges. **47** p. 62.

Pupoides inornatus sp. n. S. Dakota,
 VANATTA Nautilus **29** p. 95.

†*Pupoides pilsbryi* sp. n. Oligocene
 Florida, DALL Smiths. Inst. U. S. Nat.
 Mus. Bull. **90** p. 29.

Stenogyra [Rumina] decollata, WILLE
442.

Tomigerus, FULTON **149**.

Urocoptidae, CLAPP **72**.

Urocoptis (Arangia) scobmiata sp. n.
 Cuba, RAMSDEN Nautilus **28** p. 133.

Vertigo with *V. alabamensis & V. a.*
concehensis sp. & subspp. n. Alabama,
 CLAPP Nautilus **28** p. 137.

STENOGYRIDAE AND ACHATINELLIDAE.

Achatinella sowerbyana thurstoni, A.
s. laiensis, A. s. *dextroversa*, A. s. *roseo-*
plica subspp. n. A. (*Achatinellastrum*)
 with A. (A.) *casta margarete*, A. (A.)
spaldingi, A. (A.) *thaamuni* (sic)
 [? *thaamuni*] spp. & subspp. n. *Acha-*
tinella s. str. with A. *turgida perplexa*,
A. t. simulacrum, A. *leucorraphe irwini*,
A. swifti chromataeme, A. *apexfulva*
beata, A. a. *aloha*, A. *valida kahukuensis*
 subspp. n. Hawaiian Isds., PILSBRY Man.
 Conch. **22** Pt. 88 pp. 177-354.

Achatinellidae, PILSBRY **312** & HYATT
 in PILSBRY **205**.

Amastra with A. (*Cyclomastra*) *obesa*
aurora, A. (C.) *metamorphia*, A. (C.) *m.*
debilis, A. (C.) *antiqua kawaihapaiensis*,
umbilicata arenarum, *fragilis*, *ultima*,
 A. (*Metamastra*) *eos*, *transversalis*
bryani, *reticulata vespertina*, A. *kauna-*
kakaiensis, *kalamaulensis*, *humilis*

moomomiensis, *h. sepulta*, *nubilosa*
georgii, *albocincta*, *goniops*, *lahainana*,
neglecta, *subroror auwahiensis*, *nubigena*,
melanosis kauensis spp. & subspp. n.
 Hawaiian Isds., PILSBRY Man. Conch.
21 Supple. Pts. 89-90 pp. 18-52.

Amastriidae, PILSBRY **312**.

Anriculella with A. *diaphana caecu-*
minis, A. *straminea*, *olivacea*, *montana*,
minuta, *perversa*, *turritella*, *serrula*,
tantalus, *flavida*, *lanaiensis* spp. &
 subspp. n. Hawaiian Isds., PILSBRY Man.
 Conch. **21** Supple. Pt. 90 pp. 71-111.

Bulinus subgen. *Pseudoclavator*
 Germain, P. Nautilus **28** 1914 p. 60.

Cæcilioides gundlachi, CLAPP **70**.

Carelio, PILSBRY **312**.

Curvella caloraphe, Preston fig.
 WATSON Ann. Natal. Govt. Mus. **3** p.
 250.

Elasmias with *E. luakahaense*,
anceyanum spp. n. Hawaiian Isds.,
 PILSBRY Man. Conch. **21** Supple. Pt. 90
 pp. 113-128.

Ferussacia atlasica & var. minor sp.
 & var. n. Morocco, PALLARY Bull. Mus.
 Paris **1915** p. 27.

Gulickia gen. n. Type *G. alexandri*
 sp. n. Hawaiian Isds., PILSBRY Man.
 Conch. **21** Suppl. Pt. 90 p. 112.

Laminella with *L. gravida kalihensis*,
g. aurantium, *g. waianaensis* subspp. n.
 Hawaiian Isds., PILSBRY Man. Conch. **21**
 Supple. Pt. 90 pp. 52-56.

Leptachatina with *L. popourellensis*,
sagittata, *oryza hesperia*, o. *arus*, *L.*
dormitor, *somniator*, *L. opipara manana*,
L. mcgregori, *L. (Angulidens) microdon*,
hyperodon, *L. (Ilikala) nematoglypta*
 spp. & subspp. n. Hawaiian Isds. PILSBRY
 Man. Conch. **21** Supple. Pt. 89 pp. 1-14.

Newcombia, PILSBRY **312**.

Partulina with *P. thwingi* sp. n. *P.*
virgulata var. n. *kaluaahacola*, *P.*
subpolita sp. n. *P. dwigthi* var.
occidentalis, *P. redfieldi* var. *kamaloensis*
 varr. n. *P. physa konana* subspp. n.
 Hawaiian Isds., PILSBRY Man. Conch. **22**
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Panahia, PILSBRY **312**.

Pterodiscus, PILSBRY **312**.

Tornatellinidae PILSBRY **312**.

SUCCINEIDAE, VERONICELLIDAE,
AND ONCHIDIIDAE.

Onchidium, SCHEPMAN 354.

Succinea putris, *pfeifferi*, S. 346.

AURICULIDAE, LIMNAEIDAE, PHYSIDAE,
CHILINIDAE AND SIPHONARIIDAE.

Aeroloxus lacustris, POPPLE 319.

Ancylus fluviatilis, POPPLE 319.

Gnollachia, DALL 105; PILSBY 313.

Kerguelenia innominata nom. n. for
Siphonaria lateralis, Gld., IREDALE Trans.
N. Z. Inst. 47 p. 478.

Limnaea [vide etiam *Limnea* et
Lymnaea], SCHEPMAN 354; *L. auricularia*,
S. 346; *L. truncatula* PALLARY 300.

†*Limnea* [vide etiam *Limnaea* et
Lymnaea] *hopii* sp. n. Mesozoic Arizona,
ROBINSON Amer. J. Sci. 40 pp. 650-651.

Lymnaea [vide etiam *Limnea* et
Limnaea], COLTON 84 & 85; *L.*
(*Pseudosuccinea*) *columella* VANATTA
418.

Lymnaeidae, BAKER 16.

Marinula with *M. tristanensis* sp. n.
Tristan d'Acunha etc. *M. velaini* nom. n.
for *M. nigra*, Phil. CONOLLY Ann. S. Af.
Mus. 13 pp. 108, 113; *M. tristanensis*
ROBSON 337.

Otina auricula (Turt), IREDALE 209.

Planorbis (*Gyraulus*) *labiatus*, BENSON
fig., PRESTON Fauna Brit. Ind. Moll.
Gast. & Pel. 1915 p. 119; *P. glaber*,
vortex, *carinatus*, S. 346; *P. lentus*
WALKER 434.

†*Planorbis tampaensis*, *P. (Torquis)*
elisis spp. n. Oligocene Florida DALL
Smiths. Inst. U. S. Nat. Mus. Bull. 90 pp.
30-31.

Pythia, SCHEPMAN 354.

Siphonaria with *S. raoulensis*,
cheesemani, *macaulayensis*, & *m. perplexa*,
S. amphibia spp. & subsp. n.
Kermadec Isds. OLIVER Trans. N. Z.
Inst. 47 pp. 445-448; *S. virgulata* sp. n.
N. S. Wales, HEDLEY Proc. Linn. Soc. N.
S. W. 39 p. 751.

Siphonariidae, VON JHERING 217.

INCERTAE SEDIS.

Microparmarion SCHEPMAN, 354.

Scaphopoda.

†*Dentalium martini* sp. n. Célèbes
Oligocène DOLLEUS Paléont. de Célèbes p.
35; *D. molengraaffi*, *nanngulanense* spp.
n. Java Eocene, MARTIN Leiden Samml.
Geol. Reichsmus 2 p. 179; *D. sexangulum*
MELI 266.

Pelecypoda or Lamellibranchia.

GENERAL.

Lamellibranchia, HEATH 183.

†*Lamellibranchia*, ALLEN 4.

TETRABRANCHIA.

OSTRACEA.

†*Anomia triadica* sp. n. Trias
Kashmir, DIENER Pal. Ind. 5 (1) p. 95.

Crassostrea, L. 242.

†*Exogyra upatoiensis*, *ponderosa*
erraticostata, *costata cancellata* sp. &
varr. n. Southeastern U. S. Cretaceous,
STEPHENSON U. S. Geol. Surv. Prof.
Paper No. 81 pp. 46, 49, 53.

Meleagrina Lk., IREDALE 211.

Melina, Retz., IREDALE 211.

Ostrea edulis, HILLMAN 200.

†*Ostrea buwaldana weaveri* spp. n.
California Eocene, DICKERSON Univ. Cal.
Pub. Bull. Dept. Geol. 8 p. 127; *O.*
calabra sp. n. Jura Italy, ONETTI Rev. ital.
paleont. Parma 21 p. 48; *O. sultani.*
puruensis, *jogjacartensis* spp. n. Java,
Eocene, MARTIN Leiden Samml. Geol.
Reichsmus. 2 pp. 181, 182; *O. vaughani*
sp. n. Oligocene Florida, DALL Smiths.
Inst. U. S. Nat. Mus. Bull. 90 p. 123; *O.*
virginica, SHIMER 362; *Ostrea*, JOLEAUD
226.

