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## EXPLANATORY.

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

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 when of importance are given at the right-hand top corner of the right-hand pages. The date 1916 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 1916 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-third of the Zoological Record, and would have been N. Zoology of the Sixteenth 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 54, dealing with the Literature of 1917, is in preparation.

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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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# II. PROTOZOA

ARRANGED BY

R. W. HAROLD ROW.

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Alm, 4; André, 4a; Arnoldi & Aleksenko, 8, 9; Averincev, 13; Batty, 16; Bělícer, 21; Derjugin, 49; Dubrovin, Kaminskij & Pešudov, 53; El'doradova-Sergěeva, 61; Georgěvitch, 74; Hansen-Ostenfeld, 84; Heron-Allen, 87; Heron-Allen & Earland,

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[Nothing.]

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†*Valvulina* (?) *bulloides* Perm-Ablagerungen Ost-Russlands (Russ.), ČERDYNCEV T.c. pp. 46-49.

### (c) Heliozoa

[Nothing.]

### (d) Radiolaria.

[Nothing.]

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### (a) Gregarinidea.

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*Plasmodium achromaticum* sp. n. parasite des chauves-souris du Turkestan, YAKIMOV, STOLINKOV, KOOLII-YAKIMOVA Med. obozr. Moskva 77 1912 pp. 162-166.—*P. mackiei* sp. n. from *Vespertilio muricola*, MELLO & BRAZ DE SA Ind. J. Med. Res. Calcutta 3 p. 737.—*P. malariae raupachi* sp. n. in Truthühner, Fortpflanzung (Russ.), PARCVANIDZE Zakavk. veter. vöstn. 3 pp. 86-87.—*P. tenue* merely distorted specimens of the other malaria parasites, LAWSON J. Exp. Med. 24 pp. 291-314.—*P. vivax* the so-called "intra-globular conjugation" discussed, SWELLENGREBEL Arch. Schiffshyg. 20 pp. 423-432.

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#### e) Actinomyxidia.

[Nothing.]

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#### (g) Haplosporidia.

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[Various and uncertain.]

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- Dinobryon protuberans* var. *obtusatus* var. n. pp. 270, 276, *proteus* sp. n. pp. 271, 276-277 environs de Petrograd (Russe + rés. franç.), VISLOUCH Journ. microbiol. 1.
- Heterodinium crassipes* p. 210 *kofoida* p. 211 spp. n. Adriatic, SCHILLER Arch. Protistenk. 36.
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# III. PORIFERA OR SPONGIDA

ARRANGED BY

R. W. HAROLD ROW.

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# IV. COELENTERATA

ARRANGED BY

F. W. EDWARDS.

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# V. ECHINODERMA

ARRANGED BY

H. B. PRESTON.

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†*Pentacrinus*, RIABININ 142.

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# VI. VERMIDEA

ARRANGED BY

R. W. HAROLD ROW.

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### (f) Echiuroidea.

[Nothing.]

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[Nothing.]

#### 3. PRIAPULOIDEA.

[Nothing.]

#### 4. PHORONIDEA.

[Nothing.]

#### 5. PTEROBRANCHATA.

[Nothing.]



# VII. BRACHIOPODA AND BRYOZOA

BY

F. W. EDWARDS.

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## (a) BRACHIOPODA

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†*Castanopora* gen. n. *Pelmatorporidae* p. 94, *retrorsa*, *nucifera*, *juglans*, England, *castanea* Rügen p. 95, *glandulosa* Rügen p. 106, spp. n. Cretaceous, LANG t.c.

†*Corymbopora* gen. n. *Andrioporidae*, *religata* sp. n. Bohemia Cretaceous, LANG t.c. p. 385.

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*Crisia serrata* S. Africa p. 472, *oranensis* Algiers p. 473, *sigmoidea* Naples p. 476, spp. n., WATERS Ann. Mag. Nat. Hist. 18.

†*Ctenopora* gen. n. *Ctenoporidae*, *pecten* sp. n. England Cretaceous, LANG Ann. Mag. Nat. Hist. 18.

†*Ctenoporidae* fam. n. *Cheilostomata*, LANG, t.c. p. 403.

†*Cystodictya brentwoodensis* p. 135, *sinuomarginata* p. 136, *flexuosa* p. 137, *morrowensis* p. 138, spp. n. Arkansas Carboniferous, MATHER Bull. Sci. Lab. Denison Univ. 18 1915.

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†*Fenestella nowlinsky* sp. n. Russia Carboniferous, BOLOHOVITINOVA Bull. sect. géol. Soc. nat. 3 p. 70.

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†*Francopora* gen. n. *Cheilostomata*, *canui* sp. n. France Cretaceous, LANG Ann. Mag. Nat. Hist. 18 p. 84.

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†*Glyptopora crassistoma* sp. n. Arkansas Carboniferous, MATHER Bull. Sci. Lab. Denison Univ. 18 1915 p. 140.

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ARRANGED BY

H. B. PRESTON.

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*Thais carinifera*, ANNANDALE & KEMP, 7.—*T. lapillus*, COLTON 66.

†*Trematonotus pritchardi*, CHAPMAN 59.

*Trophon* with *T. condensatus* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 pp. 60-61.

†*Trophon magister* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 207.

*Turbinella pyrum* var. n. *obtusa*, *acuta*, *globosa*, *comorinensis* Indian Ocean HORNELL Mem. Ind. Mus. 6 pp. 111-118; *T. VREDENBURG* 405.

†*Turbinella lynchi* and *T. dodderleiniana* [ANON] 9.

*Typhis pauperis* sp. n. New Zealand, MESTAYER Trans. N. Zeal. Inst. 48 p. 127.

*Vexillum pumilio* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 85.

†*Xancus wilsoni*, DALL 83.

*Zafra columnaria* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 89.

*Zafra* gen. n. type "*Colombella* [sic] *isomella* Duclos," IREDALE Proc. Malac. Soc. 12 p. 32.

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

†*Aporrhais*, GRECO 143.

*Bursa rubeta*, HEDLEY 167; B., COOKE 72.

†*Bursa victrix* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 506.

†*Cassidensepicata* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 243; C., DALL 83.

†*Cymatium cecilianum* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 507.

*Cypraea hesitata* nom. n. for *C. umbilicata* Sol., IREDALE Proc. Malac. Soc. 12 p. 93; *C. undata buttoni* var. n. Fiji Isds., OLDROYD Nautilus 29 p. 107; *C. variolaria* var. n. *splendens* Japan and Seychelles, *C. erosa* varr. n. *galbula* and *lucida* Seychelles, *C. e* var. n. *pallens* Ceylon, *C. esotropia* var. n. *pellucida*, *C. rashleighana* varr. n. *eunota* and *transpicens* Hawaii, TAYLOR J. Conch. 15 pp. 122–123; *C. venusta* var. *bakeri* W. Australia, *C. miliaris* var. *gabrielii* N. Territory Australia varr. n., GATLIFÉ Vict. Nat. 32 pp. 147–148; C., BYNE 51.

*Erato guttula* Sow., TOMLIN 384.

*Eugyrina gigantea*, COOKE 71.

†*Eutrilonium bomasense* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 242.

†*Harpagodes*, GRECO 143.

*Lambis*, IREDALE 188.

*Neosimnia catalinensis* sp. n. California, BERRY Nautilus 30 p. 21.

†*Orthaulax*, DALL 83.

†*Persona djunggrangensis* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 242.

†*Rimella Mordax, sokkohensis* spp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 pp. 246–247.

†*Pterodonta*, GRECO 143.

†*Pugnellus australis* sp. n. Cretaceous New Zealand, MARSHALL Trans. N. Zeal. Inst. 48 p. 120.

*Strombus leidas*, Lin., IREDALE 189.

†*Strombus spolongensis* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 275; S. DALL 83; S. GRECO 143.

†*Terebellum papilliferum, cinctum*, spp. n., Java, Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 248.

*Triton gyrynoides*, DE GREGORIO 145.

†*Tritonium*, GRECO 143.

*Trivia*, IREDALE 188.

CERITHIIDAE, PLANAXIDAE, TRICHO-TROPIDIDAE, VERMETIDAE, TURRITELLIDAE AND CÆCIDAE.

†*Aclisina*, COSSMANN 74.

*Bitium gravelyi* sp. n. Cochin back-water Ernakulam India, PRESTON Rec. Ind. Mus. 12 p. 29; *B. perspicuum* sp. n. Ceylon, SOWERBY Proc. Malac. Soc. 12 p. 75.

†*Bitium silicium* sp. n. Oligocene Georgia, DALL U.S. Nation Mus. Proc. 51 p. 510.

†*Cerithiopsis diagona* sp. n. Oligocene Georgia, DALL U.S. Nation. Mus Proc. 51 p. 516; *C. dumblei, orovillensis* spp. v. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 489; *C. smithfieldensis* sp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 16.

*Cerithium vulgatum*, KUŠÁKEVIČ 219; *C. tuberculatum*, TREGOUBOFF 387.

†*Cerithium brauneri* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69; *C. wanneri* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 248; *C. silicifluviium, mascotianum, halense, vaughani, cookei, corallicolum, entextile, vaginatum, insulatum*, spp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 pp. 511–516; *C.* (with *C. Cimolithium*) *anachoreta* (*VulgoCerithium*) *radamesis, C. hori*, spp. n., Cretaceous Egypt, GRECO Palaeont. Ital. 22 pp. 123, 133, 135, 154.

†*Diastoma georgiana* sp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 p. 510.

*Heterocerithiopsis* subgen. n. (*Cerithiopsis*), OLSSON Bull. Amer. Pal. 27 p. 16.

†*Horizostoma*, COSSMANN 74.

†*Mesalia sphyngis* sp. n. quatercarnatu var. n. Cretaceous Egypt, GRECO Palacont. Ital. 22 pp. 127-129.

†*Nerinella*, GRECO 143.

*Potamides djunggranganensis, deningeri, Volzi, kelirensis, dolfusi, teschi, ickei, progocensis*, spp. n., Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N.F. 2 pp. 249-253.

†*Procerithium* with *P. pentataeniatum* nov. mut., *P. mesalioides* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 pp. 118-120.

†*Promathilla*, COSSMANN 74.

†*Purpuroidea*, COSSMANN 74.

†*Spirocyclina*, COSSMANN 74.

*Strephopoma nucleocostata* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 92.

*Trichotropis bruceana* nom. n. for *T. antarctica*, MELVILL & STANDEN J. Conch. Leeds 15 p. 90; *T. antarctica*, HEDLEY 166.

*Trichotropis bruceana* nom. n. for *T. antarctica*, MELVILL & STANDEN, J. Conch. Leeds 15 p. 50; *T. Antarctica* HEDLEY 166.

*Triphora* [vide etiam *Triphoris*] *obliqua* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 91; *T. smithi* Sow. and *T. gracilior*, Smith, SMITH 383.

†*Triphoris* [vide etiam *Triphora*] *bartschi, dupliniana*, spp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 17.

†*Turritella buwaldana, kewi, andersoni, lawsoni*, spp. n. Eocene California, DICKERSON Univ. Cal. Pub. geol. 9 pp. 500-502; *T.* with *T. halensis* sp. n. Oligocene Georgia, DALL U.S. Nation. Mus. Proc. 51 p. 617; *T. nova* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 208; *T. teschi, spolungensis*, spp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus. N.F. 2 pp. 255-256; *T.* with *T. terebralis applunata, T. vermicularis*

*bijugata*, varr. n., Miocene S. W. Africa, WAGNER Union S. Africa Mines Dept. Geol. Surv. Mem. No. 7 pl. xxix; *T. (Peyrota) aidae*; (*Torcula cleopatrae*; (*Haustator) ramesis*, spp. n. Cretaceous Egypt, GRECO Palacont Ital. 22 pp. 119-120, 126; *T.*, COSSMANN 74.

†*Tympantonotus*, GRECO 143.

MELANIIDAE, PSEUDOMELANIIDAE, PLEUROCORRIDAE, LITTORINIDAE AND FOSSARIDAE.

†*Amberleya*, COSSMANN 74.

*Conradia cancellata* sp. n. Madras, PRESTON Rec. Ind. Mus. 12 p. 30.

†*Dissochilus*, COSSMANN 74.

*Doryssa transversa jaryensis, tapajozensis*, subspp. n. *D. rex, D. r. regina, D. globosa, starksi* spp. & subspp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 649-652.

†*Dumesella*, COSSMANN 74.

†*Fossarus*, COSSMANN 74

*Goniobasis pennsylvanica* sp. n. W. Pennsylvania, PILSBRY Nautilus 29 p. 4

†*Gouelina* gen. n. (*Littorinidae*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 69.

†*Hallstadtia* gen. n. (*Fossaridae*) COSSMANN Essais Pal Comp. 1915 [1916] p. 97.

*Hemisinus flammeus* sp. n. *elongatus* subsp. n. Brazil, BAKER, Philadelphia Proc. Acad. Nat. Sci. 65 p. 657.

†*Heterospira*, COSSMANN 74.

†*Lacuna*, COSSMANN 74.

†*Lacunina*, COSSMANN 74.

*Larinopsis* gen. n. type *Larina* (?) *turbinata*, Gat. and Gab., GATLIFF & GABRIEL Proc. R. Soc. Victoria 29 p. 104.

†*Lithoglyphus neumayri*, GRIGOROVICH-BEREZOVSKIJ 147.

*Littorina*, with *L. palliata* varr. n. *turritella, carinata, auricularia, L. rudis* var. n. *conoidea* Iceland, SCHLESCH Naturalist London 1916 pp. 279-280; *L. littorea*, KANDA 208.

†*Littorina*, COSSMANN 74.

†*Littorinopsis* and *L. tournoueri* sp. n. France Miocene, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 61, 262.



†*Loxonema sinuosa* var. n. *australis* Silurian Victoria; CHAPMAN Proc. R. Soc. Victoria 29 p. 96; *L.* with *L. welleriana* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U.S. Geol. Surv. 89 pp. 29-80; *L. wortheni* sp. n. Carboniferous U.S.A., WELLER Contrib. Walker Mus. Chicago 1, p. 261.

*Melania*, GERMAIN 137.

†*Melania fossariformis*, GRIGOROVİČ-BEREZOVSKIJ 147.

†*Melanopsis*, GRIGOROVİČ-BEREZOVSKIJ 147; *M. rhodensis*, KALIŌKIJ 207.

†*Microdomus*, COSSMANN 74.

†*Micromelania* (?) *curta* sp. n. *planoconvexa* var. n., NALIVKIN Mém. Com. géol. 116 pp. 21-22, 31.

†*Nina*, COSSMANN 74.

†*Oncospira*, COSSMANN 74.

†*Ooliticia*, COSSMANN 73 and 74.

†*Palaeonaricia*, COSSMANN 74.

†*Paleunema*, COSSMANN 74.

†*Planaxis densestriatus* sp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N.F. 2 p. 254.

*Pseudobaicalia elegantula*, DYBOWSKI 110.

†*Pseudolacuna*, COSSMANN 74.

†*Pseudomelania*, COSSMANN 73.

†*Rigauxia*, COSSMANN 74.

†*Risella* and *R. (Risselloidea) bajocica* sp. n. France [? Tertiary], COSSMANN Essais Pal. Comp. 1915 [1916] pp. 73, 263.

†*Rothpletzella*, COSSMANN 74.

†*Spironema*, COSSMANN 74.

†*Sublacuna*, COSSMANN 74.

†*Tectarium*, COSSMANN 74.

SOLARIIDAE, SKENEIDAE, LITIOPIDAE, RISSIODAE, HYDROBRIDAE, VIVIPARIIDAE, VALVATIDAE, AMPULLARIIDAE AND ASSIMINEIDAE.

*Alvania thouinensis, seminodosa, suprasculpta* spp. n. Tasmania MAY. Proc. R. Soc. Tasmania 1915 pp. 94-95.

*Amnicola neomexicana* New Mexico. —*A. deserta* Utah, spp. n., PILSBY Nautilus 29 p. 111.

(N-9974 r)

*Amphithalamus triangulus, auran-tiocinctus, pertumidus, tiara*, spp. n., Tasmania, MAY Proc. R. Soc. Tasmania 1915 pp. 95-96.

*Ampullaria*, GERMAIN 137; *A. SOWERBY* 358.

†*Angyomphalus* subgen. n. (*Rotellomphalus*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 152.

†*Architectonica ultrayana* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 487.

*Assemania rufostriata* sp. n. Bul-garia, HESSE Nachr. Bl. D. Malakozool Ges. 48 p. 154.

*Bythinia moltschanovi* sp. n. Delta of the Amur - Darja, LINDHOLM Ann. mus. zool. Ac. sc. 19 pp. 344-345; *B. GERMAIN* 137.

†*Bythinia vukotinoviči*, GRIGOROVİČ-BEREZOVSKIJ 147.

*Campeloma* with *C. rufum meridionale, geniculiforme* subsp. n. Georgia, PILSBRY Nautilus 30 p. 42.

*Cerithiopsis antarctica*, HEDLEY 166.

†*Colpomphalus* sec. n. (*Discohelix*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 136.

*Discohelix hedleyi* sp. n. New Zealand, MESTAYER Trans-N. Zeal. Inst. 48 p. 125.

†*Discohelix*, COSSMANN 73 & 74.

*Eatoniella kerguelenensis*, HEDLEY. 166.

*Eatoniopsis ainsworthi* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 46.

†*Eccyliomphalus*, COSSMANN 74.

†*Emmericia*, PILSBRY 309.