Placenta Retz., IREDALE 211.

PECTINACEA.

†*Aviculopecten middlemissii* sp. n.
Carboniferous Kashmir, DIENER Pal.
Ind. 5 (2) p. 18.

Chlamys cellularis sp. n. Kermadec
Isds., OLIVER Trans. N. Z. Inst. 47 p.
554; *C. consociata* sp. n. New Zealand,
SMITH Brit. Ant. Exp. 2 p. 89.

†*Chlamys ruttleri* sp. n. Java, Eocene,
MARTIN Leiden Samml. Geol. Reichsmus.
2 p. 182.

†*Hinnites colosseus* sp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 p. 438.

Lima africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 187.

†*Lima* (?) *claytonensis*, *haseltinei* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 126; *L. perrini* sp. n. California Eocene, WARING J. Geol. Chicago 22 p. 782.

Limatula with *L. insularis* sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 554.

†*Mysidioptera eximia* sp. n. Trias Kashmir, DIENER Pal. Ind. 5 (1) p. 91.

Pecten (*Chlamys*) *scabricostatus* sp. n. W. Australia, SOWERBY Ann. Mag. Nat. Hist. 15 p. 168; *Pecten* KÜPPER 241.

†*Pecten abendanoni* sp. n. Célèbes Oligocène, DOLLFUS Paléont. de Célèbes p. 39; *P. (Chlamys) middlemissi* sp. n. Trias Kashmir DIENER Pal. Ind. 5 (1) p. 111; *P.* with *P. (Plagioctenium) bilineatus*, (*Pecten*) *cierboensis*, (? *Plagioctenium*) *crassiradiatus*, (*Pecten*) *raymondi*, (*Pallium*) *holcayi* (*Patinopecten*) *weaveri* spp. n. Tertiary California CLARK Bull. Dept. Geol. Univ. California 8 pp. 448-455; *P. obrutus* BLANKENHORN 33; *Pecten* FABIANI 127.

Spondylus with *S. raoulensis* sp. n. Kermadec Isds., OLIVER Trans. N. Z. Inst. 47 p. 553; *Spondylus* with *S. reevei* nom. n. for *S. hystrix*, Rve., *S. imperialis* var. *purus*, *S. electus*, *lamyi*, *igneus* [Loc. ?]; *S. depressus*, New Caledonia var. & spp. n.; *S. smithi* nom. n. for *S. radula*, Rve.; *S. gravis* Philippine Isds.; *S. iredalei* Kermadec Isds. spp. n., FULTON J. Conch. Leeds 14 pp. 331-333, 353-362.

MYTILACEA.

Atrina alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 183.

†*Avicula pastannahensis* sp. n. Trias Kashmir, DIENER Pal. Ind. 5 (1) p. 88; *A.* with *A. (Oxytoma) petitclerci* sp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 396-405.

Crenella alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 189.

†*Daonella americana, sanctae-anae* Triassic N. America, SMITH U. S. Geol. Surv. Prof. Paper No. 83 pp. 143-145.

†*Dreissena* NELLI 282.

†*Hoernesia bhavani* sp. n. Trias Kashmir, DIENER Pal. Ind. 5 (1) p. 107.

Idasola gen. n. for *Idas*, Jeff., IREDALE Proc. Malac. Soc. 11 p. 340.

†*Inoceramus* with *I. ischeri* sp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 414-424; *Inoceramus* BÖHM 37 & YABE 448.

†*Leptodesma carboniferum, spergenense* var. *robustum* sp. & var. n. Carboniferous Arkansas, GIBBY U. S. Geol. Surv. Bull. 593 pp. 88-89.

†*Lithodomus* with *L. salinensis, bathonicus* spp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 321-334.

†*Maccoyella barklyi* NEWTON 284.

Modiola [vide etiam *Modiolus*] *taprobanensis* sp. n. Ceylon, PRESTON Ann. Mag. Nat. Hist. 16 p. 84; *M. modiolus* RETZIUS 332; *M. pulex* HEDLEY 186.

†*Modiola lidarensis* sp. n. Carboniferous Kashmir, DIENER Pal. Ind. 5 (2) p. 16.

Modiolus neozelanicus nom. n. for *Mytilus ater*, Zel., IREDALE Trans. N. Z. Inst. 47 p. 484.

†*Modiolas* [vide etiam *Modiola*] *blandus* sp. n. Oligocene Florida DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 127; *M. bakeri* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 128; *M. gabbi* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 458; *M. stalderi* sp. n. California Pliocene MARTIN Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 182.

Modiolarea africana, imu spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 190.

Modiolaria phenax sp. n. Bering Sea, DALL Nautilus 28 p. 135.

†*Modiolopsis linguatus* sp. n. Sweden Silurian, HEDE Lund Univ. Årsskr. N. F. 11 Afd. 2 No. 6 p. 27; *M. thebawi* sp. n. Ordovician Shan States REED Pal. Ind. 6 (1) p. 15.

Musculus niger, (Gray) IREDALE 209.

†*Myalina* with *M. welleriana*, *elongata* spp. n. Carboniferous Arkansas, GRAY U. S. Geol. Surv. Bull. 593 pp. 93-97.

Mytilus with *M. maorianus* nom. n. for *M. magellanicus*, Lk., IREDALE Trans. N. Z. Inst. 47 p. 484; *M. edulis* MEVES 269; *Mytilus* MULON 278.

†*M. merriami*, *perrini*, (*Mytiloconcha*) *trampasensis* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 455-457; *M.* with *M. (Modiola) eberhardti*, *M. (Rhynchomytilus) studeri*, *meisteri*, *M. (Pernomytilus) montanus raudenensis*, *M. (Arcomytilus) vesuntinus* spp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 334-370.

†*Perna brentonensis*, *theseni* spp. n. Cretaceous S. Africa, SCHWARZ Grahams-town Rec. Alb. Mus. 3 p. 123; *P.* with *P. moeschi* sp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 424-437.

Pinctada, Bolten IREDALE 211.

†*Pinna barrowsi* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 125; *P. levisi* sp. n. California Eocene, WARING J. Geol. Chicago 22 p. 785; *P.* with *P. (Pinnigena) greppini*, *P. (Trichites) fibrosa*, *thiessingi*, *pustulata* spp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 370-395.

†*Pseudomonotis* with *P. greppini*, *kiliani* spp. n. Mesozoic C. Europe, ROLLIER Mem. Soc. Pal. Suisse 40 pp. 405-414; *P. (Eumicrotis) middlemissi* sp. n. Carboniferous Kashmir, DIENER Pal. Ind. 5 (2) p. 60.

Rhomboidella prideaux (Leach), IREDALE 209.

Volsella compta sp. n. Japan, SOWERBY Ann. Mag. Nat. Hist. 15 p. 168.

ARCACEA.

Arca strabo sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. W. 39 p. 697; *A. (Barbatia) novae-zelandiae* sp. n. New Zealand, SMITH Brit. Ant. Exp. 2 p. 88; *A. (Fossularca) lactea*, LIN. PRESTON 321.

†*Arca grammatodonta* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 118; *A. nanggulanensis*, *molengraaffi* spp. n. Java Eocene,

MARTIN Leiden Samml. Geol. Reichsmus. 2 1915 pp. 183, 184; *A. (Anadara) diluvii* MELI 266.

†*Axinaca puruensis* sp. n. Java Eocene, MARTIN Leiden Samml. Geol. Reichsmus. 2 p. 186.

Barbatia alfredensis, *cafria* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 182-183.

Cratis gen. n. Genotype *C. progressa* sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. Wales 39 p. 698.

†*Ctenodonta retusa* sp. n. Sweden Silurian, HEDE Lund Univ. Årsskr. N.F. 11 Afd. 2 No. 6 p. 23; *C. shanensis* sp. n. Ordovician Shan States, REED Pal. Ind. 6 (1) p. 16.

†*Cucullaea morani* sp. n. California Eocene, WARING J. Geol. Chicago 22 p. 784.

†*Glycymeris lamyi* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 122; *G. ruckmani* sp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 52.

Hochstetteria alfredensis, *paramoea* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 184.

Leda with *L. dasea*, *electilis*, *narthecia* spp. n. N. Queensland, HEDLEY Proc. Linn. Soc. N. S. W. 39 pp. 695-696.

†*Leda posti* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 117; *L. packardii*, *milleri* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 123; *L. uvasana*, *vaderensis* spp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 pp. 51-52.

Limopsis lillieci Antarctic, *L. janeiroensis* Off Rio de Janeiro spp. n., SMITH Brit. Ant. Exp. 2 pp. 76, 99.

†*Limopsis modesta* sp. n. Tertiary S. America, DOELLO-JURADO Bol. Soc. Physis Buenos Aires 1 p. 594; *L. aurita*, MELI 266.

†*Nucula elliptica*, *N. ? reticulata* spp. n. Bornholm Silurian, HADDING Lund Univ. Årsskr. N.F. 11 Afd. 2 No. 4 pp. 26-27; *N. tampae* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 116.

Nuculana (Adrana) janeiroensis sp. n. Off Rio de Janeiro, SMITH Brit. Ant. Exp. 2 p. 98.

Philobrya africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 185.