†*Emmericia jenkiana and candida*, GRIGOROVİČ-BEREZOVSKIJ 147.

*Epigrus semicinctus* sp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 p. 96.

*Eumeta strebeli*, HEDLEY 166.

†*Euomphalus* with *E. centrifugalis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 89-90; *E.*, COSSMANN 74; *E.*, MATHER 249.

†*Fluminicola nevadensis* sp. n. Nevada WALKER Occ. Paprs. Mus. Zool. Univ. Michigan No. 29 p. 6.



- †*Hippocampoides* gen. n. *H. serratus* sp. n. Cretaceous Tennessee, WADE, Philadelphia Proc. Acad. Sci. 68 pp. 466-467.
- †*Homalaxis*, COSSMANN 74.
- Horatia (Hauffenia) micra*, P. & F. nom. n. for *Valvata micra*, PILS & FERR. PILSBRY Nautilus 30 pp. 83-84.
- Idiopyrgus pilsbryi* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 658.
- Iravadia funerea, annandalei* Cochinchina backwater, near Ernakulam India; *I. ennurensis* Madras, spp. n. Preston Rec. Ind. Mus. 12 pp. 30-31.
- Laevilitorina claviformis* sp. n. S. Shetland Isds., Preston Ann. Mag. Nat. Hist. 18 p. 270; *L.*, HEDLEY 166.
- Lanistes*, SOWERBY 358.
- Lanzaia*, PILSBY 309.
- Leroya*, SOWERBY 358.
- †*Lionopholus* gen. n. (*Euomphalidae*) *L. australis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 90.
- Littoridina manni* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 658.
- Meladomus*, SOWERBY 358.
- Melanella iotoides* nom. n. for *M. iota*, Bartsch S. Africa, BARTSCH Nautilus 30 p. 72; *M.* with *M. laseroni* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 49.
- †*Micromelania*, KALICKIJ 207.
- Microsetia durbanensis* sp. n. Durban TOMLIN J. Conch. 15 p. 119.
- †*Nipteraxis* sec. n. (*Solariidae*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 167.
- †*Nummocallar* and *N. (Colpomphalus) thieri* sp. n. Franco Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 138, 268.
- Ouoba cymatodes* sp. n. Antarctic, MELVILL & STANDEN J. Conch. 15 p. 120.
- Ovirissoa* gen. n. Type *Rissoa adarensis* Smith, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 47.
- Paludestrina jenkinsi*, OLDHAM 279.
- †*Platybasis* sec. n. (*Nummocallar*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 140.
- †*Platyschisma*, COSSMANN 74.
- Potomopyrgus scottii* var. n. *deilicola* Argentina, DOELLO-JURADO Physis Rev. Soc. Argentina Buenos Aires 2 p. 178.
- †*Pseudomalaxis*, COSSMANN 74.
- †*Riselloidea subdisjuncta* var. n. *conjuncta* Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 127.
- Rissoa obeliscus, pupoides, simillima, multilirata, freycineti*, spp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 pp. 92-94.
- †*Rotellomphalus*, COSSMANN 74.
- †*Semisolarium* gen. n. and *S. vidali* sp. n. Cretaceous, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 155, 269.
- †*Serpulospira* nom. mut. *Serpularia*, Roemer 1843, COSSMANN Essais Pal. Comp. 1915 [1916] p. 144.
- †*Solarium sokkohenense* sp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N.F. 2 p. 256; *S.* and *S. (Climacopora) grossouvrei* sp. n. Cretaceous, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 163, 270; S. GRECO, 143.
- Stenothyra perpumilis* sp. n. Cochinchina backwater near Ernakulam India, PRESTON Rec. Ind. Mus. 12 p. 31.
- †*Straparollina*, COSSMANN 74.
- †*Straparollus debilis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 92; *S.* COSSMANN 74; *S.* MATHER 249; *S.* WELLER 419.
- Subonoba* with *S. bickertoni, wilkesiana* spp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 47-48.
- †*Tanaliopsis* subgen. n. (*Risella*), COSSMANN, Essais Pal. Comp. 1915 [1916] p. 77.
- Tatea melvilli* sp. n. Macquarie Isd. HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 46.
- †*Torinia*, COSSMANN 74.
- †*Tornidae*, CERULLI-IRELLI 55.
- †*Touzinia* sec. n. (*Littorinopsis*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 62.

*Trachybaicalia* with *T. carinato-costata* *bittneri* var. n. *clara*, *opaca*, *pyramidalis*, *micronella*, subvar. n. *credneri*, var. n. *elatella*, *inflatella*, subvar. n. *sandbergeri*, *moussoni* var. n. *dybowskiana lindholmi* var. n. Lake Baikal, DYBOWSKI Ann. mus. zool. Ac. sc. 19, pp. 300-316; *T.* with *T. carinata martensiana* var. n., *T. c. m. elencha*, *maura*, *rudis*, *picola*, *orthos*, subvar. n., *hoernesiana*, *fuchsiana*, *sturanyana*, *neumayeriana*, var. n., Lake Baikal, DYBOWSKI Ann. Mus. zool. Ac. Sc. 19 pp. 286-298.

*Valvata biwaënsis*, *annandalei*, spp. n. Japan, PRESTON Ann. Mag. Nat. Hist. 17 pp. 161-162.

*Vivipara* [vide etiam *Viviparus*], GERMAIN 137.

†*Vivipara* [vide etiam *Viviparus*] with *V. laskarevi* sp. n. Bessarabia, GRIGOROVIC-BERZOVSKIJ Varšova Izv. Univ. 1915 pp. 97-99.

*Viviparus contectoides impolitus*, *compactus* subspp. n. Alabama, PILSBRY Nautilus 30 pp. 41-42; *V. contectoides*, JOHNSON 200; *V. malleatus*, JOHNSON 201.

CYCLOPHORIDAE, CYCLOSTOMATIDAE  
AND TRUNCATELLIDAE.

*Acicula lineata*, DEAN 97.

*Chondropona wilcoxi* [? sp. n.] Isle of Pines, HENDERSON Ann. Carnegie Mus. 10 p. 316.

*Tropidophora (T.) ancëps*. GERMAIN 136.

CAPULIDAE, XENOPHORIDAE, ADEOR-  
BIDAE, LAMELLARIIDAE, NATICIDAE,  
AND JANTHINIDAE.

†*Amaltheus balduri*, SOKOLOV 355.—A., PAVLOV 295.

†*Amouropsis ocavana*, DALL 83.

†*Ampullina*, DALL 83.

†*Bucanospira*, COSSMANN 74.

†*Bulimorpha pygmaea*, *whitfieldi* spp. n. Carboniferous U.S.A., WELLER, Contrib. Walker Mus. Chicago 1 p. 260.

†*Calyptrea (Trochita) trochiformis*, DALL 83.

*Crepidula adunca*, HEATH 164.; *C. plana*, CONKLIN 68.

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†*Crepidula inornata* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 489.

†*Cyclonema*, CHAPMAN 59.

†*Diaphorostoma retrorugatum*, *incisum* spp. n., Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 98-99.—D. RUEDEMANN 333.

†*Eudoptyxma*, COSSMANN 74.

*Friginatica* gen. n. type *Natica beddomci*, Johnston, *F. pisum* sp. n. Macquaire Isd., HEDLEY Aust. Ant. Exp. 1911-1914, Vol. 4 pp. 51-53.

†*Jurassiphorus* gen. n. (*Xenophoridae*) COSSMANN Essais. Pal. Comp. 1915 [1915] p. 188.

*Lamellariopsis aurora* sp. n. Antarctic HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 53.

†*Lamelliphorus* gen. n. (*Xenophoridae*) COSSMANN Essais Pal. Comp. 1915 [1916] p. 189.

*Lunatia bransfieldensis* sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 270.

*Marseniopsis mollis*, HEDLEY 166.

†*Meekospira minuta* sp. n. Carboniferous U.S.A., WELLER Contrib. Walker Mus. Chicago 1 p. 261.—M., MATHER 249.

*Natica kempfi* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 90.

†*Natica convexa* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 86.—*N. gesteri* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 496.—*N. (Neverita) orbicularis* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 207.—*N.*, GRECO 143.

†*Naticopsis* with *N. eichwaldi*, Stuckenb. = *noinskii* sp. n. Carboniferous, FREDERICKS Kazani Trd. Obsč. jest. 47 pp. 10-11.—*N. wortheni*, *waterloensis* spp. n., Carboniferous U.S.A., WELLER Contrib. Walker Mus Chicago 1 p. 259.

*Onchidopsis (Atlantolimax) hannai* sp. n. Behring Sea, DALL Philadelphia Proc. Acad. Sci 68 p. 375.

†*Orthonychia brevis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 96.

*Pellilitorina bennetti*, *bransfieldensis* spp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 pp. 270-271.—*P. rossiana*, HEDLEY 166.

†*Platyceras* with *P. chapmani*, *edmundi*, *P. (Orthonychia) aroostooki*, *compressa* spp. n., Silurian U.S.A., WILLIAMS & BREGER Bull. U.S. Geol. Surv. 89 pp. 259-262.—*P.* with *P. minutum* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 97-98.—*P.* MATHER 249.—*P.*, WELLER 419.

†*Platystoma*, WILLIAMS & BREGER 424.

*Roya deveva* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 92.

*Sigaretus (Eunaticina) calaraphe* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 90.

†*Sphaerodoma*, MATHER 249.

†*Strophostylus*, COSSMANN 74.—*S.* MATHER 249.—*S.* WILLIAMS & BREGER 424.

†*Subulites*, COSSMANN 74.

†*Tylostoma* with *T. atheleticum* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 131.

†*Xenophora stocki* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 502.—*X. conchyliophora* DALL 83.—*X.*, COSSMANN 74.—*X.* GRECO 143.

#### SCALIDAE.

†*Aclis*, COSSMANN 74.

†*Aclisina*, MATHER 249.

*Crossea consobrina* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 97.

†*Epitonium tejonensis* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 491.—*E. ? dubiosum* sp. n. Oligocene Georgia DALL U. S. Nation. Mus. Proc. 51 p. 506.

†*Pliciscula*, COSSMANN, 74.

†*Scala dupliniana*, *sheldoni* spp. n., *S. lineata*, Say var. n. *magnoliiana* Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 pp. 15-16.

#### EULIMIDAE AND PYRAMIDELLIDAE.

*Bartschella* gen. n. Type *Dunkeria subangulata*, Carp., IREDALE Proc. Malac. Soc. 12 p. 36.

*Dunkeria*, IREDALE 188.

*Elusa*, IREDALE 188.

*Eulima immaculata* fig. GATLIFF & GABRIEL Proc. R. Soc. Victoria Pl. VII. fig. 2 [see also id. p. 109]; *E. oxytata*, Wats. fig. and *E. rossinsulæ* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 91 *E. schoutanica*, *columnaria*, *mamilla*, *cunaeformis* spp. n., Tasmania, MAY Proc. R. Soc. Tasmania 1915 pp. 89-90.

*Eulimastoma* subgen. n. (*Pyramidelidae*) Type *Subeulima lamberti* Souv., BARTSCH Nautilus 30 p. 73.

*Eulimidae*, JONKER 205.

†*Hypsipleura*, COSSMANN 74.

†*Microschiza*, COSSMANN 73.

*Odostomia occultidens*, *crassicosta*, spp. n., Tasmania, MAY Proc. R. Soc. Tasmania 1915 pp. 90-91.

†*Odostomia packi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 498.

†*Palaeoniso*, COSSMANN 74.

†*Pyramidella kelirensis*, *djunggran-ganensis*, spp. n., Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus. N. F. 2 pp. 257-258.

*Pyrgulina humilis*, Preston=*Pyramidula (Mormula) humilis*, Preston; *P. h.* var. *chilkaensis*, Preston=*Mormula chilkaensis*, Preston, PRESTON Rec. Ind. Mus. 12 p. 32.

*Scalenostoma*, BARTSCH 24.

†*Stephanoscomia*, COSSMANN 74.

*Stilifer polaris* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 50.—*S. sibogae*, JONKER 205.

*Thyea crystallina*, JONKER 205.

†*Tretospira*, COSSMANN 74.

*Tropaeas*, IREDALE 188.

*Turbonilla lamyi* sp. n. Macquarie Isd. HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 62.

†*Undularia*, COSSMANN 74.

*Vanesia rambhaënsis*, Preston nom. n. for *Terebra rambhaënsis*, Preston, PRESTON Rec. Ind. Mus. 12 p. 32.



†*Zygopleura*, COSSMANN 74.

HELICINIDAE.

*Helicina schereri, guajarana, laterculus*, spp. n., Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 625–626.

NERITIDAE, NERITOPSIDAE, TURBINIDAE, TROCHIDAE AND CYCLOSTREMATIDAE.

†*Acrosolarium*, COSSMANN 74.

†*Astralium arnoldi* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 204.

†*Ataphrus pembertoni* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69.—A., COSSMANN 73.

†*Aulacotrochus* gen. n. for *Trochus nitens*, Dum., COSSMANN Bull. Soc. Geol. Normandie 33 p. 131.

*Brookula*, HEDLEY 166.

†*Calliophthalmus*, COSSMANN 74.

†*Calliostoma* with *C. fallaciosum* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 128.—*C. amneris* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 117.—*C. conulum* var. n. *cingulifera, granulosa, C. striatum* var. n. *conjungens* Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 pp. 191–192, 200.—*C. ethegoiense* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 85.—*C. harrisiannum, suffolkense*, spp. n., *C. (Eutrochus) shackelfordensis* ? sp. n. Miocene U.S.A. OLSSON Bull. Amer. Pal. 27 pp. 19–20.

*Cantharidus rariguttatus* sp. n. New Caledonia, SOWERBY Proc. Malac. Soc. 12 p. 75.

†*Chartronella raspalli* sp. n. France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] p. 267.

†*Circulus schmidti* sp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 18.

†*Cirridae* fam. n., COSSMANN Essais Pal. Comp. 1915 [1916] p. 197.

†*Cirrus (Spirocirrus) bigoti* sp. n. France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] p. 270.

*Cirsonella translucida* sp. n. Tasmania MAY Proc. R. Soc. Tasmania 1915 p. 97,

†*Clanculus*, COSSMANN & PEYROT 75.

†*Coelocentrus*, COSSMANN 74.

†*Craspedostoma*, CHAPMAN 59.

†*Cyclonema globosa* sp. n. Carboniferous U.S.A., WELLER Contrib. Walker Mus. Chicago 1 p. 256.—*C.*, COSSMANN. 74.

*Cyclostrema microscopica* Nevill fig., ANNANDALE & KEMP 7.

†*Cyclostrematidae*, CERULLI-IRELLI 55.

†*Cyclostremella magnoliiana* sp. n. Miocene U.S.A., OLSSON Bull. Amer. Pal. 27 p. 24.

†*Delphinula helvetica* nom. mut. or *Adeorbis cristatus*, Mayer-Eymar, D. (*Pseudoninella*) *raulini* and var. n. *planibasis, D. (Pr.) falloti*, spp. n., Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 228–234; D., COSSMANN 74.

†*Eotrochus*, WELLER 419.

*Ethalia capillata* fig., PRESTON Rec. Ind. Mus. 12 p. 92.

†*Ethalia alexandri* sp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 p. 22.

*Euchelus profundior* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 98.

†*Eucyclomphalus*, COSSMANN 74.

†*Eucyclus* and *E. capitaneus* var. n. *bruni* France Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 52, 262.

†*Gibbula* with *G. sallomacensis* n. mut. *Trochus magus* Ben.; *G. (Gibbuloidella) altispira, G. (Colliculus) aquitanica* and var. n. *amphibola, eichwaldi* and var. n. *avitensis*, spp. n.; *G. (C.) benoisti* n. mut. *G. (C.) glyphidospira, sosensis* spp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 262–284; *G. magus*, var. n. *perproducta, conica, perconica, G. filiformis* var. n. *transiens* Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 pp. 179–180.

†*Halopea fountainensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 260.—*H. (Turbina?) boonei* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 124.

†*Hyperacanthus*, COSSMANN 74.

*Lepiothyra fultoni* sp. n. Aden, SOWERBY Ann. Mag. Nat. Hist. 18 p. 491.

†*Liotia (Arene) halensis, L. persculpturata* spp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 521.



*Margarella* with *M. macquariensis* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 37.

†*Margarites coralicus* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 520.

†*Metriomphalus* subgen. n. (*Calliomphalus*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 222.

*Minolia* with *M. thielei* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 39.

†*Molleria harrisi*, *smithfieldensis* spp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 pp. 23-24.

†*Monodonta* with *M. peyreirensis*, *pygmaea*, *M. (Neodiloma) raulini* spp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 246-254; *M. watti* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 494.

†*Mrhilaia*, GRECO 143.

†*Nerinea basileensis*, Thurm., STRÜBIN 372; *N.*, GRECO 143.

†*Nerita ickei* sp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N. F. 2 p. 258; *N. tampaensis*, DALL 83.

†*Neritina joggacartensis*, *eastoni* spp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N. F. 2 pp. 259-260; *N.*, GRIGOROVIC-BEREZOVSKIJ 147; *N.*, NALIVKIN 269.

†*Neritopsis*, GRECO 143.

†*Nododelphinula* gen. n. (*Delphinulidae*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 225.

†*Omphalotrochus*, CHAPMAN 59.

†*Oxystele* with *O. burdigalensis* sp. n., *O. rotellaris* mut. n. *bearensis* Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 255-262.

†*Pulacotrochus*, COSSMANN 74.

†*Paraturbinidae* fam. n. (= *Trochoturbinidae*, Koken, ex parte), COSSMANN Essais Pal. Comp. 1915 [1916] p. 33.

†*Paraturbo* and *P. cavalliere* sp. n. France [? Tertiary], COSSMANN Essais Pal. Comp. 1915 [1916] pp. 37, 361.

†*Phasianella teschi* sp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N. F. 2 p. 260.

†*Phasianellidae* with *P. pullus* var. n. *dubia* Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 pp. 171-173.

*Photinula* with *P. coruscans* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 40.

†*Plagiothyra*, COSSMANN 74.

†*Platyacra* and *P. (Asperilla) mayensis* sp. n. Jurassic, COSSMANN Essais Pal. Comp. 1915 [1916] pp. 206, 271.

†*Pseudorotella bushi* sp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 p. 22.

†*Pseudotectus* with *P. ? deciduus* sp. n. Silurian U. S. A., WILLIAMS & BREGGER Bull. U. S. Geol. Surv. 89 pp. 276-279.

†*Raiblia* nom. mut. (*Wöhrmannia*), COSSMANN Essais Pal. Comp. 1915 [1916] p. 204.

†*Rhabdopleura*, COSSMANN 74.

†*Scalaetrochus*, CHAPMAN 59.

†*Schizobasis* gen. n. *S. depressa* sp. n. Cretaceous Tennessee, WADE Philadelphia Proc. Acad. Sci. 68 pp. 468-469.

*Solariella deliciosa* sp. n. Madras, PRESTON Rec. Ind. Mus. 12 p. 33.

†*Solariella simulans* sp. n. Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 p. 189; *S. liasica* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 131.

†*Spirocirrus* subgen. n. [*Cirridae* fam. n.], COSSMANN Essais Pal. Comp. 1915 [1916] p. 201.

*Submargarita* with *S. smithiana* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 vol 4 p. 38.

†*Teinostoma niocenicum*, *thompsoni*, spp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 p. 21; *T. sublimata* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 520:

*Thoristella auclandica*, HEDLEY 166.

†*Trochidae*, CERULLI-IRELLI 55.

†*Trochonema*, COSSMANN 74.

†*Trochus* with *T. (Tectus) elegantulus* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 236-241; *T. bomasensis* sp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N. F. 2 p. 261.

†*Turbinidae*, CERULLI-IRELLI 55.

†*Turbinilopsis*, COSSMANN 74.

†*Turbo* with *T. cheopis* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 pp. 116, 143; *T. djunggranganensis, deningeri* spp. n. Java Miocene, MARTIN Leiden Samml. Geol. Reichsmus N. F. 2 pp. 260–261.

†*Turbochilus*, COSSMANN 74.

†*Turbonitella verneuili* sp. n. Nehou (Manche) [? Tertiary], COSSMANN Essais Pal. Comp. 1915 [1916] p. 260.

†*Urceolabrum* gen. n. *U. tuberculatum* sp. n. Cretaceous Tennessee, WADE Philadelphia Proc. Acad. Sci. 68 pp. 469–470.

STOMATHIDAE, HALIOTIDAE, PLEUROTOMARIIDAE, BELLEROPHONTIDAE AND FISSURELLIDAE.

†*Astralites*, COSSMANN 74.

†*Bellerophon* with *B. monroensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 257; *B.* with *B. pisum* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 79–80.; *B.*, FREDERICKS 123; *B.*, MATHER 249.

†*Carinaropsis victoriæ* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 81.

†*Cocculinidae*, CERULLI-IRELLI 55.

†*Coelidium*, WILLIAMS & BREGER 424.

†*Coelocaulus* with *C. apicalis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 84–87.

†*Cyrtostropha lilydalensis* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 87.

†*Emarginula fissura* var. n. *depressula*, *E. interposita* sp. n. and var. n. *perconoidalis*, *E. conica* varr. n. *pseudocapuliformis*, *erecta*, *rotundula*, *depressa obtusa*, *E. adriatica* var. n. *rustica* Tertiary Italy, CERULLI-IRELLI Palaeont. Ital. 22 pp. 212–218; *E.*, COSSMANN & PEYROT 75

†*Euconospira arkansana* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 235.

†*Euomphalopterus*, COSSMANN 74.

†*Euphemus lentiformis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 258; *E.*, MATHER 249.

*Fissurella sagax* sp. n. New Caledonia, SOWERBY Proc. Malac. Soc. 12 p. 75.

†*Fissurella* with *F. leogananensis* sp. n. *F. (Lucapina) subcostaria* var. n. *pustulosa*, *F. (L.) italica* varr. n. *vasconiensis*, *sallomacensis* Neogen Franc., COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 198–207.

†*Fissurellidae*, CERULLI-IRELLI 55.

†*Fissurellidea*, COSSMANN & PEYROT 75.

†*Fissuridea subelliptica* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 205.

†*Goniostropha* with *G. chapmani* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 p. 276; *G.*, CHAPMAN 59

†*Gyrodoma*, CHAPMAN 59.

†*Haliotis*, CROSSMANN & PEYROT 75.

†*Helicotoma*, COSSMANN 74.

†*Hormotoma gregaria* sp. n. Palaeozoic U. S. A., RUEDEMANN N. Y. State Mus. Bull. 189 p. 73.

†*Mesocalia* with *N. tennella* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 273–275.

†*Mourlonia minuta* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 253; *M.* with *M. subaequilatera* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 pp. 82–83.

†*Patellostium* with *P. revolvens* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 264–265.

†*Phanerotrema*, CHAPMAN 59.

†*Plectonotus* WILLIAMS & BREGER 424.

†*Pleurotomaria maccoyi* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 81; *P. xenia* sp. n. Upper Carboniferous Ural, FREDERICKS Kazan Trd. obč. jest. 47 pp. 8–9; *P. Penecki* sp. n. Palaeozoic Graz., HERITSCHE Deutschr. K. Ak. Wiss. Wien 92 p. 572; *P.*, COSSMANN, 73.

†*Ptychomphalus wortheni, sinuatus depressus*, *P. ? fountainensis*, spp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 pp. 253–255.

*Puncturella analoga*, HEDLEY 166.

†*Raphistoma*, COSSMANN 74.

*Schismope subantarctica* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 vol. 4 p. 36.

*Scissurella regia* sp. n. New Zealand, MESTAYR Trans. N. Zeal Inst. 48 p. 124.

†*Scissurella*, COSSMANN & PEYROT 75.

†*Scissurellidae*, CERULLI-IRELLI 55.

†*Scutum*, COSSMANN & PEYROT 75.

*Submarginula golischae* sp. n. California, DALL Nautilus 30 p. 61.

†*Submarginula* with *S. ? newvillei* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 218-220.

†*Tennodiscus pharetroides* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 78.

†*Tropidodiscus* with *T. (Tennodiscus) somerseti* sp. n. *T. minimus* var. n. *americanus* Silurian U. S. A. WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 269-272.

*Tugalia antarctica*, M. & S. = *T. melvilli* Thiele, MELVILL & STANDEN 257.

†*Worthenia*, MATHER 249.

#### ACMÆIDAE AND PATELLIDAE.

†*Acmaea ruckmani* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 488.

†*Helcionopsis* with *H. elegantulum* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 77.

*Lepeta* with *L. depressa* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 41-42.

†*Lepetopsis*, MATHER 249.

*Nacella*, Hedley 166.

†*Patella* with *P. burdigalensis*, *sallo macensis*, *degrangei*, *tenuiflora* spp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 192-196; *P. turkestanica* sp. n. Oligocene Turkestan, GORIZDRO Petrograd Trav. Soc. nat. 37 No. 5 p. 37.

*Radiacmea macquariensis* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 41.

†*Scurriopsis vendacensis* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 133.

†*Tectura*, COSSMANN & PEYROT 75.

†*Tecturidae*, CERULLI-IRELLI 55.

#### INCERTAE SEDIS.

†*Angularia*, COSSMANN 74.

†*Auryptigma*, WILLIAMS & BREGER 424.

†*Bembexia waterlooensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 252.

†*Coelostylina*, COSSMANN 73.

*Eutocolax ludwigi*, ŠVANVIČ 373.

*Harpovoluta vanhoffeni*, HEDLEY 166.

†*Katosira*, COSSMANN 73.

†*Modoriopsis* and *M. sacyi*, *M. (Entomope) bonneti* spp. n. France [?Tertiary]. COSSMANN Essais Pal. Comp. 1915 [1916] pp. 109, 264-265.

†*Protospira minuta* sp. n. Cambrian U. S. A., RUEDEMANN N. Y. State Mus. Bull. 189 p. 72.

†*Rostrocerithium*, GRECO 143.

†*Roxania progocensis*, *spolungensis* spp. n. Java Miocene, MARTIN Leiden Samml. geol. Reichsmus N. F. 2 pp. 223-224.

†*Sinum imperforatum*, DALL 83.

†*Solenospira pygmaea*, *illinoiensis* spp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 256.

*Toledonia* with *T. globosa*, *major*, Hedley var. *elata* var. and sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 63.

†*Trajanella*, COSSMANN 74.

*Trichoconcha mirabilis*, HEDLEY 166.

*Trochaclis*, HEDLEY 166.

†*Viviana*, COSSMANN 74.

†*Zigopleura nadejduana* sp. n. Ural Carboniferous, FREDERICKS Kazan Trd. Obšč. jest. 47 pp. 9-10.

#### Opisthobranchia (INCLUDING PTEROPODA AND HETEROPODA).

†*Accra fourtaui* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 165.

†*Actaeon moodyi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 488.—A., GRECO 143.

†*Actaeonella (Trochactaeon) humei* sp. n. Cretaceous Egypt, GRECO Palaeont. Ital. 22 p. 150.

*Aegires albus*, HEDLEY 166.

*Archidoris tuberculata*, RENOUF 322.



†*Avellana paucistriata, curta, tertiaria*, spp. n., Cretaceous New Zealand, MARSHALL Trans. N. Zeal. Inst. 48 pp. 120–121.

*Bathydoris hodgsoni*, HEDLEY 166.

*Bulla hydatis*, DUSTIN 109.

†*Bullinella triplicata* sp. n. Java Miocene. MARTIN Leiden Samml. geol. Reichsmus N. F. 2 p. 224.

*Clodilia caduceus*, HEDLEY 166.

*Clione antarctica*, HEDLEY 166.

*Cuthona henrici* sp. n. Chilka Lake, ELIOT Mem. Ind. Mus. 5 p. 377.

*Cylichnella syngenes* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 92.

†*Cylindrobullina*, COSSMANN 73.

*Doris* with *D. antarctica* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911–1914 vol. 4, p. 65.

*Elysia chilkinsis* sp. n. Chilka Lake ELIOT Mem. Ind. Mus. 5 p. 378.

†*Euconacteon*, COSSMANN 73.

*Heteropoda*, BIGELOW 37.

*Lamellidoris bilamellata*, RENOUF 322.

*Limacina costulata* sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 269.

*Neacteonina fragilis*, HEDLEY 166.

*Newnesia antarctica*, HEDLEY 166.

*Noteolidia depressa*, HEDLEY 166.

†*Ovactaonina*, COSSMANN 73.

*Pleuroleura walteri*, DERIUGIN 100.

*Pteropoda*, BIGELOW 37; *P.*, VAYS-SIÈRE 400.

*Pterotrachea*, BRÜEL 50.

*Retusa* with *R. ennurensis* sp. n. Madras, PRESTON Rec. Ind. Mus. 12 1916 p. 27.

†*Striactaonina boonei* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandic 33 p. 114.

†*Tornatellæa pauciarata* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandic 33 p. 114.—*T.*, GRECO 143.

*Tritoniella sinuata*, HEDLEY 166.

## Pulmonata.

### APERIDAE, TESTACELLIDAE AND SELENITIDAE.

*Ennea reesi* with *E. (Gulella) cadmani*, *E. (Paucidentata) monodon zariaënsis*, sp. & subsp. n. W. Africa, PRESTON Ann. Mag. Nat. Hist. 17 pp. 259–260.—*E. (Uniplicaria) gestroi, nemoralis, E. (Enneastrum) girardi, feai*, spp. n., Isds. in Gulf of Guinea, GERMAIN Bull. Mus. Paris 1915 pp. 283–285.

*Entodina jekylli* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 630.

*Eustreptostele* subgen. n. (*Streptostele*) *S. (E.) truncata* sp. n. Fernando Po, GERMAIN Bull. Mus. Paris 1915 pp. 285–286.

*Happia snethlagei* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 629.

*Streptaxis deplanchei quixadaensis* subsp. n., *cookeana, abunaensis*, spp. n., Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 628–629.

*Systrophia eatoni* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 631.

### LIMACIDAE, PHYLOMYCIDAE AND ZONITIDAE.

*Agriolimax absoloni* sp. n. Herzegovina, SIMROTH Nachr. Bl. D. Malakozool. Ges. 48 p. 13.—*A. (Hydrolimax) huculorum* sp. n. Worochta, BABOR & FRANKENBERG Wien Verh. Zoolbot. Ges. 64 pp. 109–122.—*A. agrestis* HEDLEY 166.

*Amalia* with *A. cavicola* sp. n. Dalmatia, SIMROTH Nachr. Bl. D. Malakozool. Ges. 48 pp. 3–12.—*A.*, POLLONERA 312.

*Ariolimax californicus*, HEATH 163.

*Austenia aborensis, alba, siyomensis*, spp. n., Abor Hills, GODWIN-AUSTEN Rec. Ind. Mus. 8 pp. 548–551.

*Cryptaustenia bicolor* sp. n. Assam GODWIN-AUSTEN Rec. Ind. Mus. 8 p. 548.

*Dihaugia* gen. n. (*Zonitidae*) with *D. koboensis* sp. n. Assam, GODWIN-AUSTEN Rec. Ind. Mus. 8 p. 552.

*Durgella aborensis* sp. n. Abor Hills, GODWIN-AUSTEN Rec. Ind. Mus. 8 p. 555.



*Galongia* gen. n. (*Zonitidae*) with *G. kempfi* sp. n. Rotung, GODWIN-AUSTEN Rec. Ind. Mus. 8 p. 553.

*Geomalcus* (*Letourneuxia*) *maroccanus* sp. n. Morocco, POLLONERA Bull. Mus. Paris 1916 p. 191.

*Girasia maculosa* Singpho Hills, *G. gladstonei* Assam, spp. n., GODWIN-AUSTEN Rec. Ind. Mus. 8 pp. 551-552.

*Guppya mayi* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 632.

*Helix scytodes* = *Trochomorpha s.* is a *Plectotropis*, GUDE Proc. Malac. Soc. 12 p. 121.

*Hyalinia malinowskii* form. n. *stenophala* Eastern Rumelia, HESSE Nachr. Bl. D. Malakozool. Ges. 48 p. 114.

*Limacopsis*, SIMROTH 347.

*Limax tenellus*, OLDHAM 282; *L.*, SIMROTH 347.

*Malacolimax*, POLLONERA 312.

*Martensia koenigi* sp. n. Sudan, BOETTGER Zool. Jahrb. Jena 38 pp. 371-384.

*Minyongai* subgen. n. (*Durgella*) with *M. kempfi* sp. n. Rotung, GODWIN-AUSTEN Rec. Ind. Mus. 8 p. 556.

*Polita*, BOYCOTT 47.

*Prositata* subgen. n. (*Sitala*) *S. (P.) fernandopoensis* sp. n. Fernando Po, GERMAIN Bull. Mus. Paris 1915 p. 288.

*Thapsia thomensis* var. n. *subthomensis* Saõ Thomé, GERMAIN Bull. Mus. Paris 1915 p. 286.

*Trochonanina* (*Trochozonites*) *moreleti*, *multisulcata*, spp. n., Isds. of Gulf of Guinea, GERMAIN Bull. Mus. Paris 1915 p. 287; *T. (Martensia) smithi*, GERMAIN 136.

*Zonitoides parana* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 632; *Z. nitidus*, HADDEN 156.

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*Phrixgnathus hamiltoni*, HEDLEY 166,

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*Angasella lemani* South Australia, *A. hinsbyi* New South Wales, spp. n., GUDE Proc. Malac. Soc. 12 pp. 41-42.

*Dorcasia alexandri montana* var. n. S. Africa, CONNOLLY Ann. S. Af. Mus. 13 p. 179.

*Epiphragmophora* with *E. cuyamancensis* and *c. arus*, *E. venturenensis*, *E. traskii tularica*, *proles*, *coronadoensis*, *coelata*, *phlyctaena*, sp. and subspp. n., California, BARTSCH U. S. Nation. Mus. Proc. 51 pp. 610-619; *E. ellipsostoma*, PILSBRY figured. PILSBRY Nautilus 29 p. 102 pl. ii. fig. 6.—*E.* with *E. hillebrandi yosemitensis* subsp. n. California, LOWE Nautilus 30 p. 95.—*E. petricola*, *tudiculata rufiterra*, sp. and subspp. n., California, BERRY Berkeley Univ. Cal. Pub. Zool. 16 pp. 107-110.—*E. Zechae* sp. n. California, PILSBRY Nautilus 29 p. 104.

*Helicella caperata* and *H. gigaxii*. ARKELL 15; *H. c.*, HADDEN 155.

*Helicodonta* with *H. obvolvata* and var. n. *albina* Great Britain, TAYLOR Mon. L. and F. W. Moll. British Isles pt. 22 pp. 53-64.