Poroleda spathula sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. W. **39** p. 696.

†*Schizodus* with *S. depressus* var. *abruptus*, *brannerianus* var. & sp. n. Carboniferous Arkansas, GIRTU U. S. Geol. Surv. Bull. **593** pp. 97-102.

†*Trigonia kitchini* sp. n. Cretaceous S. Africa, SCHWARZ Grahamstown Rec. Alb. Mus. **3** p. 124; *T.* with *T. dalemasamunei*, *hokkaidoana*, *kotoi*, *yokoyanai*, *brevicula* spp. n. Cretaceous Japan, YAHARA Sci. Rep. Imp. Univ. Sendai Japan 2nd ser. (geol.) **2** pp. 35-44; *T. neozelanica* sp. n. Tertiary New Zealand, SUTER N. Z. Geol. Surv. Pal. Bull. **3** p. 50.

†*Yoldia carmarosensis* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California **8** p. 446; *Y. gesteri*, *powersi* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. **8** p. 124.

SUBMYTILACEA.

Alasmidonta, WILSON & CLARK **444**.

Anodonta, CALUGAREANU **55**; SURBER **396**; WILSON & CLARK **444**.

Anodontites salmonea, *darochai*, *aurora* spp. n. Brazil, MARSHALL U. S. Nation. Proc. Mus. **49** p. 527-529.

Anodontooides, WILSON & CLARK **444**.

†*Anodontophora patarkulensis* sp. n. Trias Kashmir, DIENER Pal. Ind. **5** (1) p. 95.

†*Astarte silana* sp. n. Jura Italy, ONETTI Rev. ital. paleont. Parma **21** p. 55.

†*Cardita hillegondae* sp. n. Java Eocene, MARTIN Leiden Samml. Geol. Reichsmus. **2** p. 186; *C. (Cardita) shepardi* sp. n. Oligocene Florida, DVLL Smiths. Inst. U. S. Nat. Mus. Bull. **90** p. 133.

†*Cardinia hybrida*, *grecoi* spp. n. Jura Italy, ONETTI Rev. ital. paleont. Parma **21** pp. 53-55.

Carditopsis alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 193.

Carunculina parva, *taxasensis*, ORTMANN **294**.

Condylocardia io sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 193.

†*Crassatellites brainerdi* sp. n. California Eocene DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. **8** p. 300; *C. branneri* sp. n. California Eocene, WARING J. Geol. Chicago **22** p. 782; *C. studyei*, *stewartvillensis*, *claytonensis* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. **8** pp. 129-131.

Cuna concentrica sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 191.

Cyprogenia, WILSON & CLARK **444**.

Digitaria africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. **91** p. 194.

Dromus, WILSON & CLARK **444**.

Euryxia (Micromya) perpurpurea, *nebulosa*, *vanuxemensis*, *constricta* ORTMANN **294**.

Harmandia = *Hyrja* Juv., FRIERSON Nautilus **29** p. 82.

Lamellidens (L.) marginalis, Lk. var. *sublamellata*, Preston, var. *sawaddyensis*, Preston, *L. (L.) narainporensis*, Preston, *nonyangensis*, Preston, *phenchooganensis*, Preston, *mainwaringi*, Preston fig. PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 pp. 182, 186, 188, 189, 191, 192.

Lampsilis, SURBER **396**; WILSON & CLARK **444**.

Lasmigona subviridis, FRIERSON **144**.

Lastena lata, ORTMANN **294**; WILSON & CLARK **444**.

Margaritana, SURBER **396**; WILSON & CLARK **444**.

Medionidus conradicus, ORTMANN **294**; WILSON & CLARK **444**.

Mycetopoda, DOELLO-JURADO **118**.

†*Myoconcha? dubia* sp. n. Carboniferous Arkansas, GIRTU U. S. Geol. Surv. Bull. **593** p. 106.

†*Myophoria middlemissii* sp. n. Trias Kashmir, DIENER Pal. Ind. **5** (1) p. 104.

Nodularia (N.) chauthurii, Preston, *theobaldi*, Preston fig., PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. **1915** pp. 140, 144.

Obliquaria, WILSON & CLARK **444**.

Obovaria, SURBER 396; WILSON & CLARK 444.

Parreysia favidens, Benson var. *chrysis*, Bens., var. *viridula*, Bens., var. *ussamensis*, Preston var. *pinax*, Bens., var. *plagiosoma*, Bens., *P. pernodulosa*, Preston, *daccaensis*, Preston, *perconveza*, Preston, *amandalei*, Preston fig. PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 pp. 160-162, 164, 166, 172, 173.

Pegias, WILSON & CLARK 444.

Plagiola, WILSON & CLARK 444.

Pleurobema missouriensis, WALKER 430; *Pleurobema* WILSON & CLARK 444.

Pseudodon (Trigonodon) peguensis, ANT var. *curvata*, Preston fig., PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 p. 151.

Ptychobranchus, WILSON & CLARK 444.

Quadrula, HOWARD 203; SURBER 396; WILSON & CLARK 444.

Solenia soleniformis, Benson fig., PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 p. 133.

Strophitus, WILSON & CLARK 444.

Symphynota, WILSON & CLARK 444.

Truncilla with *T. walkeri* sp. n. Tennessee, WILSON & CLARK Washington D.C. Rep. U. S. Com. Fish. 1912 No. 781 pp. 45-46.

Unionidae HOWARD 204; ISELY 212; WILSON & DANGLADE 445.

Unio, SURBER 396; VANATTA 420; WILSON & CLARK 444; *U. viridis*, Conrad., WALKER 431.

†*Unio grangeri*, *eomargaron*, *didymictidis*, *sinopæ* spp. n. Tertiary Wyoming, COCKERELL Bull. Amer. Mus. Nat. Hist. 34 pp. 122-125; *U. jaqueti*, *white-cliffensis* spp. n. Upper Cretaceous N. S. Wales, NEWTON Proc. Malac. Soc. 11 pp. 230-231; *U. nereis* sp. n. Pontian Greece, NELLI Boll. Soc. geol. ital. 33 p. 216.

Venericardia africana sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 192.

ERYCINACEA.

Bornia farica, *africa*, *B. (Pythina) africana* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 198-199.

(N-8913 r)

†*Bornia tampae* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 141.

Erycina alfredensis, *ima*, *carifa*, *rifaca* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 197-198; *E. helmsi* sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N. S. W. 39 p. 701.

†*Erycina? indecisa* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 141.

Kellya chilkaënsis, *mahosaënsis* spp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 298.

Lasea [vide etiam *Lasea*] *australis* HEDLEY 186.

Lasea [vide etiam *Lasea*] *turtoni* sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 201.

Lepton concentricum, HEDLEY 186.

Neolepton novacambrica sp. n. N. S. Wales, HEDLEY Proc. Linn. Soc. N.S.W. 39 p. 701.

Rochefortiaenora, *elsa*, *milda*, *helena*, *io*, *farma* spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 pp. 200-201.

Scintilla chilkaënsis sp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 299; *Scintilla turtoni* sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 196.

CARDIACEA.

Cardium delicatulum sp. n. W. of Falkland Isds., SMITH Brit. Ant. Exp. 2 p. 93; *C. tuberculatum* with var. n. *dautzenbergi*, *spinosa*, *asperula*, *torquata*, *picta* Adriatic, COEN Genova Ann. Mus. Civ. st. nat. 6 pp. 299-304; *C. (Serripes) notabile* sp. n. Japan, SOWERBY Ann. Mag. Nat. Hist. 15 p. 169.

†*Cardium cèlebesensis* sp. n. Célèbes Oligocène, DOLLFUS Paléont. de Célèbes p. 39; *C. (Trigoniocardia) berberum* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 145.

†*Conocardium mekanum* var. n. *magnum*. Carboniferous Arkansas. Girty U. S. Geol. Surv. Bull. 595 p. 34.

†*Limnocardium franceschii*, *sessalonicense* spp. n. Pontian Greece, NELLI Boll. Soc. geol. ital. 33 pp. 217, 218.

†*Lunilicardium caudagalli* sp. n. Sweden Silurian, HEDE Lund Univ. Årsskr. N.F. 11 Afd. 2 No. 6 p. 29.

†*Shanina vlastoides* gen. & sp. n. Ordovician Shan States, REED Pal. Ind. 6 (1) p. 18.

CONCHACEA.

†*Amiantis (Amiantis) dalli* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 465.

†*Anisocardia verrucana* sp. n. Cretaceous Italy, FUCINI Pal. Ital. 21 p. 89.

Anomalocardia alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 203.

Azor chama-solen (Costa), IREDALE 209.

†? *Callocardia nux* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 147.

†*Chione diabloensis, pabloensis* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 468-469; *C. elsmereensis, fernandoensis* spp. n. California Pliocene, ENGLISH Univ. Cal. Pub. Bull. Dept. Geol. 8 pp. 214-215.

Circe alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 203.

Corbicula alberti nom. n. for *C. violacea*, Clessin, PRESTON Fauna Brit. Ind. Mollusca (F. W. Gast. & Pelecyp.) 1915 p. 219; *C. (Velorita) satparaënsis*, Preston=*Meretrix casta*, Chem, PRESTON Rec. Ind. Mus. 11 p. 300.