*Helix scytodes* = *Trochomorpha s.* is a *Plectotropis*, GUDE Proc. Malac. Soc. 12 p. 121; *H. nemoralis*, SCHMID 342; *H. pisana*, DEAN 96; *H. p.*, MATTHES 250; *H. p.*, COOKE 70; *H. pomatia*, FLOSSNER 117; *H. p.*, SCHMALZ 341; *H. p.*, ZAUNICK 432; *H. (Helicella) candicans* and *H. (Theba) carthusiana*, SCHLESCH 340.

† *Helix* (*Epiphragmophora*) *tudicula*, HADLEY 157.

*Hygromia umbrosa*, TAYLOR 376; *H.*, TAYLOR 377.

*Oreohelix* with *O. hemphilli*, subsp. n., *eurekaensis*, *strigosa depressa* form. n. *toelensis*, *haydeni corrugata* subsp. n. Utah; *O. tennistriata* sp. n. Idaho, HENDERSON & DANIELS Philadelphia Proc. Acad. Sci. 68 pp. 321-338; *O.* with *O. strigosa magnicornu* subsp. n. Wyoming, PILSBRY Nautilus 29 pp. 139-142; *O. yavapai mariae*, *idahoensis baileyi*, subspp. n. W. United States, BARTSCH U. S. Nation. Mus. Proc. 51 pp. 331-333.—*O.* with *O. haydeni mixta* subsp. n. Colorado, PILSBRY Philadelphia Proc. Acad. Sci. 68 pp. 315-339.

*Orychona pyramidella currani* subsp. n. Brazil, BARTSCH Nautilus 30 p. 53.

*Pupuina subcostata*, *lepida*, spp. n., Shouten Isds. Dutch New Guinea FULTON Proc. Malac. Soc. 12 pp. 77-78.

*Pleurodonte* (*Zachrysia*) *torrei* sp. n. Cuba, HENDERSON Nautilus 30 p. 49.

*Polygyra brevipila cherokeensis* subsp.

n. Alabama, CLAPP Nautilus 30 p. 3; *P. pinicola* sp. n., BERRY Berkeley Univ. Cal. Pub. Zool. 16 p. 110; *P. profunda strontiana, albolabris goodrichi* varr. n. Canada, CLAPP Ann. Carnegie Mus. 10 pp. 437-540; *P. albolabris major* and *P. a. fuscolabris*, PILSBRY 302.—*P. monodon* Say, DALL 89.

*Psadara derbyi cearana* subsp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 634.

*Punctum pygmaeum*, DEAN 97.

*Pyramidula* with *P. solitaria strontiana* U. S. A.; *P. s. roseo-apicata* Canada; *P. s. mynesites* U. S. A.; *P. alternata eriensis* Canada, varr. n., CLAPP Ann. Carnegie Mus. 10 pp. 532-536.

†*Pyramidula (Goriodiscus)* with *P. subpracostata* var. n. *suevica* Tertiary Germany, GOTTSCHICK & WENZ Nachr. Bl. D. Malakozool. Ges. 48 p. 28.

*Sonorella* with *S. peninsularis* Lower California; *ultima* Mexico, spp. n. PILSBRY Nautilus 29 pp. 97-101.

*Theba cantiana*, BOYCOTT 46.

*Xerophila derbentina*, VASILJEV 399.

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*Anostoma depressum*, HEATH 165.

*Bulimulus (Rhinus) rochai* sp. n. B. (R.) r. *taipuenensis, suturalis*, subspp. n., Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 636-637.

*Drymaeus branneri* sp. n. *linostoma suprapunctatus* subsp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 637-638.

*Odontostomus (Cyclodontina)*, subspp. n. *inflatus maranguapensis, scabrellus cylindricus* Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 641-642.

*Tomigerus pilsbryi* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 643.—*T. clausus*, HEATH 165.

#### BULIMINIDAE, UROCOPTIDAE AND PUPIDAE.

*Agardhia macrodonta* and *m. rumelica*, sp. and subsp. n., Eastern Rumelia, HESSE Nachr. Bl. D. Malakozool. Ges. 48 pp. 116-117.

*Bifidaria carnegei* nom. n. for *B. minuta*, St. STERKI Nautilus 30 p. 84;

*B. clementina oldroydi* var. n. California, VANATTA Nautilus 30 p. 48; *B. minuta* sp. n. Ohio, STERKI Nautilus 29 p. 105.

*Buliminus zarudnyi, hyrcanus*, spp. n., Persia, LINDHOLM Ann. mus. zool. Ac. sc. 20 pp. xli-xliii; *B. lindholmi* sp. n. S. Russia, RETOWSKY Ann. mus. zool. Ac. sc. 20 pp. xlv-xlvi.

*Chænaxi* with *C. intuscostata* form. n. *brevicostata* Arizona, PILSBRY Man. Conch. Struct. and Syst. Philadelphia 23 pp. 1-5.

*Clausilia* with *C. (Herilla) bosniensis* var. n. *semistriata*, *C. (Uncinaria) roschitzi* var. n. *serbica*, FRANKENBERGER Zool. Anz. Leipzig 47 p. 235; *C. bidentata*, ARKELL 16; *C. lessonai*, LINDHOLM 233.

*Cælocentrum gigas*, SPENCE 360.

*Gastrocopta* with *G. contracta* form. n. *peninsularis*, Florida; *G. prototypus* subsp. n. *basidentata* Guatemala; *G. dalliana media* subsp. n. Arizona; *G. quadridens* nom. n. for *Bifidaria quadridentata* Sterki; *G. rupicola*, subspp. n., *matacumbensis* Florida, *duplex* Bermuda; *G. riograndensis* sp. n. Texas; *G. pellicida delicata, barbadensis crassilabris*, subspp. n., Bahamas; *G. polyptyx* sp. n. St. Thomas; *G. boninensis, chichijimana* and *ogasarawana*, spp. and subsp. n. Bonin Isds.; *G. coreana* sp. n. Korea; *G. hirasei* sp. n. China, PILSBRY Man. Conch. Struct. and Syst. Philadelphia 23 pp. 6-111.

†*Leucochila* with *L. acuminata* var. n. *procera* Tertiary Germany, GOTTSCHICK & WENZ Nachr. Bl. D. Malakozool. Ges. 48 pp. 62-67.

*Microceramus perconicus anafensis* f. n. Cuba, HENDERSON Nautilus 29 p. 136.

*Pupa minutissima*, REINHARDT 320; *P. arctica*, SCHLESCH 340.

*Rachis hillebrandti*, GERMAIN 136.

*Urocoptidae*, SPENCE 361.

*Urocoptis cyclostoma anafensis* subsp. n. Cuba, HENDERSON Nautilus 29 p. 136.

*Vertigo unidentata*, REINHARDT 321.

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*Cæcilioides*, PILSBRY 305.

*Curvella feai* sp. n. Fernando Po, GERMAIN Bull. Mus. Paris 1915 p. 289.

*Elasmias*, PILSBRY 310.

*Fernandezia*, PILSBRY 310.

*Gibbulina*, PILSBRY 310.

*Lamellidea*, PILSBRY 310.

*Lamellina*, PILSBRY 310.

*Lamellovum*, PILSBRY 310.

*Leptachatina*, PILSBRY 310.

*Leptinaria perforata, imperforata*, spp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 645-646.

*Limicolaria abinsiensis* and var. *aurea*, sp. and var. n. N. Nigeria, SHACKLEFORD & SPENCE J. Conch. 15 pp. 127-128; *L. kambeul serafica, flammata geyri, candidissima laevenotata* subsp. n. Sudan, BOETTGER Zool. Jahrb. Jena 38 pp. 371-384.

*Opeas gestroi* sp. n. Isd. of Anobon. GERMAIN Bull. Mus. Paris 1915 p. 289; *O. mauritianum*, VANATTA 395

*Pseudoglessula splendida* sp. n. Fernando Po, GERMAIN Bull. Mus. Paris 1915 p. 289.

*Pseudopeas feai* sp. n. Fernando Po, GERMAIN Bull. Mus. Paris 1915 p. 290.

*Strobilops brasiliiana* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 647; *S.*, WENZ 421.

*Tornatellaria* with *T. lilae, adelinae, occidentalis, stokesi, anceyana, sykesi* and subsp. *illibata, convecior, abbreviata*, (Ancey) var. *hawaiiensis, smithi, sharpi, baldwiniana* spp. subsp. and var. n. Hawaiian Isds., PILSBRY & COOKE in PILSBRY Man. Conch. Struct. Syst. Philadelphia 22 pp. 251-271.

*Tornatellina* with *T. baldwini* Ancey var. *subrugosa, macgregori* Hawaiian Isds.; *T. societatis* Society Isds.; *T. kermadecensis* Kermadec Isds.; *T. polygnampla* Hawaiian Isds.; *T. moelien-dorffiana* Marianne Isds. spp. and var. n. *Tornatellopsis* sec. n. *T. (T.) nakadai* Bonin Isds.; *T. hataiana* Japan; spp. n. *T. ponapensis* nom. n. for *T. pusilla*, Mlláff.; *T. gayi* Kauai; *T. tantalus* Oahu; *T. voyana* Hervey Group; *T. iredalei, raoulensis* Kermadec Isds. spp. n. PILSBRY & COOKE in PILSBRY Man. Conch. Struct. and Syst. Philadelphia 22 pp. 132-192.

*Tornatellinidae*, PILSBRY 310.

*Tornatelloides* with *T. tryoni* Bonin Isds.; *T. subperforatus kermadecensis* Kermadec Isds.; *T. pocerulus kailuanus, kamaloensis, kilauea, kahukuensis,*

Hawaiian Isds.; *T. bryani* Laysan, Isd.; *T. kahoolavensis* Kahoolawe; *T. konaensis, oucospira, inornatus, lhaanumi, idae, diptyx, attenuatus, insignis, oahuensis, moomomiensis, perkinsi acicula, comes, frit, macromphala ada, micromphala, spaldingi, irregularis, ronaldi, poponensis, waianaensis, brunneus, virgula, bellus, plagiopyx, leptospira, prionoptychia, serrarius, forbesi* and *f. nanus drepanophora* Hawaiian Isds. spp. and subsp. n., PILSBRY & COOKE in PILSBRY Man. Conch. Struct. and Syst. Philadelphia 22 pp. 192-249.

*Waimea* subgen. n. (*Tornatelloides*), PILSBRY & COOKE in PILSBRY Man. Conch. Struct. and Syst. Philadelphia 22 p. 250.

#### SUCCINEIDAE.

*Lithotis japonica* sp. n. Japan, PRESTON Ann. Mag. Nat. Hist. 17 p. 160.

AURICULIDAE, LIMNÆIDAE, PHYSIDAE, CHILINIDAE AND SIPHONARIIDAE.

*Choanomphalus japonicus* and *C. j. perstriatulus* sp. and subsp. n. Japan PRESTON Ann. Mag. Nat. Hist. 17 pp. 160-161.

*Coilostele*, PILSBRY 309.

*Gundlachia bakeri* Pilsbry sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 665.

†*Hercynella victoriae* sp. n. Silurian Victoria, CHAPMAN Proc. R. Soc. Victoria 29 p. 99.

*Limnaea* [vide etiam *Limnaeus* et *Lymnaea*] *palustris*, DEWITZ 102; *L. stagnalis*, KOLAČEV 216; *L. (Radix) undussuma*, GERMAIN 137; *L.*, BLANC & ROSZKOWSKI 40; *L.*, KANDA 209.

†*Limnaeus* [vide etiam *Limnaea* et *Lymnaea*] *acuarius*, GRIGOROVIOČ-BEREZOVSKIJ 147; *L.*, NALIVKIN 269.

*Lymnaea* [vide etiam *Limnaea* et *Limnaea*] *stagnalis*, LINDHOLM 231.

*Physa heterostropha*, SALISBURY 334; *P.*, KANDA 209.

*Planorbis corneus*, KOLAČEV 216; *P. dilatatus* and *P. sampsoni*, P. 291; *P. ehrenbergi*, LINDHOLM 231; *P.*, GERMAIN 137; *P.*, KANDA 209; *P.*, (*gyraulus*) *biwaensis* sp. n. Japan, PRESTON Ann. Mag. Nat. Hist. 17 p. 161.

*Segmentina paparyensis* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 652.



## INCERTAE SEDIS.

*Ischnosteles* gen. n. *I. leroyi* sp. n. Sudan, BÖTTGER Zool. Jahrb. Jena 38 pp. 371–384.

## Scaphopoda.

*Dentalium majorinum*, HEDLEY 166.

†*D. ladinum* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 522; *D.* with *D. helveticum*, *interbinarium*, *intertrinarium* nov. mut. *D. sexangulum*; *D. dumasi*, *D. (Antale) degrangei* var. n. *hemigygnum*, *D. (A.) reirncse*, *D. (Entalina) anomalum* spp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 159–172.

†*Entalis* with *E. basteroti* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 174–178.

†*Fustiaria*, COSSMANN & PEYROT 75.

†*Gadila* with *G. benoisti* nom. mut. *Gadus ventricosus*, Benoist; *G. (Loxoporus) degrangei* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 181–184.

†*Laevidentalium*, WELLER 419.

†*Pseudantalis* with *P. aturensis* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 179–180.

†*Pulsellum* with *P. infundibulatum* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 180–181.

*Siphonentalis tetragona*, MICKELSON 260.

*Siphonodentalium vitreum*, MICKELSON 260.

†*Siphonodentalium* with *S. (Dischides) subpolitum* nom. mut. *Gadus politus*, Benoist; *S. (Dr.) helveticum* sp. n. Neogen France, COSSMANN & PEYROT Bordeaux Actes Soc. Linn. 69 pp. 184–186.

## Pelecypoda or Lamellibranchia.

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†*Lamellibranchia*, HORWOOD 186; *L.*, IWAOKAWA 193; *L.*, RAYMOND 319.

## TETRABRANCHIA OSTRACEA.

†*Ctenostreon nitidum* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362; *C.* with *C. alsaticum*, *ingens*, *crassicostratum* spp. n. Mesozoic

Jura Mts., ROLLIER Mem. Soc. Pal. Suisse 41 pp. 486–498.

†*Exogyra popilanicum* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362; *E. couloni*, MICHAJLOVSKIJ 259.

†*Flemingostrea* subgen. n. (*Ostreidae*) with *O. (F.) morgani*, *kalhora* spp. n. Cretaceous India, VREDENBURG Rec. Geol. Surv. India 47 pp. 196–203.

†*Gryphrea dilatata popilanicum* var. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362; *G. esterhazyi*, *romanovskii*—*esterhazyi* var. *romanovskii* var. *belder-saiensis* var. n. Oligocene Turkestan, GORIZDZO Petrograd Trav. Soc. nat. 37 pp. 8–22 52–53; *G.*, MICHAJLOVSKIJ 259.

*Ostrea madrasensis* sp. n. Madras, PRESTON Rec. Ind. Mus. 12 pp. 33–35; *O. edulis*, DANTAN 94; *O.*, HOULBERT & GALAINE 187.

†*Ostrea carinata*, Lk. var. n. *erecta* Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 p. 269; *O. peetzi*, *tschinganensis* spp. n. Oligocene Turkestan, GORIZDZO Petrograd Trav. Soc. nat. 37 pp. 25–29 54–55; *O. titan*, Conrad var. n. *perrini* Miocene California, HALL & AMBROSE Nautilus 30 p. 81; *O.*, DALL, 83; *O.* MICHAJLOVSKIJ 259; *O.* PATTON, 294.

†*Pseudomonotis echinata* var. *donziana*, IVANOV 192; *P. subcircularis*, MARTIN 244.

## PECTINACEA.

†*Aviculopecten* with *A. halensis*, *aurisculptus*, *arkansanus* spp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 222–227.—*A. mosquensis* sp. n. Lower Carboniferous Gov. of Moscow, FREDERICKS Kazani Trd. Obšč. jest. 47 pp. 11–13; *A.*, FRAUENFELDER 121; *A.*, TSOHERNSCHEW 390; *A.*, WELLER 419.

*Chlamys* with *C. subantarctica* sp. n. Macquarie Id., HEDLEY Aust. Ant. Exp. 1911–1914 Vol. 4 p. 23.

†*Chlamys*, COSSMANN 73.

†*Deltopecten*, MATHER 249; *D. subquinguelineatus*, ETHERIDGE 113.

†*Entolium*, COSSMANN 73.

†*Eopecten dumortieri* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 138.



†*Hinnites* with *H. (Prospodylus) aeberhardi, erni* spp. n. Mesozoic Jura Mts., ROLLIER Mem. Soc. Pal. Suisse 41 pp. 447-466.

†*Janeira* with *J. quadricostata* var. n. freili Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 pp. 279-280.

*Lima* with *L. closei* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 23-24.

†*Lima* with *L. heterocostata* sp. n. Trias Ticino, FRAUENFELDER Ec. Geol. Helvet. 14 pp. 288-289; *L. halensis* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 493; *L. (Plagiostoma) charpei, modeli, (Mantellum), minima, kiliani* spp. n. Mesozoic Jura Mts., ROLLIER Mem. Soc. Pal. Suisse 41 pp. 478-486; *L.* with *L. (Limatula) boonei* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 140.

*Limatula deceptionensis* sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 271; *L. attenuata* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 404.

†*Mysidioplera*, FRAUENFELDER 121.

†*Palaeolima ineguicostata* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 229; *P. minor* sp. n. Carboniferous U. S. A. Weller Contrib., WALKER Mus. Chicago 1 p. 251.

*Pecten tigrinus*, DERJUGIN 100.

†*Pecten clarkensis* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 68; *P. edelsteini* sp. n. Permian Carbon of Darvas, TSCHERNYSCHEW Mem. Com. geol. 164 pp. 4-5 4-42; *P. tolmanni* sp. n. Miocene California, HALL & AMBROSE Nautilus 30 p. 82; *P. mstaensis* sp. n. Gov. of Moscow Lower Carboniferous, FREDERICKS Kazan Trd. Obsč. jest. 47 pp. 13-14; *P.* with *P. (Aequipecten) tschakitensis, P. (Chlamys) serratus*, Nils. var. *Kuschdjulariensis* spp. and var. n. Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 pp. 176-278; *P.* with *P. (Entolium) fraiponti (Aequipecten) catharinae, triboletii, (Chlamys), kiliani* spp. n. Mesozoic Jura Mts., ROLLIER Mem. Soc. Pal. Suisse 41 pp. 467-478; *P. (Neithea?) rollieri* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 134; *P.* DALL, 83; *P.*, DAS-GUPTA 95; *P.*, FRAUENFELDER 121.

†*Plagiostoma*, COSSMANN 73.

*Pseudamussium incongruum, bis-triatum* spp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 403-404.

†*Spondylus flaris* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 493.

†*Synicyclonema valdaica*, FREDERICKS 123.

#### MYTILACEA.

†*Actinopterylla* with *A. aroostooki* varr. n. *erecta, planicosta, A. concentrica, tenuiradiata* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 182-193.

*Adula*, DALL 85.

†*Anomalodonta*, FOERSTE 119.

†*Arcoperna inflata* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 494.

†*Aucella sokolowi, popitanica* spp. n. Jura Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362; *A.*, ŽIR-MUNSKIJ 435; *A.*, DAS-GUPTA 95.

†*Avicula gregoryi* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69; *A. tenuicostata*, SINCOV 348; *A.*, FRAUENFELDER 121.

†*Byssonychia*, FOERSTE 119.

†*Congerina drvarensis* sp. n. Trias Westbosnien, TOULA Wien Jahrb. Geol. Rchs. Anst. 63 pp. 621-694.

*Crenella rotundata* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 406.

†*Cymatonota*, FOERSTE 119.

*Dacrydium pacificum* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 405.

†*Daonella* with *D. caudata* sp. n. Trias Ticino, FRAUENFELDER Ec. Geol. Helvet. 14 pp. 294-295; *D. péciensis* sp. n. Trias W. Bosnia, TOULA Wien Jahrb. Geol. Rchs. Anst. 63 pp. 621-694; *D.*, MARTIN 244.

†*Dreissensia polymorpha*, GRIGOROVIC BEREZOVSKIJ 147; *D.*, NALIVKIN 269.

†*Follmannella*, WILLIAMS & BREGER 424.

*Gaimardia* with *G. trapezina* var. n. *coccinea* Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 24-25.

†*Gervillia mytilopsis* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 144; *G.*, FRAUENFELDER 121.

†*Halobia*, MARTIN 244.

†*Inoceramus stantoni* sp. n. = *acuteplicatus*, Stanton 1899 praeoec. Kreide von Nord-Sachalin, SOKOLOV Mém. Com. géolog. 83 pp. 52-54 88-90; *I.* with *I. sachalinensis*, *orientalis*, *elegans*, *pilvoënsis* spp. n. Cretaceous N. Sachalin, SOKOLOV Mém. Com. géolog. 83 pp. 23-47 67-83; *I. anglicus* var. n. *substriatula* Lower Cretaceous of Mangyschlak, SINC OV Mém. Soc. minéral 50 pp. 253-254; *I.*, DAS-GUPTA 95; *I.*, MICHAJLOVSKIJ 259; *I.*, SINC OV 348.

*Kidderia* with *K. macquariensis* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 26.

†*Leiopteria* with *L. riesiana* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 208-212.

†*Limoptera* with *L. panciradiata* var. n. *chapmani* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 202-205.

†*Lithophaga pectinicola* sp. n. Miocene U. S. A., OLSSON Bull. Amer. Pal. 27 p. 26; *L. nuda*, DALL 83.

†*Megambonia* with *M. cardiiformis*, WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 197-201.

†*Modiola* [vide etiam *Modiolus*] with *M. fountainensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 251; *M.*, FRAUENFELDER 121.

*Modiolarca trapezina*, BISPINGHOFF 39.

†*Modiolaria*, DALL 83.

†*Modiolopsis* with *M. brevantica* sp. n. Palaeozoic U. S. A., FOERSTE Bull. Sci. Lab. Denison Univ. 18 p. 332.

*Modiolus* [vide etiam *Modiola*] (? *politus*, Verrill var.) *pallidulus* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 404.

†*Modiolus*, DALL 83.

†*Monopteria*, MATHER 249.

*Musculus niger* var. n. *obesus*, *protractus*, *M. olivaceus* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 405.

†*Myalina* with *M. maureriana* & var. *lala* sp. & var. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 212-216; *M.* with *M. orthonota* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 219-221; *M.*, WELLER 419.

†*Mytilus anarekensis* sp. n. Jurassic or Cretaceous Persia, FISCHER Wien Beitr. Pal. Geol. öst.-Ung. 27 pp. 207-273; *M. kewi* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 206; *M.*, FRAUENFELDER 121.

†*Pinna*, COSSMANN 73.

†*Posidonia*, FRAUENFELDER 121.

†*Praevicula* gen. n. (*Pteriidae*) with *P. brevis* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 205-208.

†*Pseudomonotis precursor*, *inflata* spp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 217-218; *P. lenaensis*, BORISIAK 45; *P.*, TSCHERNYSCHEW 390; *P.*, COSSMANN 73; *P.* DAS-GUPTA 95.

*Pteria viridozona* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 403.

†*Pterinea prostriata* sp. n. Palaeozoic U. S. A., RUEDEMANN N. Y. State Mus. Bull. 189 p. 74; *P.*, WILLIAMS & BREGER 424.

†*Pteronitella* with *P. quadrata* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 193-197.

*Septifer bifurcatus* var. n. *obsoletus* N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 404.

*Vulsella pacifica* sp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 403.

#### ARCACEA.

†*Acila gabbiana* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 481.

*Arca tetragona*, DE GREGORIO 145; *A. noe*, MONTEROSATO 265.

†*Arca* (*Scapharca*) *straminea*, Say subsp. n. *rubisiana* Miocene Florida, MANSFIELD U. S. Nation. Mus. Proc. 51 p. 603; *A. clarki* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 481; *A. subprotracta*, DALL 83; *A.*, DAS-GUPTA 95

†*Oleidophorus* with *C. curtus*, *perovalis* spp. n. Silurian U. S. A., WILLIAMS & BERGER Bull. U. S. Geol. Surv. 89 pp. 159-161.

†*Otenodonta* ? *salinensis* sp. n. Palaeozoic U. S. A., RUEDEMANN N. Y. State Mus. Bull. 189 p. 75.

†*Beushausenia*, COSSMANN 73.

†*Barbatia* (*Calloarca*) *cuculloides*, DALL 83.

*Glycymeris* *corteziana*, *miguelliana* spp. n. N. W. America, DALL U. S. Nation. Mus. Proc. 52 p. 402; *G. diaphorus* sp. n. Uruguay, DALL Nautilus 29 p. 112; *G. pectunculus*, *reevei*, *planatus* & *G. mindoroensis* sp. n. Philippines, SMITH Proc. Malac. Soc. 12 pp. 15, 18.

†*Glycymeris* with *G. cookei* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 490; *G. australis gigantea* var. n. Cainozoic S. Australia, CHAPMAN S. Australia Geol. Surv. Bull. 4 p. 19; *G. perrini*, *fresnoensis*, *hannibali* spp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 pp. 482-483.

*Leda navispa*, *amiata*, *oxia*, *liogona*, *ossa* var. *sculpta*, *L. gomphoidea*, *fascona*, *phenaxia*, *spargana*, *hamata* var. *limata* varr. & spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 395-397; *L. oblonga*, HEDLEY 166; *L. pennula*, DERRIUGIN 100.

†*Leda choctawhatcheensis* sp. n. Miocene Florida, MANSFIELD U. S. Nation. Mus. Proc. 51 p. 604; *L. fresnoensis* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 483; *L.* with *L. harrisi*, *minula* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 171-172; *L.*, COSSMANN 73; *L.*, MATHER 249; *L.*, WELLER 419.

*Limopsis* *skenia*, *akutanica* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 402-403; *L. grandis*, HEDLEY 166.

*Lissarca beunetti* sp. n. S. Shetland Isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 271; *L.*, HEDLEY 166.

†*Macrodon*, FRAUENFELDER 121.

*Malletia sabrina* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 18; *M. (Minormalletia) talawa*, *M. (Neilo) flora* spp. n. N.W.

America, DALL U. S. Nation. Mus. Proc. 52 p. 400.

†*Myophusius* with *M. chapmani* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 p. 162.

*Nucula semiramisensis* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 93; *N. cardara*, *darella*, *linki*, *quirica*, *petriola* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 394-395.

†*Nucula* with *N. kessleriana* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 210-212; *N.*, WELLER 419.

†*Nuculoidea* gen. n. (*Nucula*) *N. (N.) bellatula*, *cordata*, *trigonale* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 173-177.

†*Paleoneilo* with *P. mainensis* var. n. *umbonata* Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 168-170.

†*Parallelodon* ? *brevifulcratum* sp. n. Jura Franco, COSSMANN Bull. Soc. Geol. Normandie 33 p. 146; *P.* with *P. illinoensis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 249; *P.* with *P. pergibbosus*, *cancellus* spp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 214-215; *P.* with *P. sara-naensis* sp. n., FREDERICKS Kazani Trd. Obsč jest. 47 pp. 21-23.

*Philippiella* *bagei*, *orbiculata* Antarctic; *hamiltoni* Macquarie Isd. spp. n., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 pp. 20-21.

*Philobrya wandelensis*, HEDLEY 166.

*Poroleda longicaudata*, HEDLEY 166; *P.*, GATLIFF & GABRIEL 132.

†*Schizodus morrowensis* sp. n. Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 222; *S.* with *S. ? prunum* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 238-239.

†*Tellinites* with *T. chapmani*, *curta* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 163-167.

*Tindaria californica*, *brunnea*, *martiniana*, *ritleri*, *dicoferania*, *cervola*, spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 400-402.



†*Trigonia zonata*, Ag. *grewingi* var. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362; *T. ferdinandi* sp. n. Cretaceous Asia Minor, FRECH Zs. D. Geol. Ges. 68 p. 271.

*Yoldia olacina*, *secunda*, *beringiana*, *orca*, *sanesia*, *cecinnella*, *capsa* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 398–400.

†*Yoldia*, WELLER 419.

## SUBMYTILACEA.

*Anodonta cellensis*, FERNAU 114; *A. c.*, LINDHOLM 231; *A. c.*, WETEKAMP 423; *A. danielsi*, ELLIS 112; *A.*, BRÜCK 49.

*Anodontites dalli*, *bartschi* spp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 667–668.

†*Anodontopsis* with *A. maccoyiana* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 236–238.

*Astarte*, DERÛGIN 100.

†*Astarte* with *A. vendaeensis*, *latefulcrata*, *platymorpha* spp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 pp. 150–153; *A. (Ashtarotha) vaughani* sp. n. Miocene Florida, MANSFIELD U. S. Nation. Mus. Proc. 51 p. 605.

†*Bakewellia ceratophaga*, TSCHERNY-SOHEW 390.

*Cardita*, LAMY 222 and 225.

†*Cardita* with *C. beaumonti* var. n. *cilicica*, *C. mavrogordati* sp. n. Cretaceous Asia Minor FRECH Zs. D. Geol. Ges. 68 pp. 283–285; *C. (Carditamera) shepardi*, DALL 83.

*Cokeria southalli* gen. & sp. n. [Unionidae] S. Dakota, MARSHALL Nautilus 29 p. 133.

†*Crassatellites paramesus* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 p. 495; *C. lillisi* sp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 482.

†*Cypricardella* with *C. bellatula*, *rotundata*, *transversa* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 239–249; *C.* with *C. laevis* sp. n. Carboniferous U. S. A., WELLER Contrib. Walker Mus. Chicago 1 p. 252.

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†*Cypricerdites* with *C. detroitensis* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 147–156.

†*Cyrtodonta*, FOERSTER 119.

*Diplodon kelseyi*, *obsolescens* spp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 pp. 665–666.

*Euryntia (Micromya)*, *E. (Euryntia)*, *Lampsilis*, ORTMANN 287.

*Gonidea angulata*, ORTMANN 288.

†*Goniophora* with *G. kayseri*, *omega* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 223–233.

*Hyria jamauchimensis* sp. n. Brazil, BAKER Philadelphia Proc. Acad. Nat. Sci. 65 p. 664.

*Hyriopsis myersiana*, ORTMANN 290.

*Lampsilis* with *L. radiata oneidensis* var. n. N.E. United States, BAKER Nautilus 30 p. 74.

*Lemiox rimosus*, ORTMANN 289.

*Margaritana auricularia*, HAAS 154.

*Milneria kelseyi* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 408.

*Miodontiscus meridionalis* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 408.

†*Modiolopsis* sp. n. Ordovician U. S. A. RAYMOND Ann. Carnegie Mus. 10 p. 339.

†*Modiomorpha* with *M. aroostooki*, *chapmani* spp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 216–223.

*Mutela*, GERMAIN 137.

†*Myoconcha*, FRAUENFELDER 121.

†*Opis*, COSSMANN 73.

*Pleurobema simpsoni* nom. n. for *Unio striatus*, Lea, *P. conradi* nom. n. for *U. maculatus* Congr., VANATTA Philadelphia Proc. Acad. Sci. 67 p. 559; *P. lewisii*, WALKER 410.

†*Pleurophorus*, MATHER 249.

*Pseudanodonta elongata*, HARGREAVES & FIRTH 160.

*Pseudokellya stillwelli* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911–1914 Vol. 4 p. 31.



*Ptychocardia* with *P. rudis* sp. n. Antarctic, HEDLEY Aust. Ant. Exp. 1911-1914, Vol. 4 pp. 30-31.

†*Scalenaria biclzi*, GRIGOROVIO-BEREZOVSKIJ 147.

†*Schizodus wheeleri*, TSCHERNYSCHEW 890; S., WELLER 419.

*Silicula rouchi*, HEDLEY 166.

†*Sphenotomorpha* gen. n. with *S. rigidula* sp. n. Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 233-236.

†*Trigonodus*, MUŠKETOV 268.

*Unio complanatus mainensis* var. n. Maine, RICH Science New York 42 pp. 579-580; *U.* with *U. rafinesquei* nom. n. for *U. fuscatus*, Lea, VANATTA Philadelphia Proc. Acad. Sci. 67 p. 559; *U. cor.* FRIERSON 125; *U. giganteus*, FRIERSON 124; *U.*, BRÜCK 49; *U. GERMAIN* 137; *U.*, GRIGOROVIO-BEREZOVSKIJ 147; *U.*, WALKER 409.

*Unionidae*, UTTERBACK 391.

*Venericardia astartoides*, HEDLEY 166.

†*Venericardia ? tenuicostulata* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 149; *V. praecisa*, DALL 83; *V.*, LAMY 225.

#### ERYCINOCEA.

*Cyamium rotundatum*, HEDLEY 166.

*Entovalva (Synapticola) perrieri*, MALLARD, ANTHONY, 14.

*Erycina catalinae*, *E. ? coronata*, *E. bakeri*, *balliana*, *chacei sontarosae* spp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 409-410.

*Kellia nimrodiana*, HEDLEY 166.

*Lasea consanguinea*, HEDLEY 166.

*Lepton frenchiense* sp. n. Victoria, GATLIF & GABRIEL Proc. R. Soc. Victoria 29 p. 105.

*Psephidia brunnea* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 413.

*Pseudopythina myaciformis* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412.

*Rochefortia ferruginosa*, *beringensis*, *grebnitzskii*, *golischii*, spp. n., N.W. America, DALL, U. S. Nation. Mus. Proc. 52 p. 411; *R.* with *R. macquari-*

*ensis* sp. n. Macquarie Isd., HEDLEY Aust. Ant. Exp. 1911-1914 Vol. 4 p. 32.

*Tellimya flavida* sp. n. S. Shetland isds., PRESTON Ann. Mag. Nat. Hist. 18 p. 272.

#### CARDIACEA.

†*Adacna*, KALICKIJ 207.

*Cardium dulcinea* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412; *C. fultoni* sp. n. Philippines. SOWERBY Proc. Malac. Soc. 12 p. 76.

†*Cardium marysvillensis* nom. n. for *C. dalli*, DICKERSON Univ. Cal. Pub. Geol. 9 p. 482; *C. (Jurassicardium) microscopicum* sp. n. Jura France, COSSMANN Bull. Soc. Geol. Normandie 33 p. 156; *C.*, DALL 83; *C.* KALICKIJ 207.

†*Conocardium dubia* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 201-202; *C. mesialis* sp. n. Carboniferous U.S.A. Contrib., WALKER Mus. Chicago 1 p. 249; *C. kolvae*, *praepermicus*, spp. n., Ural Upper Carboniferous, FREDERICKS Kazani Trd. Obšč. jest. 47 pp. 18-19; *C.*, TSCHERNYSCHEW 390.

†*Didacna parvula* sp. n. *catillus*, *planissima*, *anomalous* varr. n., *rudis* sp. n. varr. *varia*, *catillus-rudis* varr. n. Berg der Bakustufe, NALIVKIN Mém. Com. géol. 116 pp. 6-14 27-29; *D. paetrigonoides*, *post-carditoides*, spp. n., Pliocene Russia, NALIVKIN & ANISIMOV Mém. Com. géol. 270 pp. 1-22; *D. trigonoides*, *carditoides*, *crassa*, KALICKIJ 207.