†*Corbicula corrugata*, NEWTON 284.

Cultellus vitreus, HEDLEY 186.

Cyprina islandica, RETZIUS 332.

Cyrena impressa Desh. fig., PRESTON Fauna Brit. Ind. Moll. Gast & Pel. 1915 p. 202.

†*Cyrena pisana, terminetti, verrucana* spp. n. Cretaceous Italy, FUCINI Pal. Ital. 21 pp. 76, 86-87.

†*Cyrenopsis* with *C. australiensis*, C. (?) *elongata* spp. n. Upper Cretaceous N. S. Wales, NEWTON Proc. Malac. Soc. 11 pp. 228-229.

Cytherea, HEDLEY 186.

†*Cytherea verbeeki* sp. n. Célèbes, Cretaceous, DOLLFUS Paléont. de Célèbes p. 9.

Diplodonta africana, almo spp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 195; *D. satparaënsis, barhampurensis* spp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 302.

†*Diplodonta catopotium* sp. n. Oligocene Florida, DALL Smiths. Inst. U. S. Nat. Mus. Bull. 90 p. 140.

Donax cacuminatus sp. n. N. Caledonia, SOWERBY Ann. Mag. Nat. Hist. 15 p. 170; *Donax*, LAMY 247.

†*Dosinia (?) lawsoni* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 133; *D. (Dosinella) arnoldi, merriami* & var. *occidentalis* spp. & var. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 459-462.

Eupera, WALKER 432.

Felaniella alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 195.

†*Fissilunula clarkei*, NEWTON 284.

†*Isocardia tejonensis* sp. n. California Eocene, WARING J. Geol. Chicago 22 p. 784.

Joanniella subquadrata sp. n. Queensland, HEDLEY Proc. Linn. Soc. N. S. W. 39 p. 699.

Jukesena nom. n. for *Acolus* (= *Psephhis foveolata*, Cooper & Preston), IREDALE Proc. Malac. Soc. 11 p. 299.

Macrocalista sophiae, HEDLEY 186.

†*Macrocallista (?) packi* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 136; *M. vaderensis*, M. (?) *andersoni* spp. n. Eocene N. America, DICKERSON P. Calif. Ac. 5 p. 54.

†*Meretrix boettgeri* sp. n. Java Eocene, MARTIN Leiden Samml. Geol. Reichsmus. 2 p. 189; *M. stantoni, dalli* spp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 pp. 134-135; *M. tejonensis* nom. n. for *M. uvasana*, Gabb. non Conrad, DICKERSON P. Calif. Ac. 5 p. 53.

Petricola esculpturata sp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 301; *Petricola*, MARTIN-ICKE 262; VERNHOUT 423.

†*Petricola buwaldi* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 471.

Pisidium hydaspicola, Theob. *bombayanum*, Theob., *atkinsonianum*, Theob. fig. PRESTON Fauna Brit. Ind. Moll. Gast. & Pel. 1915 pp. 225-226; *P. (Fluminina) atlasium* sp. n. PALLARY Bull. Mus. Paris 1915 p. 28; *Pisidium supinum*, JACKSON 215; *Pisidium*, JOHANSEN 219; RITCHIE 335.

†*Pitaria behri, stalderi* spp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 467-468.

Psammobia mahosaënsis sp. n. E. India, PRESTON Rec. Ind. Mus. 11 p. 303.

†*Saxidomus (?) noblei* sp. n. California Eocene, DICKERSON Univ. Cal. Pub. Bull. Dept. Geol. 8 p. 300.

Sinodia jukes-browniana PRESTON Calcutta Rec. Ind. Mus. 11 p. 481.

Solecortus tenerior sp. n. Queensland HEDLEY Proc. Linn. Soc. N. S. W. 39 p. 706; *Solecortus*, BLAINV., IREDALE 211.

Solen alfredensis sp. n. S. Africa BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 208; *S. amandalei, kempii* spp. n. E. India, PRESTON Rec. Ind. Mus. 11 pp. 304, 305.

†*Solen perrini* sp. n. Tertiary California CLARK Bull. Dept. Geol. Univ. California 8 p. 477.

Solenomorphidae should replace *Solenopsidae* COCKERELL 74.

†*Tivela (Pachydesma) diabloensis* & var. *angulatum, gabbi*, spp. & var. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 pp. 462-464.

Ungulina alfredensis sp. n. S. Africa, BARTSCH Smiths. Inst. U. S. Nat. Mus. Bull. 91 p. 196.

†*Venus martini* sp. n. Tertiary California, CLARK Bull. Dept. Geol. Univ. California 8 p. 469.

MYACBA.

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IX. ARTHROPODA

(GENERAL)

No memoirs requiring notice under this heading have been met
with this year

EDITOR.

X. CRUSTACEA

ARRANGED BY

W. T. CALMAN, D.Sc.

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Daphnia pulex longispina, Variabilität p. 133 figs., KAPTEREV Journ. sect. zool. Soc. nat. 2.

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XI. ARACHNIDA

TO WHICH ARE ADDED

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PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA
and PROTOTRACHEATA

ARRANGED BY

W. T. CALMAN, D.Sc.

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Ampyx rostratus var. n. *shanensis* Ordovician, Shan States p. 24 figs., REED t.c.

Brachymetopus (?) *elegans* sp. n. Mississippian, Arkansas, p. 22 figs., GIRTY Bull. U.S. Geol. Surv. 598.

Bronteus palifer var. n. *carnicus*, *rhinoceros* var. n. *inermis*, p. 168, *alpinus* p. 169 figs., Devonian, Carnic Alps, GORTANI Palaeont. Ital. Mem. 21.

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Symphyla.

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Hanseniella producta p. 41, *dolosa* p. 43, *tenella* p. 44, spp. n., E. Africa, figs., RIBAUT Voy. Alluaud et Jeannel Myriap. ii.

Scutigera caldaria p. 294 figs., ARCHEY Trans. N. Zool. Inst. 47.

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Diplopoda.

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Akamptogonus beauforti sp. n. Waigeu p. 5 figs., ATTEMS Bydr. Dierk. 20.

Annameris gen. n. (*Glomerini*) p. 49, *curvimana* sp. n. Tonkin p. 50 figs., VERHOEFF Zool. Anz. 46.

Brachydesmus Kalischewskyi sp. n. Abchasiën p. 370 figs., LIGNAU Petrograd Ann. mus. zool. Ac. sc. 19.

Brachyiulus dioscriadis sp. n. Abchasiën p. 382 figs., LIGNAU t.c.

Craspedosoma subsp. n. *saxonicum*. var. n. *saxonicum*, p. 4, var. n. *helleri*, (subsp. *genuinum*) varr. n. *weesensteinese*, *albae*, *germanicum*, p. 5, *C. vomrathi* (subsp. *genuinum*) varr. n. *weismanni*, *vomrathi*, *arcis*, subsp. n. *zollerianum*, var. *fraxini* p. 7, var. *zollerianum*, *C. suevicum* subsp. (*genuinum*), *jurassicum*, subsp. n. *mixtum* p. 8, varr. n. *mixtum*, *suevicomiatum*, p. 9, *C. alemannicum* subsp. *danubianum*, *denticulatum*, var. *denticulatum*, var. n. *manudentatum*, subsp. *bavaricum*, p. 10, subsp. *salisburgense*, subsp. n. *doggeranum* var. *doggeranum*, var. n. *walchenium*, p. 11, subsp. *brevilobatum*, subsp. *brevidentatum* varr. n. *abbreviatissimum*, *setigerum*, p. 12, *henningsii*, *murigerum*, *brevidentatum*, *acutum*, *sulcicoles*, *clepsammidii*, p. 13. VERHOEFF Dresden Sitz.Ber. Isis 1915.

Cylindroiulus ruber p. 382, *hypero-pherus* (?) Abchasiën p. 387 figs., LIGNAU Petrograd Ann. mus. zool. Ac. sc. 19.

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Dinematocricus philistus sp. n. Ceram, Ambon p. 11 figs., ATTEMS Bydr. Dierk. 20.

Dolichoïulus rebotensis sp. n. Palestine p. 61 figs., VERHOEFF Wien Verh. ZoolBot. Ges. 64.

Geoglomeris jurassica sp. n. Jura p. 21 figs., VERHOEFF Zool. Anz. 46.

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Glomeris kallipygos Abchasiën p. 369, LIGNAU Petrograd Ann. mus. zool. Ac. sc. 19.

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Monacobates marcomannius sp. n. Jura p. 484 figs., VERHOEFF t.c.

Orthochordeunella fulvum subsp. n. *alemannicum* p. 411 figs., VERHOEFF t.c.

Pachyiulus flavipes continentalis Abchasien p. 379, LIGNAU Petrograd Ann. mus. zool. Ac. sc. 19.—*P. (Trichopachyiulus) aharonii* sp. n. Palestine p. 64, VERHOEFF Wien Verh. ZoolBot. Ges. 64.

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II.—SUBJECT INDEX.

3203-3227.

GENERAL.

[Vacant.]

DISTRIBUTION.

Clark, 4.