†*Monodacna sjögreni*, KALICKIJ 207.

*Protocardia paziana* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412.

†*Pseudotrapezium*, COSSMANN 73.

#### CONCHACEA.

*Anisodonta ? pellucida* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 411.

*Antigona (Circumphalus) foliacea* & *A. (Ventricola) mindoroensis* sp. n. Philippines, SMITH Proc. Malac. Soc. 12 pp. 14 17.

†*Antigona*, DALL 83.

*Axinopsis debilis*, HEDLEY 166.

*Callista roscotincta*, SMITH 351.

*Callocardia (Agriodesma) felipponei*  
sp. n. Uruguay, DALL *Nautilus* 29 p. 113.

*Chione mawsoni* sp. n. Macquarie  
Isd., HEDLEY *Aust. Ant. Exp.* 1911-  
1914 Vol. 4 p. 33.

†*Chione bainbridgensis* sp. n. Oli-  
gocene Georgia, DALL U. S. Nation.  
*Mus. Proc.* 51 p. 499.

†*Cimitaria* with *C?* *chapmani* sp. n.  
Silurian U.S.A., WILLIAMS & BREGER  
*Bull. U. S. Geol. Surv.* 89 pp. 253-257.

†*Coralliophaga* ? *boonei* sp. n. Jura  
France, COSSMANN *Bull. Soc. Geol.*  
Normandie 33 p. 155.

*Corbicula cochinesis* sp. n. Cochin  
backwater Ernakulam India, PRESTON  
*Rec. Ind. Mus.* 12 pp. 36-37; *C.*  
*fluminalis* var. *oziana*, LINDHOLM  
231; *C. Germaini* 137.

*Cypricardia*, LAMY 223.

*Cyprina*, LAMY 223.

†*Cyprina scutellaria*, GORIZZDRO 141.

*Cytherca*, LAMY 221.

*Dosinia subalata* sp. n. Philippines,  
SMITH *Proc. Malac. Soc.* 12 p. 17.

*Eupera*, STERKI 369.

†*Grammysia*, WILLIAMS & BREGER.  
424.

*Isocardia*, LAMY 223.

†*Macrocallista*, DALL 83.

†*Marcia* (?) *conradi* sp. n. Eocene  
California, DICKERSON *Univ. Cal. Pub.*  
*Geol.* 9 p. 484.

†*Megalodon*, DAS-GUPTA 95.

*Musculium* with *M. transversum*  
*decisum* form. n., *M. partumeium glo-*  
*bosum*, *truncatum albidum* & *angusta-*  
*tum*, *rosuccam fuliginosum*, *sphaericum*  
*succineum* varr. n. *M. australe* sp. n.  
U.S.A., STERKI *Ann. Carnegie Mus.*  
10 pp. 439-446.

†*Orthodesma* with *O. carinifera* sp. n.  
Silurian U.S.A., WILLIAMS & BREGER  
*Bull. U. S. Geol. Surv.* 89 p. 126.

†*Palcosolen* with *P. chapmani* sp. n.  
Silurian U.S.A., WILLIAMS & BREGER  
*Bull. U. S. Geol. Surv.* 89 pp. 249-253.

*Paphia microdon*, SMITH 351.

*Petricola digitale* sp. n. Philippines  
SMITH *Proc. Malac. Soc.* 12 p. 16;  
*P. lithophaga*, DE GREGORIO 145.

†*Physetomya*, WILLIAMS & BREGER  
424.

*Pisidium* with *P. compressum cur-*  
*vatum*, *pellucidum illinoiense* varr. n.  
*P. hinkleyi* sp. n. U.S.A.; *P. latchfordi*  
sp. n. Canada; *P. trapzoidium pro-*  
*tensum*, *neglectum corpulentum*, *politum*  
*decorum*, *abditum? lacteum* varr. n.  
U.S.A.; *P. subrotundum canadense*  
varr. n. Canada; *P. s. olofi* & *pumilum*  
varr. n. U.S.A.; *P. vexum* sp. n.  
Canada; *P. splendidulum corneolum*,  
*norangliae* & *miliastrum*, *P. contortum* (?)  
*triangulare*, *P. pauperculum crystalense*  
& *sulphureum* varr. n. *P. ovum* sp. n.  
*P. vesicularis striatellum*, *medianum*  
*clarum* varr. n. *P. fabale*, *abortivum* &  
a. var. *exiguum*, spp. & var. n., U.S.A.;  
*P. guatemalense* sp. n. Guatemala  
STERKI *Ann. Carnegie Mus.* 10 pp. 446-  
474; *Pisidium hannai* sp. n. Alaska,  
STERKI U. S. Nation. *Mus. Proc.* 51  
pp. 476-477; *P. lilljeborgi*, OLDHAM  
281; *P. casertanum f. lacustris*, PRE-  
STON 315; *P. supinum*, *parvulum*,  
WOODWARD 428; *P. SCHLESCH* 338.

†*Pisidium amnicum*, GRIGOROVİČ-  
BEREZOVSKIJ 147; *P. supinum*, *par-*  
*vulum*, PHILLIPS 299.

†*Pitaria* with *P. (Lamelliconcha)*  
*silicifluvia* sp. n. Oligocene Georgia  
DALL U. S. Nation. *Mus. Proc.* 51 pp.  
500-501.

*Protothaca staminca* var. n. *spatiosa*  
N.W. America, DALL U. S. Nation. *Mus.*  
*Proc.* 52 p. 413.

*Psammobia philippinensis* sp. n.  
Philippines, SMITH *Proc. Malac. Soc.*  
12 p. 15.

†*Psemmbia cerasia* sp. n. Oligocene  
Georgia, DALL U. S. Nation. *Mus. Proc.*  
51 p. 501; *P. gubernatoria*, Glenn.  
var. n. *dalli* Mioocene U.S.A., OLSSON  
*Bull. Amer. Pal.* 27 p. 25.

*Saxidomus gigonteus* var. n. *brevis*  
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*Mus. Proc.* 52 p. 413.

*Sphaerium* with *S. sulcatum* varr.  
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U.S.A.; *S. torsum* sp. n. Canada; *S.*  
*striatinum* var. *corpulentum* var. n.  
U.S.A. STERKI *Ann. Carnegie Mus.* 10  
pp. 431-439.

†*Tivela packardi* sp. n. Eocene Cali-  
fornia, DICKERSON *Univ. Cal. Pub.*

Geol. 9 p. 486; *T. trigonalis* sp. n. Pliocene California, NOMLAND Univ. Cal. Pub. Geol. 9 p. 207.

*Thyasira cygnus, tricarinata*, spp. n., N.W. America, DALL, U. S. Nation. Mus. Proc. 52 p. 409.

*Trigoniocardia eudoxia* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 412.

*Velorita delicatula* sp. n. Cochin backwater near Ernakulam India, PRESTON Rec. Ind. Mus. 12 p. 37.

*Venus mercenaria*, MEIGS 253.

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*Corbula porcella, kelseyi*, spp. n., N.W. America, DALL U. S. Nation. Mus. Proc. 52 pp. 415-416.

†*Corbula middlenissi* sp. n. Cretaceous Hazara, DAS-GUPTA J. As. Soc. Bengal 11 p. 255.

*Ervilia californica* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 414.

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*Lutraria magna*, DE GRERORIO 145.

†*Maetra beali* sp. n. Miocene California, HALL & AMBROSE Nautilus 30 p. 80; *M. mississippiensis*, DALL 83; *M. WAGNER* 408.

*Mactrella elisia*, DALL 88.

†*Mesodesma pacifica* sp. n. Miocene California, HALL & AMBROSE Nautilus 30 p. 79.

*Panomya arctica* var. n. *turgida*, *P. beringiana* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 416.

†*Panopea smithii* sp. n. Eocene California, HALL & AMBROSE Nautilus 30 p. 79.

*Saxicava antarctica*, HEDLEY 166.

*Saxicavella pacifica* sp. n. N.W. America, DALL, U. S. Nation. Mus. Proc. 52 p. 416.

*Sphenia trunculus, pholadidea*, spp. n., N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 415.

†*Spisula merriami* sp. n. Eocene California, DICKERSON Univ. Cal. Geol. 9 p. 488.

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*Phaladidea sagitta* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 417.

*Pholas costulata*, Goodall, WALSINGHAM 413.

*Teredo diegensis* sp. n. California, BARTSCH Nautilus 30 p. 48.—*T. navalis*, KUHLMANN 218a.

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*Lucina euglypta, transversa*, spp. n., Philippines, SMITH Proc. Malac. Soc. 12 p. 18; *L. LAMY* 221 & 224.

†*Lucina packi, diegoensis*, spp. n. Eocene California, DICKERSON Univ. Cal. Pub. Geol. 9 p. 484; *L.*, LAMY 221.

†*Paracyclas* with *P. bulloides* sp. n. Silurian U.S.A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 257-259.

*Phacoides*, LAMY 224.

†*Phacoides* with *P. perovatus* sp. n. Oligocene Georgia, DALL U. S. Nation. Mus. Proc. 51 pp. 496-498; *P. (Myrtca) taffana* sp. n. Eocene California. DICKERSON Univ. Cal. Pub. Geol. 9 p. 485; *P. (PleuroLucina) choctawhatcheensis* sp. n. Miocene Florida MANSFIELD U. S. Nation. Mus. Proc. 51 p. 604.

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†*Macoma wilcoxi*, HALL & AMBROSE 158.

†? *Semele*, DALL 83.

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Madras, PRESTON Rec. Ind. Mus. 12 p. 38.

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*Theora hindsiana* sp. n. Andaman Isds., PRESTON Rec. Ind. Mus. 12 p. 99; T. with *T. translucens* sp. n. Madras, PRESTON Rec. Ind. Mus. 12 pp. 38–39.

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*Cetocoencha malespinae* sp. n. N.W. America, DALL U. S. Nation. Mus. Proc. 52 p. 407.

†*Clinopistha radiata*, TSCHERNYSCHEW 390.

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†*Edmondia fountainensis, genevievensis* spp. n., Carboniferous U.S.A., WELLER. Contrib. Walker Mus. Chicago 1 p. 247.—*E. MATHER* 249.

†*Elymella* with *E. harrisi* sp. n. Silurian U.S.A., WILLIAMS & BRÉGER Bull. U. S. Geol. Surv. 89 p. 140.

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*Laternula elliptica*, HEDLEY 166.

*Myodora elongata* sp. n. Tasmania, MAY Proc. R. Soc. Tasmania 1915 p. 98.

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†*Pleuromya baltica* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191–362.—*P. subdonacina* sp. n. ? Jurassic ? Cretaceous Persia, FISCHER Wien Beitr. Pal. Geol. Öst.-Ung. 27 pp. 207–273.—*P. COSSMANN* 73; *P. FRAUENFELDER* 121.

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†*Apscheronia eurydesma, propinqua* KALICKIJ 207.

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†*Cypricardinia laevicula* sp. n. Carboniferous U.S.A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 216.—*C. WELLER* 419.

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†*Glossites* with *G. barraudii, amni-genoides*, spp. n., Silurian U. S. A., WILLIAMS & BRÉGER Bull. U. S. Geol. Surv. 89 pp. 143–147.

†*Gonodus*, MUŠKETOV, 268.

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†*Sphenotus halensis* sp. n. Carboniferous U.S.A., MATHER Bull. Sci. Lab. Denison Univ. 18 p. 207.

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- † *Celtites*, FRAUENFELDER 121.
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- † *Clymenia* with *C. involuta* var. *frechi*, *subflexuosa* var. *costata* and *acuta*, *flexuosa orientalis*, *annulata* varr. *correcta*, *rustica*, *C. pinnata*, *placida*, *kurpinski*, spp. & varr. n., Devonian Russia, PERNA Mém. Com. Geol. 99 pp. 57-81.
- † *Coeloceras daviei rectiradiatum* var. n. Jurassic England, WINGRAVE Geol. Mag. (n.s.) London 3 p. 196.
- † *Colpoceras*, FOERSTE 119.
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spp. n., Cretaceous Dahgestan, KAZANSKIJ Tomsk. Izv. technol. Inst. 32 No. 4 pp. 51-66.

†*Ephippioceras mosquensis* sp. n. Lower Carboniferous Central Russia, FREDERICKS Kazanī Trd. Obšč. jest. 47 pp. 24-25.

†*Eucleotcuthis* gen. n. (for *Symplectotcuthis laminosa* Sasaki 1915), BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 60.

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†*Gastrioceras* with *G. kesslerense*, *pygmaeum*, spp. n., Carboniferous U. S. A., MATHER Bull. Sci. Lab. Denison Univ. 18 pp. 242-244.

†*Glyphioceras vesiculiferum* de Koninck, CRICK 76.

†*Gomphoceras osculum* sp. n. Palaeozoic U.S.A., RUEDEMANN N.Y. State Mus. Bull. 189 p. 76.—*G. densiseptatum* sp. n. Oberdevon Brunn., OPPENHEIMER Verh. nat. f. Ver. Brünn. 54 p. 172.

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†*Hecticoceras krakoviense popilanica* var. n. Jurassic Russia, KRENKEL Palacont. Stuttgart 61 pp. 191-362.

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†*Hollandites nodai* sp. n. Trias Japan, DIENER Denkschr. K. Ak. Wiss. Wien 92 12.

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*Megalocranchia pardus* sp. n. Kermadec Isds., BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 51.

*Moschites challengerii* nom. nov. for *Eledona verrucosa*, Hoyle 1886 pars, non Verrill 1881, BERRY Philadelphia Proc. Acad. Nat. Sci. 68 pp. 48 49.

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†*Oppelia* with *O. discoangulata* sp. n. Jura. Koktobel, STREMOUCHOV Moskva Bull. sect. géol. Soc. nat. 1 pp. 64-68.

†*Orthoceras vicinus* sp. n. Palaeozoic U.S.A., RUEDEMANN N.Y. State Mus. Bull. 189 p. 76; *O.* with *O. princiana*, *parlinense*, spp. n., Silurian U. S. A., WILLIAMS & BREGER Bull. U. S. Geol. Surv. 89 pp. 232-283.—*O.* FRAUENFELDER 121; *O.* MATHER 249; *O.* WELLER. 419

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†*Polyptychites craspeditoides* sp. n. Valanginien River Ounja, ŽIRMUNSKIJ Ann. geol. miner. 16 pp. 73-74 76; *P. diptychoides, variisculptus, densicosta, conferticosta, anabarensis, middendorffi, tscherskii, tschekanovskii*, spp. n. Unt. Neocom von Nordsibirien, PAVLOV Mém. Ac. sc. 21 No. 4 pp. 18-36.

†*Prolobites delphinus* with *P. d. nana* var. n. Oberer Neodevon des Ural. PERNA Mém. Com. géol. 99 pp. 25-27.

†*Proplanulites dacquei* sp. n. Jurassic Russia, KRENKEL Palaeont. Stuttgart 61 pp. 191-362.

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†*Sonneratia rogersi* sp. n. Cretaceous California, HALL & AMBROSE Nautilus 30 p. 69.

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†*Tornoceras auriforme* sp. n. Oberdevon Brünn, OPPENHEIMER Verh. nat. f. Ver. Brünn 54 p. 174.

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# IX. ARTHROPODA

(GENERAL)

ARRANGED BY

D. S H A R P.

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# X. CRUSTACEA

ARRANGED BY

W. T. CALMAN, D.Sc.

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*Triodos* gen. n., *insignis* sp. n. S. Africa p. 140 figs., BARNARD Ann. S. Afric. Mus. 15.

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†*Pholadocaris lutheri* sp. n. Portage, New York St. p. 94 fig., RUEDEMANN t.c.

†*Spathiocaris lata* p. 94, *chagrinenensis* p. 95, Chemung, *cushingi* Olmstead p. 96, *williamsi* Waverlyan p. 96, spp. n. figs. New York St., RUEDEMANN t.c.

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# XI. ARACHNIDA

TO WHICH ARE ADDED

GIGANTOSTRACA (XIPHOSURA, TRILOBITA, EURYPTERIDA),  
PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA  
and PROTOTRACHEATA

ARRANGED BY

W. T. CALMAN, D.Sc.

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Hilton, W. A. A remarkable Pycnogonid. J. Ent. Zool. Claremont Calif. 8 1916 (19-24) 2 pls. 4

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Cotte 362; Duchaussoy 460.

*Lepidoptera.*

Gouin 677; Rondou 1382; Rowland-Brown 1402; Maine-et-Loire, Abot Bull. Soc. Angers 45 pp. 72 & 73 and 46 pp. 55 & 56.—Var, Lowe 8-11 Entomol. 49.—Lucas Montpellier, p. 98 Bull. Soc. ent. France 1916.

*Neuroptera.*

Lacroix 939.

*Diptera.*

Legendre 964.

*Plecoptera.*

Navás 1157.

*Paraneuroptera.*

Gölin 622.

## (g) South Europe and Mediterranean Basin.

*Insecta*, collectively.

Andres Malta 43; Burr 248; Cozzi Italy 366; Navás Spain 1158; Tavares Spain 1586.

*Coleoptera.*

Correa de Barros Portugal 357; Bolivar Spain 179, 180; Redondo Spain 1321; Doderò Italy and Spain 450; Obenberger 1189; Müller 1131; Rambousek 1313; Normand Tunis 1181; Peyerimhoff Algeria 1250, 1251.