Panama; **Clark, 2**; British Guiana, *Epiperipatus imthurmi*; **Clark, 3.**

Ceram; **Bouvier, 1.**

Western Australia; **Dakin, 5.**

III.—SYSTEMATIC INDEX.

3231.

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Paraperipatus stresemanni sp. n. Ceram p. 224, **BOUVIER** Bul. Muséum Paris 1914.

Peripatoides gilesii, occidentalis, p. 44, **DAKIN** Journ. Nat. Hist. & Sci. Soc. W.A. 5.

XII. INSECTA

ARRANGED BY

D. SHARP

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wiss. Ins. biol, 10; Schulze, 1594; Sears, 1600a; Theobald, 1723; Thompson, 1731; Trotter, 1780; Wells, 1914; *Aulac hieracii*, galls, Western p. 151 fig. Lancash. Natural. 8.

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Antoine, 45; Arcangeli, 48; Auzat, Echange 31 p. 34 *Pterostichus tarsus*; Chapman p. lxxxiii Pr. ent. Soc. London 1914; Chinaglia, 298; Delétang, 417; Dumont, 454; Ellis p. xlvi P. ent. Soc. London 1915; Griffini, 692; Henriksen, 768; Lindner, 1048, 1049; Martynov, 1139; Wagner, 1861; Walsh, Ent. Mag. 51 p. 124.

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(a) Collectively.

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Ghigi, 625; Girault, 642; Morley, 1208; Šestakov, 1604, 1605.

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Le Cerf, 1029; Ishugunov *Rev. russe Ent.* 15 pp. 66–69 Transbaikal; Warren 1881.

Neuroptera.

Esben-Petersen, 514; Navás, 1241, 1250, 1251.

Diptera.

Riedel, 1464; Schmitz, 1587.

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(c) North Europe (includ. Petrograd) and Siberia.

Insecta.

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Buxton (Norway) p. 182 *Ent. Rec.*, 27; Čugunov, 386, 387; Grönblom, 698, 700; Hannshus (Norway) *Nyt-Mag. Kristiania* 53 pp. 269–271; Moeberg (Petrograd), 1189; Nordström, 1266; Orstadius, 1286; Wahlgren, 1865.

Trichoptera.

Martynov, 1137.

Neuroptera.

Navás, 1253.

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Diptera.

Frey, 583; Lundström, 1085; Ringdahl, 1468, 1469; Stackelberg, 1664.

Hemiptera.

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(d) British Islands.

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Hymenoptera.

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Diptera.

Carter, 266; Edwards, 474, 479, 480, 481; Wadsworth, 1859.

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Rothschild, 1509.

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Butler, *Heteroptera*, 252; Butler, *Aepophilus*, p. 194 *Ent. Mag.* 51; Edwards, *Homoptera*, 482; Green,

Coccidae, 686; *Aphidae*, Roberts, 1880; and Theobald, 1723, 1724, 1725.

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Forth Area, Evans (continuation) Scott. Nat. 1915 pp. 8-12 etc.: Hebrides, Scott, 1600.

Ireland, Halbert, 711; Johnson, p. 226 Irish Nat. 24.—Wexford, Cuthbert p. 207 Irish Nat. 24.

Coleoptera.

Exmouth, Champion p. 239 Ent. Mag. 51.—Plymouth, Keys p. 240 T.c.—Hants, Britten p. 19 T.c.—New Forest, Sharp p. 169 T.c.—Deal, etc., Perkins p. 218 T.c.—Hastings, Bennett, 117.—Herefordshire, Tomlin, 1749.—S. Wales, Allen pp. 87 & 88 Ent. Rec. 27.—Glamorgan, Tomlin, 1748.—Salisbury, Harwood p. 265 Ent. Mag. 51.—Berks, Tomlin p. 329, Fowler p. 330, T.c.—Wellington Coll., Tomlin p. 143 T.c.—Godalming, Latter p. 312 T.c.—Henley-on-Thames, Ferry p. 232 Ent. Rec. 27.—Oxford, Walker, 1869 and Ent. Mag. 51 pp. 169, 218, 312.—Cambridge, MacHardy p. 125 Ent. Mag. 51.—Hunts, Fowler p. 265 T.c.—Norfolk *Carabus clathratus*, Edwards p. 31 T.c.—Yorkshire, Fordham pp. 164-167 & 198 Naturalist 1915: *Lesteva luctuosa*; Carter p. 104 T.c.; Carter & Walsh p. 311 Ent. Mag. 51; Carter p. 125 T.c.; Selby, Fordham p. 287 Naturalist 1915.

Lancashire, Tomlin p. 329 Ent. Mag. 51.—Durham, Walsh p. 292 T.c. Cumberlaud, Day p. 124 and Fowler p. 265 T.c.

Scotland: *Sap. scalaris*, Evans, Grimshaw, p. 311 Scott. Natural. 1915; also T.c. p. 358, *S. carcharias*; Ritchie T.c. p. 359; Beare p. 43 Ent. Mag. 51.—Aberdeen, *C. abietis*; Stewart p. 70 Scott. Natural. 1915.—Nethly Bridge, Beare p. 329 Ent. Mag. 51.—Hebrides, Browne, 223.

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Ireland, *Ichneumonidae*; Johnson pp. 130-133 Irish Nat. 24.

Lepidoptera.

Guernsey, Lowe Ent. Rec. 27 pp. 270-273.

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Chilterns, Rowland-Brown, 1531;
Bell Entomol. 48 pp. 157-159; Scott
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Surrey, Waters p. 170 Ent. Mag.
51; Saville p. 267 Entomol. 48.

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68 Entomol. 48.

Yorkshire, Clutton p. 293 Ent. Mag.
51; Scarborough, Tefley Ent. Rec. 27
pp. 73-76.

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48.—Renfrewsh., Stewart, 1878.—
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Trichoptera.

Scotland, Porritt p. 146 Ent. Mag.
51.

Diptera.

Various localities, Bury p. 146 Ent.
Mag. 51.—Cheshire, Bury p. 313 T.c.—
Grange-over-sands, *Cecidomyiid.*, Bag-
nall pp. 325, 326 Lancash. Natural. 8.

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1915; Evans p. 287 T.c.; Evans
p. 331 Ent. Mag. 51; Huie p. 359
Scott. Natural. 1915.—Western isles
(continuation), Grimshaw p. 276 Scott.
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Heteroptera.

Cornwall, Tomlin p. 169 Ent. Mag.
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land, Murray p. 145 T.c.—Carlisle,
Murray p. 313 T.c.

Inverness, Evans p. 359 Scott. Nat.
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Devon and Bath, Edmonds p. 220
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cash. Natural. 8.—Clevelands, *Psylli-
dae*, Harrison Naturalist 1915 p. 400.

Aphidæ.

Kent, Theobald Entomol. 48 pp.
182-184.—Lancash., Roberts, 1481.

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Durham, Harrison, 733.

(e) Central and Eastern Europe.

Insecta, collectively.

Germany, le Roi, 1041; Timm,
1747.—Novgorod, Kolosov, 966.—Kiev,
Siskin, 1632.

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broe, 788, 789; Johansen, 860; Kryger,
978; Meyer, 1163; Rosenberg, 1506;
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167, 168; Kiseritzky, 933; Lucnik,
1070; Ogloblin, 1273; Pliginskij,
1389, 1392; Roubal, 1524; Voron-
covskij, 1853, 1855; Zaitzev, 1962.

Hymenoptera.

Denmark, Bønner, 166; Henriksen,
767; Jensen-Haarup, 853; Kryger,
977.—Holland, Smits van Burgst, 1650;
Wasmann, 1883.

Germany, Hedicke, 745.—Russia,
Birula, 153; Kurdiunov, 984; Padalka,
1298; Rimskij-Korsakov, 1466; Skori-
kov, 1636; Voroncovskij, 1854.

Lepidoptera.

Denmark, Jensen, 851, 852; Kløcker,
937; Knudsen, 957; Worm-Hansen
1954.—Schleswig-Holstein, Warnecke,
1877.—Holland, Eecke, 484.—Bayern,
Hoffmann, 784.—Switzerland, Fison.
561; and Rhone valley, p. 200 Ent.
Rec. 27; Thomann, 1730.—Austria,
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Trichoptera.

Denmark, Petersen, 1331.—Germany,
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1140.

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Denmark, Esben-Petersen, 515, 516 ; Jørgensen, 859.—Krim, Pliginskij, 1338.

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Denmark, Kieffer, 928 ; Lundbeck, 1083 ; Petersen, 1328.—Netherlands, Schmitz, 1586.—Austria, Strobl, 1687.—Russia, Marzinowsky, 1141 ; Perm, *Asilidae* and *Syrphide*, Stackelberg, pp. 194-196 Rev. russe Ent. 15.

Aphaniptera.

Holland, Oudemans, 1296.—Switzerland, Rothschild, 1513.—Russia, Wagner 1863.

Hemiptera.

Denmark, Jacobsen, 837, 838.—Netherlands, Goot, 668.—Ural, Kolosoff, 964.—Crimea, Kiritschenko, Rev. russe Ent. 15 p. 151.—*Heteroptera* of Don Cossacks, Kiritschenko Rev. russe Ent. 15 p. 320-326.

Embioptera.

Istria, Schulze, 1595.

Plecoptera.

Ural, Klapálek, 934.

Orthoptera.

Russia, Pylinov, 1428.

Collembola.

Rumania, Jonescu, 874.

(f) *France*.*Insecta*, collectively.

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Lepidoptera.

Dupont, 457 ; Viard, 1842 and Microlépidoptères Alpes françaises ;

Paris, Bul. soc. ent. 1915 p. 251.—Province, Earl, Ent. Rec. 27 p. 78-85.

Trichoptera.

Lacroix, 988, 989.

Neuroptera.

Lacroix, 992.

Diptera.

Coulou, 355 ; Parent, 1302 ; Van Gaver et Pringault, 1825.—Pic, Exchange 31 p. 11.

Hemiptera.

Loire-inférieure, Péneau pp. 81-84 Bull. Soc. Ouest France 24.

Psocoptera.

Lacroix, 993, 994.

(g) *South Europe and Mediterranean Basin*.*Insecta*, collectively.

Spain, Gil, Bol. Soc. Arragon 14 pp. 24-26 ; Navás, 1242 ; Salvador, Bol. Soc. Arragon 14 pp. 117-123.—Italy, Del Guercio, 418.

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Spain, Mercet, 1153, 1154.—Italy, Emery, 504.—Sicily, Girault, 662.—Morocco, Dusmet, 462, 463.

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Trichoptera.

Egypt, Navas, 1241.

Neuroptera.

Spain, **Naavs**, 1252.—Algeria, **Navás**, 1249.—Egypt, **Navas**, 1241.—Syria, **Návas**, 1248.

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Algeria, **Sergent**, 1602.—Pontische Küste, **Marcinowski**, 1130.

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Algeria, **Jordan & Rothschild**, 882.

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Constantinople, **Morton**, 1211.

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Italy, **Ragazzi**, 1443.

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*(h) Caucasus. West & Central Asia.**Insecta*, collectively.

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Hymenoptera.

Lac. Aral, **Šestakov**, 1603.—Persia, **Waterston**, 1889.

Lepidoptera.

Kirghiz Steppes, **Filipiev** Rev. russe Ent. 15 pp. 222–224.

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Neuroptera.

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Diptera.

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Aphaniptera.

Jordan & Rothschild, 883; **Rothschild**, 1512.

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Caucasus, **Burr**, pp. 251–258 Ent. Rec. 27; **Ššelkanocov**, 1566, 1567; **Sugurov**, 1695.

Africa.

Insecta, collectively.

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Hymenoptera.

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Diptera.

Alexander, 21; **Bequaert**, 119, 121; **Bezzi**, 146, 147, 148, 149; **Carter**, 267; **Chubb**, 310, 311; **Edwards**, 472,

473, 476, 477, 478; Felt, 539; Kohl, 958; Neave, 1255; Riedel, 1463; Rodhain Bequaert, 1490; Roubaud, 1526; Schmitz, 1582, 1584; Schwetz, *Culicidae* of Kabinda, pp. 163-168 *Ann. trop. Med.* 9; Stern, 1675; Villeneuve, 1848.

Aphaniptera.

Rothschild, 1510; Waterston, 1887, 1893.

Hemiptera.

Brain, 198; Distant, 533, 434, 436; Green, 688; Montandon, 1191; Theobald, 1726; Varela, 1826.

Ellipoptera (or *Anoplura*).

Ferris, 551.

Thysanoptera.

Bagnall, 68, 70; Williams, 1943.

Isoptera.

Fuller, 605; Schmitz, 1585.

Psocoptera.

Lacroix, 994.

Paraneuroptera.

Ris, 1471.

Orthoptera.

Bolívar, 172; Burr, 246; Chopard, 303, 305; Giglio-Tos, 635.

Madagascar and Mascarene Islands.

Coleoptera.

Alluaud, 29, 33; Bourgoin, 190; Chatanay, 290, 291, 294; Lameere, 1006; Pic, 1344, 1361, 1365, 1367.

Hymenoptera.

Morley, 1208.

Lepidoptera.

Joannis, 858; Meyrick, *Sey. helles*, 172; Poulton, *Pr. ent. Soc. London* 1915 p. lxi; Prout, 1422; Rothschild & Jordan, 1522.

Rothschild & Jordan, *Chagos Islds.*, 1522.

Asia, Tropical and Eastern.

Including Japan, Biluchistan, Afghanistan.

Insecta, collectively.

Kloss, *J. N. H. Soc. Siam* 1 p. 250 and 251; *Siam zoogeographical divisions*.

Annandale and Kemp, 38.

Coleoptera.

Achard, 2; Arrow, 56; Bernhauer, 137; Bogdanovtjok, 169; Borchmann, 175; Bourgoin, 186, 187, 188, 189, 191, 192; 193; Bryant, 235, 236; Champion, 280, 282; Desbordes, 422; Donckier de Donceel, 447; Garreta, 620; Gravely, 681, 683, 684; Grouvelle, 704; Houlbert, 806; Hunt, 813; Kurisaki, 985; Lameere, 1007, 1008; Lewis, *Formosa*, 1045; Marshall, 1132; Maulik, 1144; Pic, 1344, 1347, 1349, 1351; Tibet, 1360, 1361, 1365; Pavilstshikov, *Buchara*, 1385; Orchymont, *Formosa*, 1285; Pouillaude, 1409; Prell, 1419; Ritsema, 1477; Sharp, 1616; Spaeth, 1659; Suvorov, 1699, 1701; Uyttenboogaart, 1813.—*Formosa*, Lesne, 1042; Pic, 1345; Portevin, 1406; Raffray, 1441; Spaeth, 1660; Wagner, 1862.

Hymenoptera.

Ghigi, *Japan*, 625; *Formosa*, Enderlein, 507; Strand, 1683.

Girault, 641, 643; Kokujev, *China*, *Mongolia*, *Tibetia*, 959; Morley, 1208;

Rohwer, 1496, 1498; Ruzskij, *Tibet*, *Gobi*, 1542; Sladen, 1639; Waterston, *Ceylon*, 1888.

Lepidoptera.

Bell, 112; Ellis, 495; Evans, *Tibet*, 521; Fruhstorfer, 598; Hannyngton, *Kumaon Rhopalocera*, *J. Bombay, Soc.* 24 p. 197; Joannis, 856.—*Formosa*, Mabile, 1095; Strand, 1683.—Martin, 1135; Matsumura, *Japan*, 1142; Meyrick, 1172; Moulton, 1216; Prout, *Formosa*, 1423; Reverdin, 1459; Rothschild & Jordan, 1522; Swinhoe, 1713; Thierry-Mieg, 1727; Tytler, 1804; Warren, 1880, 1881; Wileman, *Formosa*, 1937, 1938, 1941; Wileman, *Japan*, 1936, 1939.

Trichoptera.

Martynov, 1138; Nakahara, Japan, 1234.

Neuroptera.

Esben-Petersen, 514, 516; Nakahara, Japan, 1233, 1234, 1235, 1236; Navás, 1241; Stitz, 1680.—Formosa, Becker, 108; Bezzi, 150; Hendel, 766; Oldenberg, 1280; Ricardo, 1461.—Brunetti 230; Edwards, 472; Felt, 541; Hervé-Bazin, 773; Hong Kong *Culicidae*, Macfarlane, p. 67 Bull. ent. Res. 6; Meyere, 1165; Schmitz, 1586.

Aphaniptera.

Rothschild, 1512, 1514.

Hemiptera.

Bergroth, 126, 128; Distant, 432, 436; Enderlein, Formosa 506; Green, Baluchistan, 685a; Jacobi, 835; Kiritschenko, 932; Mitsuhashi, 1185; Muir, 1220, 1221; Poppius, 1402; Rutherford, 1539, 1540.

Thysanoptera.

Bagnall, 70.

Isoptera.

Hozawa, Japan, 812.

Paraneuroptera.

Laidlaw, 1997 to 1000; Oguma, Japan, 1274, 1276.

Orthoptera.

Annandale & Kemp, 39, 41; Gigliot, 635; Griffini, 694; Hancock, 716, 717; Hanitsch, 718.

Asiatic Archipelago.

Java to New Guinea, including Philippines.

Insecta, collectively.

Docters van Leeuwen und Docters van Leeuwen-Reynvaan, 442; Ritsema, 1476.

Coleoptera.

Arrow, 54, 56; Arrow, Marshall & Blzir, 57; Bernhauer, 136, 137, 138; Bickhardt, 151; Bryant, 235, 236, 237; Champion, 282; Desbordes, 422; Fleutiaux, 562; Gahan, 615; Grou-

velle, 705, 706; Heller, 761, 762; Hopkins, 799, 800; Houlbert, 806; Jordan, 876, 877; Moulton, 1217; Pouillaude, 1410; Pic, 1344, 1349, 1351, 1358, 1360, 1361, 1365; Raffray, 1442.

Hymenoptera.

Cockerell, 322, 324, 325, 327, 328, 329; Crawford, 367; Forel, 571; Friese, 588; Girault, 639, 642, 646, 651, 662; Kieffer, 929; Turner, 1302.

Lepidoptera.