*Hymenoptera.*

Mercet Spain 1076, 1077, 1078, 1079, 1081; Dusmet Arragon 468; Emery Italy 496; Masi Italy 1055; Silvestri Italy 1502; Krausse Sardinia 921; Mayer Süddalmatiens 1062; Morice N. Africa 1113; Morice Algeria 1114.

*Lepidoptera.*

Kheil Spain 879; Menés Spain 1072; Verity Italy 1698, 1700; Stauder Calabria 1532; Galvagni Süddalmatiens 619; Ragusa Sicily 1312; Buxton Dardanelles pp. 213-217 Ent. Rec. 28; Prout Cyprus 1299; Oberthür Algeria 1191; Hertz Algeria 1539; Chrétien Algeria 309; Hoggart mts. Algeria Rothschild 1390; Warren Egypt 1728.

*Trichoptera.*

Navás Spain 1154, 1156.

*Neuroptera.*

Navás Spain 1148; Salonica, Lucas p. 248 Entomol. 49.

*Diptera.*

Tavares Portugal 1587; Corti Italy 358; Zerny Süddalmatiens 1818; Anfreville Maroc 45; Carter Egypt 267.

*Hemiptera.*

Paoli Sardinia Coccidae 1219; Raab und Werner Süddalmatiens 1305; Malenotti Egypt Coccidae 1034.

*Thysanoptera.*

Bagnall Spain 73.

*Plecoptera.*

Navás Spain 1149.

*Paraneuroptera.*

le Roi Sahara 975.

*Orthoptera.*

Ebner Abruzzi 477; Werner Süddalmatiens 1754; Bolívar Mogador 177.

## (h) Caucasus, West &amp; Central Asia.

*Coleoptera.*

Borodin 193; Formánek 573, 576; Reitter 1328, 1336.

Caucasus Lutshnik 1002, 1003, 1009, 1010; Plaviliščíkov 1280; Zaitzev 1808, 1809, 1811, 1812.

*Hymenoptera.*

Bogoliulov 175; Karaviev 866; Rouzskij 1411; Vasiljev 1691; Wheeler & Mann Palestine 1764b.

*Lepidoptera.*

Avinoff Tibet 62; Filipjev Steppes des Kirghises Transsuraliennes 556; Hampson Arabia 711; Kusnezov 936; Meyerick 1087.

*Trichoptera.*

Persia: Martynov 1054.

*Diptera.*

Christophers Mesopotamia 312.

*Aphaniptera.*

Wagner Caucasus 1720.



*Hemiptera*.

Distant Aden 429; Mordvilko 1110.

*Paraneuroptera*.

Bartenev Caucasus 108.

*Orthoptera*.Giglio-Tos 633; Moritz 111;  
Stschelkanovtzev 1563; Uvarov 1675.

## Africa.

*Insecta*, collectively.

Navás 1150.

*Coleoptera*.Achard 8; Alluaud 32, 33; Arrow 49;  
Aurivillius 55, 56; Bickhardt 152, 153;  
Bourgoin 200; Champion 282, 283,  
287, 288, 290, 291; Desbordes 412,  
414; Grouvelle 695, 697, 698; Hus-  
tache 809; Kolbe 912; Lesne 977;  
Peschet 1244; Pic 1260, 1267; Oben-  
berger 1186, 1188, 1190; Orbigny 1203,  
1204; Zimmermann 1820.*Hymenoptera*.Arnold 48a; Bequaert 129, 130;  
Cockerell 329; Crawley 377; Emery  
485; Forel 572; Friese 582; Girault  
642, 644, 664; Grandi 681; Meade-  
Waldo 1063; Mercet 1080; Morley  
1121; Santschi 1427, 1428, 1429;  
Turner 1656, 1657, 1662, 1664a;  
Turner & Waterston 1665; Waterston  
1732, 1733, 1734.*Lepidoptera*.Aurivillius 54; Bethune-Baker 145;  
Dudgeon 461; Fawcett 535; Gaede  
613; Hampson 710, 711; Joicey &  
Talbot 848; Longstaff 994; Meyrick  
1087; Neustetter 1163; Oberthür 1191;  
Poulton 1289; Prout 1295, 1300;  
Rothschild 1389, 1393; Rothschild &  
Jordan 1394, 1395; Schultze 1468;  
Swinhoe 1579.*Neuroptera*.

Esben-Petersen 507.

*Diptera*.Bezzi 149; Carter 267; Edwards  
478, 479, 481; Johnston 845; Macfie &  
Ingram 1024; Rodhain et Bequaert  
1363; Roubaud 1397; Schmitz 1457;  
Speiser 1529; Townsend 1637; Ville-  
neuve 1707, 1708, 1709, 1710, 1711,  
1712, 1713, 1714, 1714a.*Hemiptera*.Bergroth 133; Cogan 351; Del  
Guercio 406; Distant 427, 428, 429;  
Green 683; Malenotti 1035; Poppius  
1285; Theobald 1594, 1595; Zacher  
1807.*Elliptoptera*.

Cummings 385; Fahrenholz 528.

*Thysanoptera*.

Hood 784, 785, 787.

*Lipoptera*.

Ferris 552.

*Paraneuroptera*.

Förster 568; Martin 1051.

*Orthoptera*.Carl 263; Ebner 476; Giglio-Tos  
633; Peringuey 1239.Madagascar and Mascarene  
Islands.*Coleoptera*.Achard 2, 3, 5, 7, 9; Alluaud 35, 36;  
Aurivillius 55; Berlioz 138; Desbordes  
411; Pic 1267; Pouillaude 1287, 1288.*Hymenoptera*.

Cockerell 344; Waterston 1735.

*Lepidoptera*.Bethune-Baker 145; Le Cerf 960;  
Meyrick 1087; Prout 1300; Roth-  
schild 1393.*Hemiptera*.

Green Seychelles Coccidae 688.

*Paraneuroptera*.

Ris 1354.

*Orthoptera*.

Carl 263; Giglio-Tos 633.

*Aptera*.

Carpenter Seychelles 264.

Asia, Tropical and Eastern.

Including Japan, Biluchistan, Af-  
ghanistan.*Insecta*, collectively.†Cockerell 326; Fletcher 563; Vitalis  
1716.

*Coleoptera.*

Arrow Ceylon 50; Aurivillius 55; Bourgoin 197, 198; Champion 282, 293, 287, 288, 291; Fleischer Japan 562; Formánek 574, 575; Grouvelle 695; Hustache Japan 807; Jordan 856, 857; Lameere 949; Marshall India 1044, 1045; Maulik India 1059, 1060; Obenberger 1187; Peschet China 1245; Pic 1258, 1259, 1261, 1262, 1263, 1264, 1267, 1269, 1270; Reitter 1329.

*Hymenoptera.*

Aiyar India 16; Brues India 229; Cockerell Assam 329; Crawford India 373; Friese 583; Girault Japan 636, India 648, Ceylon 664; Grandi 681; Meade-Waldo India 1063; Rohwer Formosa 1376; Silvestri India 1503; Timberlake Japan 1610; Turner India 1656; Waterston Straits Settlements 1735.

*Lepidoptera.*

Bell 120; Ellis 491; Godfrey 667; Hampson 710; Hannington 713; Meyrick 1087, 1093; Nagano Japan 1141, 1142; Nire Japan 1179; Oberthür E. Tibet 1191; Prout 1296, 1298; Rothschild 1388, 1393; Rothschild & Jordan 1394; Strand Formosa 1548; Swinhoe 1578, 1579; Warren 1727, 1728; Wileman Formosa 1772, 1773, 1774; Wileman & South Japan 1776; Wileman & South Formosa 1777.

*Trichoptera.*

Navás 1150; Ulmer 1670.

*Diptera.*

Bezzi 150; Edwards 479, 482; Edwards Formosa 483; Felt 537, 538; Kieffer Formosa 881; Matsumura Japan 1058; Newstead 1170; Ricardo 1344, 1345; Townsend 1634.

*Hemiptera.*

Bergroth 133; Crawford 371; Distant 426, 427, 428, 430; Goot 675; Green 685; Kuwana Japan Coccidae 930; Muir Formosa 1133, 1134.

*Thysanoptera.*

Bagnall 72, 73; Williams 1780.

*Paraneuroptera.*

Bartenev 105; Laidlaw 940, 941; Ris Formosa 1356.

*Orthoptera.*

Carl 263; Chopard 305, 308; Giglio-Tos 633; Griffini 691, 692.

*Aptera.*

Kinoshita Japan *Collembola* 892.

## Asiatic Archipelago.

Java to New Guinea, including Philippines. For Formosa see Asia.

*Insecta, collectively.*

Banks Phillipines 94.

*Coleoptera.*

Achard 2; Arrow 51; Aurivillius 55, 56; Bernhauer 141; Bourgoin 198; Champion 282, 283, 285, 287, 291; Fleutiaux 564, 565; Grouvelle 696, 699; Heller 761, 762, 763; Jordan 856, 858; Kleine 897; Kolbe 911; Maulik 1060; Pic 1257, 1265, 1267, 1270; Schultze, 1469, 1470, 1471, 1472; Veth 1701.

*Hymenoptera.*

Cameron 259; Cockerell 332, 337, 348; Girault 636, 653, 657; Grandi 681; Kieffer 882, 883, 884, 885, 886, 887; Meade-Waldo 1063; Roepke 1371, 1374.

*Lepidoptera.*

Bethune-Baker 145; Eecke, 487; Fruhsorfer 595, 596; Hampson 710, 711; Gaede 615; Joicey Noakes & Talbot 846; Joicey & Talbot 847, 852; Jordan 854; Martin 1050; Meyrick 1087; Prout 1296, 1298; Roepke 1366, 1369; Rothschild 1391; Rothschild & Jordan 1395; Swinhoe 1578, 1579; Warren 1727; Wileman 1775.

*Trichoptera.*

Ulmer 1670.

*Neuroptera.*

Roepke 1367.

*Diptera.*

Malloch 1038; Meyere 1066, 1068; Salm 1416, 1417; Smit 1516; Strickland 1551, 1552; Townsend 1634.

*Hemiptera.*

Baker 86; Bergroth 133; Crawford 371; Distant 427, 428, 429, 430, 432, 433; Funkhauser 609; Malenotti 1034; Muir 1134; Poppius 1285; Rutherford 1409.

*Thysanoptera*.

Karny & Docters van Leeuwens-Reinvaan 867.

*Lipoptera*.

Ferris 552.

*Isoptera*.

Oshima 1212.

*Paraneuroptera*.

Ris 1350.

*Orthoptera*.

Carl 263; Bruner 239; Giglio-Tos 633.

Australia and Tasmania.

*Insecta*, collectively.

Poulton pp. ci-cxii Pr. Ent. Soc. London 1915.—†Tillyard 1603.

*Coleoptera*.

Achard 6; Aurivillius 55; Auzat 57; Bernhauer 139; Carter 268, 269; Champion 282, 283, 288, 291; Ferguson 546; Lea 956; Mjöberg 1105, 1106; Weise 1744.

*Hymenoptera*.

Cockerell 328, 329, 330, 346, 347; Dodd 448; Girault 641, 651.

Grandi 681; Santschi 1428; Turner 1656, 1658, 1659, 1660, 1661, 1663; Wheeler 1762, 1763.

*Lepidoptera*.

Hampson 710; Lower 995, 996; Meyrick 1087; Prout 1296; Turner 1648, 1649, 1650, 1651; Wzrren 1727.

*Trichoptera*.

Martynov 1054.

*Neuroptera*.

Tillyard 1606, 1608.

*Diptera*.

Edwards 484; Hardy 715; Taylor 1589; Townsend 1627, 1634, 1636; White 1765, 1766.

*Aphaniptera*.

Rothschild 1387.

*Hemiptera*.

Bergroth 131, 132; Distant 429, 431.

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*Thysanoptera*.

Bagnall 72, 73; Hardy 716.

*Lipoptera*.

Cummings 384; Harrison & Johnston 733.

*Ephemeroptera*.

Ulmer 1672, 1673.

*Paraneuroptera*.

Tillyard 1605.

*Orthoptera*.

Carl 263; Giglio-Tos 633.

North America.

*Insecta*, collectively.

Chrystal 314; †Cockerell 338; Du Porte 465; Dury 467; Ferris 551; Gibson 628; Giffard 632; Taverner 1588; Treherne 1643; Walker 1722; Weiss 1748.

*Coleoptera*.

Barber 100; Blatchley 162, 163; Blatchley & Leng 164; Casey 270, 271, 272; Champion 283, 288; Dury 466; Frost 593; Germain 623; Glasgow 666a; Harris & Leng 720; Hopkins 790; Johnson 842; Leng, Castle Florida p. 92 J. N. York Ent. Soc. 24; Morris Niagara Glen pp. 293-300 Canad. Ent. 48; Nicolay Maine p. 309 J. N. York Ent. Soc. 24; Schaeffer 1436; Slosson Connecticut p. 125 Ent. News 27; Swaine 1568, 1570, 1571; Van Dyke 1684; Wickham 1770; †Wickham 1770a; Woodruff & Davis New York *Malachiidae* p. 1553 J.N. York Ent. Soc. 24.

*Hymenoptera*.

Ackerman 11; Andrews 44; Andrews California Formicidae p. 421 Ent. News 27; Banks 97; Bradley 202, 203; Brues 230, 233; Cockerell 322, 324, 328, 329, 331, 332, 334, 336, 340, 342, 343, 345; Crawford 373, 374, 375; Doane 439; Fyles 611; Gaige 616; Girault 636, 637, 638, 639, 642, 643, 644, 646 to 650, 654, 655, 656, 658, 660 to 665; Lutz 1011; Mickel 1096, 1097; Rohwer 1375; Sladen 1512, 1513; Smith South Carolina Formicidae p. 468 Ent. News 27; Smith & Morrison South Carolina ants Ent.



News 27 p. 110; Swenk 1573, 1574; Timberlake 1610; Viereck 1704, 1705, 1706; Weiss New Jersey 1749; Williams 1737.

*Lepidoptera*.

Allen 30; Farnes & McDunnough 103, 104; Beutenmuller 143; Braun 205, 206; Dod 446, 447; French 579; Gibson 626; Hampson 711; Meyrick 1087; Quaintance & Wood 1304; Reed 1322; Saunders 1432; Skinner 1510; Swett 1576; Winn 1793; Wright 1800, 1801.

*Diptera*.

Aldrich 17; Alexander 21, 23, 24, 25; Banks 95; Banks Greene McAtee & Shannon 98; Brues 231, 232; Cole 353, 354; Cockerell 341; Cockerell & Andrews 349; Cresson 380, 381; Dietz 425; Dyar 471, 472; Felt 536, 537, 539, 540, 542; FELT in Woods 1796; Ferris 554; Hine 774; Johannsen 837; Johnson 839, 840; Jones 853; Knab 905, 906; Knab & Shannon 907; Malloch 1037; Metcalf 1083; Parker 1222, 1223, 1224, 1225; Schaeffer 1435; Shannon 1485, 1486; Smith 1518; Sturtevant 1566; Swenk 1575; Townsend 1626, 1628, 1629, 1630, 1634, 1635, 1637a; Van Duzee 1682, 1683.

*Hemiptera*, collectively.

Van Duzee 1681.

*Heteroptera*.

Abbott 1; Drake 459; Knight 908; McAtee 1018; Osborn & Drake 1209; Parshley 1229, 1230; Van Duzee 1679, 1681; Japanese Tingitid Weiss Canad. Ent. 43 p. 255.

*Homoptera*.

Ball 87, 88; Davis 397, 398; Horsfall 791; Gibson Mississippi *Jussidae* Canad. Ent. 43 p. 177; Weiss *Tibicen* in New Jersey Ent. News 27 p. 337 map.

*Aphidae*.

Baker & Davidson 80; Gillette & Bragg 634.

*Aleyrodidae, Coccidae*.

Quaintance & Baker 1303; Dietz & Morrison 424; Hollinger 782.

*Ellipoptera*.

Ferris 553.

*Thysanoptera*.

Hood 784, 786, 788; Watson 1737.

*Plecoptera*.

Needham & Smith 1163.

*Paraneuroptera*.

Bartenev 105, 106; Howe 794; Walker Ontario p. 314 Canad. Ent. 48.

*Orthoptera*.

Allard 29; Allard Virginia Canad. Ent. 48 pp. 356-358; Caudell 273; Hebard 744, 746, 747, 748, 749; Morse 1122; Rehn & Hebard 1325, 1326; Somes 1523.

*Collembola*.

Folson 569.

Central America.

*Insecta*, collectively.

Cockerell Lower California p. 469 Ent. News 27.

*Coleoptera*.

Aurivillius 55; Casey 272; Ohampion 288, 291; Pic 1267.

*Hymenoptera*.

Cockerell Coronado Islands 339; Girault 638, 645, 662; Meade-Waldo, 1063; Turner 1656.

*Lepidoptera*.

Cockerell 329; Dognin 452; Dyar 470; Joicey & Talbot 849; Prout 2197; Rothschild 1889; Rothschild & Jordan 1394; Schaus 1438.

*Diptera*.

Alexander 23, 25; Cresson 380; Knab 902; Sturtevant 1566; Swenk 1575; Townsend 1634.

*Hemiptera*.

Ball 88; Bergroth 133.

*Orthoptera*.

Carl 263; Hebard 745, 746, 750, 752; Rehn 1324.

*Zoraptera*.

Silvestri 1501.

## Antilles.

*Coleoptera*.