Bethune-Baker, 143; Chapman, 285; Eecke, 486 to 490; Frubstorfer, 598, 601; Joicey & Noakes, 868, 869; Joicey & Talbot, 871; Jordan, 878, 879; Meyrick, 1172; Moulton, 1214, 1218; Prout, 1424; Röber, 1493; Rothschild, 1516, 1517; Rothschild & Jordan, 1522; Swinhoe, 1713; Thierry-Mieg, 1727; Warren, 1880, 1881; Watson, 1895, 1896.

Diptera.

Alexander, 17, 21; Banks, 89; Brues, 226; Edwards, 471, 475; Felt, 539, 541; Ludlow, 1078; Malloch, 1121; Meyers, 1164, 1166, 1167; Papuan *Culicidae* list, Scott, p. 317 Ann. trop. Med. 9; Stanton, 1669, 1670.

Hemiptera.

Baker, 78, 79, 80, 81; Bergroth, 126, 129; Cockerell, 335; Cockerell and Robinson, 342, 344; Distant, 434; Jacobi, 835; Melichar, 1151; Muir, 1220, 1221; Poppius, 1402.

Thysanoptera.

Bagnall, 68, 70, 74; Karny, 889.

Isoptera.

Dammerman, 393; Oshima, 1293.

Paraneuroptera.

Campion, 260; Laidlaw, 1001, 1002; Ris, 1472.

Orthoptera.

Burr, 246; Griffini, 691; Hancock, 716; Hanitsch, 718.

Australia and Tasmania.

Coleoptera.

Arrow, 56; Bryant, 237; Carter, 268, 269, 270; Ferguson, 546, 547,

548; Goudie, 674; Lea, 1012, 1013, 1014, 1015, 1017, 1019; Rainbow, 1444; Sloane, 1640.

Hymenoptera.

Cockerell, 322, 323, 324, 325, 326; Crawley, 372, 373; Dodd, 444; Forel, 572; Girault, 649, 650, 653, 654, 655, 656, 657, 658, 659, also Ent. News 26 p. 362; Meade-Waldo, 1149; Morley, 1208; Rohwer, 1498; Roman, 1504; Turner, 1796, 1799, 1800, 1801; Waterhouse, 1884; Wheeler, 1919, 1923.

Lepidoptera.

Lower, 1062, 1063; Meyrick, 1170, 1172; Turner, 1788, 1789, 1790.

Neuroptera.

Esben-Petersen, 511, 514; Petersen, 1330.

Diptera.

Felt, 539; Ricardo, 1460; Taylor, 1718, 1719; White, 1927.

Hemiptera.

Distant, 435; Froggatt, 592, 593; Green, 687.

Thysanoptera.

Bagnall, 68, 70; Hood, 790.

Lipoptera.

Harrison, 634.

Isoptera.

Hill, 781.

Paraneuroptera.

Campion, 261.

Aptera.

Alexander, 25.

North America.

Insecta, collectively.

Adams, 3; Davis, 402, 409; Felt, 537; Kellogg & Ferris, 904; Manee, 1126; Marcovitch, 1131; Sears, 1600a; Swaine, 1704; Thompson, 1731; Weiss, 1906 to 1910; Wells, 1913.

Coleoptera.

Beaulne, 17a; Blanchard, 163; Britton, 214; Carnochan, 262; Casey, 271, 272; Cockerell, 340; Dury, 461; Easton and others, 470; Fall, 531,

532; Fisher, 560; Frost, 596, 597, also Maine, Canad. Ent. 47 pp. 141-145; Gardner, 618; Germain, p. 309 Canad. Ent. 47; Heffenger, and Hopkins, 748; Hopkins, 800, 801; James, 840; Johnson, 866; King, 930; Knaus, 952, 953; Long, 1035, 1036; Lovell, 1061; Manee, 1125; Morse, 1209; Prell, 1419; Schaeffer, 1570, 1572; Smith, 1646, 1648; Swaine, 1703; Van Dyke, 1823, 1824; Wallis, Manitoba water-beetles, pp. 169-174 Canad. Ent. 47; †Wickham, 1932.

Hymenoptera.

Banks, 90; Baumberger, 104; Beutenmuller, 144, 145; Cockerell, 322, 324, 327, 330, 331, 338; Crawford, 364, 365, 366, 368, 369, 370, 371; Crosby & Matheson, 382; Cushman, 392; Ellis, 496; Franklin, 580; Gahan, 613; Ghigi, 625; Girault, 640, 641, 642, 644, 645; Greene, 689; Leonard & Crosby, 1040; Morley, 1208; Merrill, 1156; Rohwer, 1497, 1498, 1499, 1500, 1502; Rust, 1537; Santschi, 1554; Smith, 1649; Smith & Vosler California Mon. Bull. St. Comm. Hort. 3 pp. 195-211; Smulyan, 1651; Viereck, 1845; Wheeler, 1921; Woods, 1949.

Lepidoptera.

Barnes & McDunnough, 101; Berry, 139; Bird, 152; Braun, 199, 200, 202; Busck, 250; Dod, 443; Dyar, 465, 466 (Bermuda); Ely, 499; Gibson, 631; Grinnell, 696, 697; Haimbach, 710; Haskin, 739; Heinrich, 756; Lindsey, 1050; Pellett, Iowa, Pr. Iowa Ac. 21 p. 347 pl. xxxvi; Perrin, 1326, 1327; Rowley & Berry, Missouri, p. 303 Canad. Ent. 47; Swett, 1706; Watson, 1894; Welch, 1911; Wild, 1934.

Trichoptera.

Lloyd, 1056; Muttkowski, 1226.

Neuroptera.

Englehardt, 508; Hilton, 782; Navás, 1239, 1240.

Diptera.

Aldrich, 10, 12, 13, 14; Alexander, 16, 20, 23; Banks, 92, 96, 97; Bishopp, 155; Britton, 217; †Cockerell, 332; Cockerell, 336; Cresson, 374, 375, 376; Dietz, 431; Dyar & Knab,

Bahamas, 467; Felt, 537 to 540, 543, 544; Greene, 690; Hunter, 814; Johnson, 861, 862, 863; Knab, 938, 941, 945; Malloch, 1110 to 1120, 1122; Muttkowski, 1227; Osburn, 1290; Shannon, 1609, 1613; Smith, 1643, 1645, 1647; Townsend, 1758, 1762, 1772, 1774; Van Duzee, 1819, 1820; Walton, 1873, 1874; Whitney, 1929.

Aphaniptera.

Jordan & Rothschild, 883; Rothschild, 1511 to 1514.

Hemiptera.

Abbott, 1; Ainslie, 8; Ball, 83; Bergroth, 132; Cockerell & Robinson, 344; Crumb, 383; Cushman, 391; Davidson, 395; Davis, 403, 404, 410; Essig, 518; Funkhouser, 612; Gibson & Cogan, 633; La Follette, 996; Metcalf, 1158; Olsen, 1283; Osborn, 1287; Osborn & Drake, 1288; Parshley, 1306, 1310; Torre Bueno, 1756; Van Duzee, 1818, 1821, 1822; Wilson, 1946; Woodruff, 1948.

Thysanoptera.

Hood, 792, 796, 797; Hood & Williams, 798; Watson, 1898.

Lipoptera.

Kellogg & Nakayama, 907.

Psocoptera.

Corbett & Hargreaves, 351.

Ephemeroptera.

Clemens, 316.

Paraneuroptera.

Quebec dragon-flies, Fyles pp. 66 & 67 Ottawa Nat. 29; Kennedy, 912; Osburn, 1291; Pierson, 1382.

Orthoptera.

Caudell, 274, 275, 276 also Alaska p. 160 Canad. Ent. 47; Davis, 400, 401, 406; Fox, 577; Fulton, 608; Hebard, 742, 743; Rehn & Hebard, 1451, 1452, 1453; Prince Edward and Magdalen islds., Walker pp. 339-344 Canad. Ent. 47; Canada *Mantis religiosa*, Canad. Ent. 47 p. 135.

Central America.

Insecta, collectively.

Godman, 665.

Coleoptera.

Arrow, 56; Casey, 271, 272; Champion, 279; Hopkins, 800; Lameere, 1006; Pic, 1344, 1361; Pouillaude, 1408; Prell, 1419.

Hymenoptera.

Franklin, 581; Gahan, 613; Morey, 1208.

Lepidoptera.

Dixey, 437; Dyar, 465; Meyrick, 1172; Schaus, 1575; Walsingham, 1871.

Neuroptera.

Esben-Petersen, 514; Navás, 1241 Petersen, 1330; Stitz, 1680.

Diptera.

Alexander, 18, 19; Cockerell, 334; Edwards, 472; Felt, 539; Jennings, 849; Knab, 938, 939; Townsend, 1758, 1759, 1766, 1768, 1771.

Hemiptera.

Cockerell & Robinson, 344; Osborn & Drake, 1289.

Thysanoptera.

Hood, 792, 793.

Paraneuroptera.

Calvert, 256.

Orthoptera.

Hancock, 716; Rehn & Hebard, 1451, 1453.

Antilles.

Insecta, collectively.

Ballou, 85; Mann, 1127.

Coleoptera.

Arrow, 56; Hopkins, 800; Pic, 1344.

Hymenoptera.

Cockerell, 325; Crawford, 364; Gahan, 613; Girault, 642; Rohwer, 1498.

Lepidoptera.

Dyar, 464; Meyrick, 1172; Ramsden, 1445.

Diptera.

Alexander, 22; Brues, 228; Felt, 538, 539; Jennings, 849; Knab, 940; Mallock, 1115; Townsend, 1758, 1771.

Orthoptera.

Bruner, 229; Rehn & Hebard, 1451.

South America, including Trinidad.

Insecta, collectively.

Lizer, 1053; Lüderwaldt, 1082.

Coleoptera.

Achard, 2; Arrow, 56; Bowditch, 196, 197; Brèthes, 209, 209b; Bryant, 236; Casey, 271; Hopkins, 800; Kerremans, 914; Lameere, 1006; Pic, 1344, 1346, 1349, 1356, 1357, 1360, 1361, 1365, 1366; Pierce, 1378; Pouillaude, 1408; Prell, 1419.

Hymenoptera.

Brèthes, 205, 208, 208c, 209a, 209e, 209f, 209h; Bruch, 224; Brues, 227; Cockerell, Patagonia, 323; Forel, 573; Girault, 640, 642, 647, 652, 661; Morley, 1208; Rust, 1537; Santschi, 1554; Turner, 1797; Wheeler, 1920.

Lepidoptera.

Dixey, 437; Joicey & Rosenberg, 870; Jones, 872; Jordan, 878; Meyrick, 1171, 1172; Schaus, 1575; Sharpe, 1619; Thierry-Mieg, 1727, 1728; Walsingham, 1871.

Neuroptera.

Navás, 1245; Stitz, 1680.

Diptera.

Aldrich, 13; Brèthes, 206, 207, 209g; Felt, 538, 539, 542; Knab, 942, 943, 944; Lutz, 1086; Lutz, Neiva & Lima, 1087; Moreira, 1194; Townsend, 1758, 1761, 1765, 1767, 1769, 1770, 1771.

Hemiptera.

Bergroth, 130; Funkhouser, 609; Jacobi, 835; Quaintance & Baker, 1429; Torre-Bueno, 1752 also pp. 157-162 An. Mus. Buenos Aires 26.

Thysanoptera.

Bagnall, 67; Brèthes, 208a; Hood, 792, 795.

Lipoptera.

Waterston, 1892.

Paraneuroptera.

Williamson, 1944.

Orthoptera.

Brèthes, 208b; Bruner, 229; Hebard, 744; Rehn, 1450; Rehn & Hebard, 1451, 1453.

III.—SYSTEMATIC.

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Some old classifications, WEISS pp. 369-376 Canad. Ent. 47.

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† *Elaterophanes acutus* sp. n. England p. 478 fig., COCKERELL P.U.S. Mus. 49.

† *Glaphyroptera anglica* sp. n., COCKERELL p. 480 fig. P.U.S. Mus. 49.

† *Holcoptera confluens* sp. n. England, COCKERELL p. 480 fig. P.U.S. Mus. 49.

† *Phanerogramma heeri*, COCKERELL p. 479 fig. P.U.S. Mus. 49.

† *Protocuneus* gen. n. *Rhynchophora*, *punctatus* sp. n. England, COCKERELL p. 477 fig. P.U.S. Mus. 49.

† *Pseudotelephorus punctulatus*, *grandis*, spp. n., England, COCKERELL p. 479 figs. P.U.S. Mus. 49.

CICINDELIDÆ.

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Actodus gen. n. p. 116 *Chlaeniini*, *treichi* n. sp. p. 117 fig. Côte d'Ivoire, ALLUAUD Bull. Soc. ent. France 1915.

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Catadromides Motsch. nom. nud. = *Catadromus* Macl., LUČNIK Rev. russ. ent. 14 p. 418.

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Coptolabrus marginithorax n. sp. p. 118 China, DONCKIER Bull. Soc. ent. France 1915.

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Darodilia curta sp. n. Queensland p. 459, SLOANE T.c.

Decogmus gen. n. p. 441 *Migadopini*, *chalybeus* sp. n. Australia p. 443, SLOANE T.c.

Diglymma marginale sp. n. New Zealand p. 148, BROUN Bull. N.Z. Inst. 1 1914.

Dromius stavropolicus sp. n. Stavropol, LUČNIK Rev. russ. ent. 14 p. 282.

Eudema eximia crampeli n. subsp. p. 153, *decorsci* p. 153, *chevalieri* p. 154, *cuneata* p. 155, *clasispila* p. 156, Africa, spp. n., ALLUAUD Bull. Soc. ent. France 1915.—*E. dicranothorax* n. sp. p. 252 fig. Gaboon, ALLUAUD T.c.

Eurylychnus ovipennis p. 444, *ker-shawi* p. 445, Australia, *femoralis* Tasmania p. 446, spp. n., SLOANE P. Linn. Soc. N.S.W. 40.

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orientale praecoc. = *dauricum* = *aeneum* Solsky (nec Dejean, nec Motsch.) = *pravei* nom. n., *brevicollis* praecoc. = *ventricosus* var. *aleutorum* nom. n., *unistriatum* Apf. (nec Letzner, nec Dejcan) = *serbicum* var. *karageorgii* nom. n., *ovicolle* Rtrtr (non Motsch.) = *diadochos* nom. n., *insulare* Ganglb. (non Bohem.) = *ganglbauerianus* nom. n., p. 427, *P. nitidicollis* praecoc. = *massessi* p. 420, *heroicum* nom. n. pro *colossus* p. 420, *P. longiventre tamerlani* ab. n. Tashkent, *sericeum mazaraki* ab. n. Rossia mer., *suslovi* subsp. n. Omisk, *laemostenomimum* sp. n. Transbaicalia, p. 422, *fortipes anomalum* ab. n. Ussuri, *gebleri muralevitski* subsp. n. China p. 423, *zolutarevianum* sp. n. Krasnojarsk p. 423, *cupreum anaticum zolutarevskyi* ab. n. Turkestan p. 423, *P. zimuidae* sp. n. Tashkent, p. 428. LUČNIK Rev. russ. ent. 14.—*P. anodon*, géographique p. 562, *marginalis* var. *deubeli* = *sericeum* ab. *auroreum* ab. n. Siebenburg p. 563, *punctibase* Chine centrale, *lamproderum* distribution, *fortipes* ab. *latithorax* Japon, *gebleri* variations p. 564, LUČNIK Ann. mus. zool. Ac. sc. 19.

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XIII. PROCHORDATA

INCLUDING

ENTEROPNEUSTA AND PTEROBRANCHIA

ARRANGED BY

C. TATE REGAN

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XIV. VERTEBRATA

(GENERAL)

i.e., complementary to Mammalia, Aves, Reptilia, and Pisces

ARRANGED BY

D. S H A R P

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XVI. REPTILIA AND BATRACHIA

ARRANGED BY

C. TATE REGAN.

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†*Broüliellus* gen. n. *texensis* sp. n. Texas, Permian, WILLISTON J. Geol. Chicago 22 p. 56 ff. 1-3.

†*Capitosaurus polaris* sp. n. Trias Spitzbergen, WIMAN Upsala Bull. Geol. Inst. 13 1 p. 21 pl. viii; *C. arenaceus*, BROILI 39.

†*Chenoprosopus* gen. n. *milleri* sp. n. New Mexico Permo - Carboniferous, MEHL Washington Carnegie Inst. Pub. No. 181 1913 p. 11 ff. 4-7.

†*Cyclotosaurus?* *spitzbergensis* sp. n. Trias Spitzbergen, WIMAN Upsala Bull. Geol. Inst. 13 1 p. 22 pl. ix f. 1.

†*Ichthyacanthus platypus*, tarsus, MOODIE 135.

†*Lydekkerina* gen. n. (type *Bothriceps huxleyi* Lydeker), BROOM P.Z.S. 1915 p. 366 fig.

†*Lyrocephalus* gen. n., *curi* sp. n. Trias Spitzbergen, WIMAN Upsala Bull. Geol. Inst. 13 1 p. 10 pl. i f. 1-6 ii f. 1-6 iii f. 4.

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XVII. AVES

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W. L. SCLATER, M.A.

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ARRANGED BY

MARTIN A. C. HINTON

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†*Miacis exiguus* p. 33, *latidens* p. 34 *spp. n.* Eocene Wyoming, MATTHEW *T.c.*

†*Oxyæna æquidens, transiens* p. 47, *gulo* p. 53, *pardalis* p. 55 *spp. n.* Eocene Wyoming, MATTHEW *T.c.*

†*Pachyæna gracilis* p. 89, *gigantea ponderosa* p. 98 *sp. et* subsp. *n.* Eocene Wyoming, MATTHEW *T.c.*

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* The total number of names in this index is 1,735; distributed as follows, viz.:—Protozoa 39; Porifera 23; Coelenterata 28; Echinodermata 34; Vermidea 72; Brachiopoda 8; Bryozoa 7; Mollusca 70; Crustacea 56; Arachnida 116; Myriopoda 14; Insecta 1,109; Prochordata 5; Pisces 40; Reptilia 36; Aves 56; Mammalia 44. The total last year was 1,945.

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