Casey 272; Champion 282; Grouvelle 695, 700; Leng & Mutchler 971; Marshall 1046, 1047; Pic 1267, 1270.

*Hymenoptera*.

Brues 229; Girault 638, 640, 642.

*Lepidoptera*.

Hampson 710; Holland 779; Prout 1297; Schaus 1438.

*Diptera*.

Alexander 23, 26; Cresson 380; Sturtevant 1566.

*Thysanoptera*.

Hood 784, 789.

*Paraneuroptera*.

Kahl 863.

*Orthoptera*.

Bruner 237; Carl 263; Hebard 746, 747, 752; Holland & Kahl 780.

## South America, including Trinidad.

*Insecta*, collectively.

Beebe 119; Bodkin & Cleare 171; Jorgensen 860; Navás 1149, 1153, 1155; Roman 1381; Tavares 1583.

*Coleoptera*.

Bernhauer 140, 143; Bickhardt 152; Bourgoin 199; Brèthes 213, 214; Bruch 228; Champion 282, 283, 286, 287, 288, 289, 291; Desbordes 415; Escomel 511; Grouvelle 695; Hyslip 812; Lameere 948; Lima 980; Marshall 1047; Minck 1101; Pic 1260, 1267, 1270.

*Strepsiptera*.

Hoffmann 776.

*Hymenoptera*.

Brèthes 209, 212; Cockerell 322, 329, 333, 335, 337; Crawley 376; Gallardo 618; Girault 636, 638, 652, 662; Mann, 1039a; Santschi 1425; Tavares 1582; Wheeler 1756, 1761, 1764a.

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*Lepidoptera*.

Dognin 452; Fassl 530, 531, 532, 533; Fruhstorfer 606; Hampson 710, 711; Joicey & Talbot 849; Jordan 855; Mengel 1073; Meyrick 1087; Oberthür 1191; Pfeiffer 1252; Prout 1297; Rothschild 1389, 1391; Schaus 1438; Skinner 1511; Stichel 1542, 1543, 1544; Thierry-Mieg 1597; Whittle Argentina p. 106, Entomol. 49.

*Diptera*.

Alexander 22, 23, 26; Bezzi & Tavares 151; Brèthes 210, 211; Cresson 380; Dyar & Knab 474; Hermann 764; Sturtevant 1566; Tavares 1584, 1585; Townsend 1624, 1630, 1634.

*Hemiptera*.

Bergroth 133; Delétang 405; Green 684; Poppius 1285; Quaintance & Baker 1303.

*Lipoptera*.

Cummings 385; Kellogg 872.

*Paraneuroptera*.

Ris 1351, 1355; Williamson 1788, 1789, 1790.

*Orthoptera*.

Bruner 237; Carl 263; Chopard 304; Giglio-Tos 633; Hebard 746, 747, 751; Rehn 1324.

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Synonymies de Coléoptères européens, BEDEL pp. 270, 271 Ann. Soc. ent. France 85.

*Cantharidoidea* (Russ.), JACOBSON Die Käfer Russlands und Westeuropas Lief xi 1915 pp. 865-991.

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Catalogue of Philippine *Coleoptera*, SCHULTZE Philipp. J. S. D. 11 pp. 1-194.

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### CICINDELIDAE.

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*Amblycheila baroni enodis* subsp. n. p. 5, CASEY Mem. Col. 7.

*Cicindela hudsonica* p. 29, *shermani* p. 30, *lincolniiana* p. 32, *prolixa*, *fontinaria* p. 33, spp. n., Am. bor.; also the following subsp. n., *ancociscronensis eriensis* p. 29, *macra topekana* p. 31, CASEY T.c.—*C. cardini* p. 690 pl. ix. f. 3, *cubana* p. 696 f. 8, spp. n., Cuba, LENG & MUTSCHLER Bull. Amer. Mus. 35.—*C. melancholia* var. *caucasicola* n.n. pro *aegyptiana* Klug (non Dejean) p. 25, *trisinata* Mingrelia p. 26, *litterata*

*karnakovi* subsp. n. Caucasus p. 27, *campestris pontica* Transcaucasia descriptio p. 29, LUTSHNIK Bull. Mus. Cauc. 9.—*C. germanica* ab. n. *michaelensis* p. 518, BOLIVAR Bol. Soc. espan. 16.—*C. hirticollis* var. n. *thodensis* p. 93, CALDER J. N. York ent. Soc. 24.—*C. hybrida* Flügeldeckenskulptur, SCHULZE D. ent. Zs. 1915 p. 247-255.—*C. campestris*, natural history, HUME pp. 1-10 Pr. Physic. Soc. Edinburgh 20.

*Distipsidera sericea* sp. n. Australia p. 5, MjöBERG Ark. Zool. 10 No. 10.

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*Acupalpus elaphus* n. sp. p. 76 fig. 16, Mauritius, ALLUAUD Ann. Soc. ent. France 85.

*Agonochila plagiata* sp. n. Australia p. 207, SLOANE P. Linn. Soc. N.S.W. 41.

*Amara eximia*, HUBENTHAL Ent. Bl. 12 p. 208.

*Anillus (Pseudanillus) magdalena elegantulus* n. subsp. p. 306, NORMAND Bull. Soc. ent. France 1915.



*Anophthalmus speluncarius* sp. n. Herzegovina, REITTER Ent. Zs. Wien 35 p. 297.—*A. vasicekli* sp. n. Herzegovina, FLEISCHER Ent. Ztg. Wien. 35 p. 60.

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*Anthracus conputus* and *wimmeli* Unterschiede, VON WANKA Ent. Ztg. Wien 35 p. 121.

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*Apoplotrechus* gen. n. for *Perileptus strigipennis* Fairm. ALLUAUD p. 286 fig. Bull. Soc. ent. France 1915.

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*Orphinium dentifrons* n. sp. p. 200 Bolivia, DESBORDES Bull. Soc. ent. France 1916.

*Paromalus estriatus* syn. of *affinis*, CASEY p. 245 Mem. Col. 7.

*Phelister carnochani* p. 229 and 291, *simplex* p. 230, *contractus*, *wickhami*, p. 231, *atrolucens*, *mobilensis*, p. 232, *pimalis*, *brevistriatus*, U.S., *aztecanus* Mexico, p. 233, spp. n., *venustus chalybaeus* subsp. n. p. 234 CASEY T.c.

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*Platysaprinus* gen. n. p. 106 type *latimanus* Schm., BICKHARDT T.c.

*Platysoma pereziguum* n. sp. p. 475, Madagascar, DESBORDES Ann. Soc. ent. France 84 1915.—*P. pinorum*, *quadri-fera*, spp. n., U.S. p. 202, CASEY Mem. Col. 7.

*Plegaderus obesus*, *egenus*, p. 279, *convergens*, U.S., *densus*, p. 280, *vegrandis* p. 281, Mexico, *pygidialis*, *sulcatus*, p. 282 U.S., spp. n., CASEY T.c.

*Pseudepierus* subgen. n. vide *Epierus*.

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*Pycnacritus* subgen. n. vide *Acritus*.

*Saprinus perparvulus* n. sp. p. 493 Madagascar, DESBORDES Ann. Soc. ent. France 84 1915.—*S. desbordesii* n. sp. p. 132 Australia fig., AUZAT Bull. Soc. ent. France 1916.—*S. cupreolus* sp. n., *discoidalis amplus* subsp. n. p. 258, *cheyennensis*, *suffusus*, p. 259, *moniliatus* p. 260, *obsoletus* p. 261, *lecontei*, *repens*, p. 262, *insolitus* p. 263, *brevicollis* p. 264. U.S., *oppidanus* Mexico p. 265, spp. n., *fibriatus dakotanus* subsp. n., *effusus* p. 266, *testudo*, *psyche*, p. 267, *p. tardus* subsp. n., *bispeculatus*, p. 268, *S. (Hypocaccus) lustrans* p. 269, *sparsus* p. 270, *divulsus* p. 271, *omissus* p. 272, *parvus* p. 273, *strigularius*, *scabriceps*, p. 274, *laciniatus* p. 275,

spp. n., U.S., CASEY Mem. Col. 7.—*S. calatravensis* La Fuente, rectification synonymique, AUZAT Bull. Soc. ent. France 1916 p. 196.

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*Teretriosoma pinguis* sp. n. Texas p. 276, CASEY Mem. col. 7.

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*Trypolister* gen. n. p. 56, *capucinus* sp. n. Brazil p. 57 pl. ii. f. 11, BICKHARDT T.c.

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*Erythrolitus* gen. n. for *Olibrus rubens* Lec., CASEY p. 85 T.c.

*Leptostilbus* gen. n. p. 71, *rutilans*, *concinuus*, p. 72, spp. n., U.S. CASEY T.c.

*Litochropus clavicornis* sp. n. Texas p. 86, CASEY T.c.

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*Amystrops camptoides* sp. n. Luzon p. 314, GROUVELLE Philipp. J. Sci. D. 11.

*Bactridium convexulum* p. 98, *hudsoni*, *obscurum*, p. 99, *curtipenne* p. 100, spp. n., U.S., CASEY Mem. Col. 7.

*Circopes philippinensis* n. sp. p. 87, GROUVELLE Bull. Soc. ent. France 1916; Hab. Cameroon nec Philippines, Id. p. 226 T.c.

*Europs unicolor* sp. n. Texas p. 94, CASEY Mem. Col. 7.

*Glischrochilus quadripustulatus* ab. n. *zoufali*, FLEISCHNER Ent. Ztg. Wien 25 p. 120.

*Hesperobaenus arizonicus* sp. n. p. 82, CASEY Mem. Col. 7.

*Lasiodactylus acutipennis* n. sp. p. 521 Congo, GROUVELLE Ann. Soc. ent. France 84 1915.—*L. chevrolati*, larva, PEYERIMHOFF p. 109 fig. Rec. Ind. Mus. 12.

*Leptipsius* gen. n. *Monotomidae*, *dilutus* sp. n. Illinois p. 93, CASEY Mem. Col. 7.

*Macreurops* gen. n. for *Europs longicollis* Horn, CASEY p. 96 T.c.

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*Nitidula carnaria* ab. *bifasciata* ab. nov. Holland, EVERTS Ber. Ned. Ent. Ver. 4 p. 355.

*Pycnotomina* gen. n. for *Bactridium cavicolle* Horn, CASEY p. 100 Mem. Col. 7.

*Quadrifrons* gen. n. near *Perthalyera*, *castaneus* sp. n. Florida, BLATCHLEY p. 92 Canad. Ent. 48.

*Rhizophagus longiceps*, *rectus*, spp. n., U.S., CASEY p. 102 Mem. Col. 7.

*Stelidota octonotata* sp. n. Luzon p. 313, GROUVELLE Philipp. J. Sci. D 11.

*Syringobius* subg. n. of *Rhizophagus* for *R. cylindricus* Lec., CASEY p. 103 Mem. Col. 7.

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*Corticotomus laeiventris* sp. n. Colorado p. 105, CASEY T.c.

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*Paraflumis* gen. n. near *Corticotomus*, *estriata* sp. n. Oregon, CASEY p. 107 T.c.

*Seidlitzella* n. n. für *Cymba* praecoce. (Russ.), JACOBSON Die Käfer Russlands und Westeuropas Lief. xi. 1915 p. 893.

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*Abromus zariquieyi* sp. n. Catalonia p. 349, DODERO Ann. Mus. Genova 47.

*Helioctamenus* Schauf. = (*Acotulus* Reitt.), BEDEL p. 271 Ann. Soc. ent. France 85.

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#### CUCUJIDAE.

*Cucujidae* (Russ.), JACOBSON Die Käfer Russlands und Westeuropas Lief. xi. 1915 pp. 896-907.

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*Catogenus monilicornis* p. 115, *puncticeps, parvus*, p. 116, spp. n., Am. bor., CASEY T.c.

*Charaphloeus* subg. n. for *L. convexulus* Lec., CASEY p. 127 T.c.

*Cryptolestes disseptus* p. 133, *adumbratus* p. 134, spp. n., Texas, CASEY T.c.

*Eutermicola* gen. n. near *Nepharinus, sculpticollis* sp. n. North-Western Australia, LEA Tr. R. Soc. S. Austral. 40 p. 273 pl. 32, f. 1.

*Hemipeplus africanus* n. sp. p. 287 Gabon, GROUVELLE Ann. Soc. ent. France 84 1915.

*Hypocoprus tenuis* sp. n. Colorado p. 137, CASEY Mem. Col. 7.

*Laemophloeus fervidus* p. 121, *californicus* p. 122, *shastanus* p. 123 *fraterculus* p. 124, *filiger* p. 125, *sphaerops* p. 126, spp. n., U.S., CASEY T.c.—*L.* sp., metamorphosis pl. iv. figs. 11-15 p. 201, BARNES & GROVE Mem. Dep. Agric. Ind. Chem. 4.

*Laemotmetus basalis* p. 21, *raffrayi* p. 22, spp. n., Abyssinia, GROUVELLE Mem. ent.

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*Leptophloeus* gen. n. p. 135 for *Laem. angustulus* Lec. and *perrisi* Grouv., CASEY T.c.

*Nepharis doddi* sp. n. Queensland, LEA Tr. R. Soc. S. Austral. 40 p. 272.

*Passandra mexicana* sp. n. p. 123, CASEY Mem. Col. 7.

*Passandrella* gen. n., *visenda* sp. n. Goyaz, GROUVELLE p. 6 Mem. ent.

*Phloeipsius* subg. n. for *Silvanophloeus fraudator* Sh., CASEY p. 132 Mem. Col. 7.

*Phloeolaemus* subg. n. for *L. immersus* Sh., CASEY p. 127 T.c.

*Scalidia postica* p. 10, *capitalis* p. 11, *gounellei* p. 12, *atra* p. 13, *minuta* p. 14, *sharpi* p. 15, *atratala* p. 16, *humeralis* p. 17, *ignota* p. 18, spp. n., Amer. mer., GROUVELLE Mem. ent.

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*Telephanus strictus* n. sp. p. 84, *cribratus* p. 85, spp. n., Jamaica, GROUVELLE Bull. Soc. ent. France 1916.

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*Antherophagus*, synonymy, *canescens* n. n. for *silacea* Er., GROUVELLE p. 28 Mem. ent.

*Atomaria caseyi* n. n. for *divisa* Cas., *versa* n. n. for *soror* C., *lucens* n. n. for *lucida* C., GROUVELLE p. 29 T.c.

*Cryptophagus translatus* n. n. for *substriatus* Reitt., *caffer* Boh. not a Cryptophagid, *fuliginosus* Br. to *Pseudotriphyllus, obscurus* Br. to *Micrambe, C. lamellicornis* Bris., GROUVELLE pp. 27 and 28 T.c.—*C. simulator* p. 64, *castanescens* p. 65, *parallellicollis* p. 66, *anziosus* p. 67, *curtus* p. 69, *infuscus* p. 70, *bimacularis* p. 71, *binotatus* p. 72, *monticola* p. 73, *vicinus* p. 74, *auropubens* p. 75, *subnudus* p. 76, India, spp. n., GROUVELLE T.c.

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*Henoticus indicus* sp. n. p. 78, GROUVELLE T.c.

*Leucolimatiium arundinaceum* Forsk. (as *Tenebrio*) = (*elongatum* Er.), BEDEL p. 271 Ann. Soc. ent. France 85.

*Loberus sharpi* n. n. for *brevicollis* Sh., *testaceipennis* n. n. for *testaceus* Gr., *mutatus* n. n. for *insularis* Cas., GROUVELLE p. 26 Mem. ent.

*Micrambe vini* and *villosa*, GROUVELLE p. 27 T.c.

*Pharaxonotha yunnanensis, lata*, Tonkin, spp. n., p. 61, GROUVELLE T.c.

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*nitidus* Bolivia p. 59, spp. n., GROUVELLE T.c.

*Pteryngium duclouxi* sp. n. Yunnan p. 63, GROUVELLE T.c.

*Toramus* nom. n. for *Tomarus* Lec., GROUVELLE p. 26 T.c.

*Xenoscelinus bicolor* India p. 53, concolor Tonkin p. 54, spp. n., GROUVELLE T.c.

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*Litargus (Litargellus) longulus, pallens*, spp. n., U.S., CASEY p. 175 Mem. Col. 7.

*Mycetophagus quadrarius* p. 172, *triballeatus* p. 173, *provensis* p. 174, spp. n., U.S., CASEY T.c.

*Thrimolus duryi* sp. n. Ohio p. 176, CASEY T.c.

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*Anthrenus seminivens* sp. n. New Mexico p. 200, CASEY Mem. Col. 7.

*A. canadensis, atrolucens*, p. 183, *nigrripes, sparsus*, p. 184, spp. n., U.S., CASEY T.c.—*A. nankinens*, China, *multinotatus* India, *A. (Telopes) donckieri* Africa, spp. n., PIC p. 15 Mél. 17.—*A. undulatus*, eggs, metamorphosis, pl. i, p. 172, Mem. Dep. Agric. Ind. Chem. 4.

*Cryptorhopalum insigne* p. 191, *tuckeri, coloradense*, p. 192, *pallens* p. 193, *anthrenoides, fontinale*, p. 194, *griseescens, uteanum*, p. 195, *nephianum, aridum*, p. 196, *bakeri* p. 197, *piceum, floridanum*, p. 198, spp. n., U.S., CASEY Mem. Col. 7.—*C. rufonotatum, brunnescente*, spp. n., Am. mor., PIC p. 17 Mél. 17.—*C. geniculatum, claveri, rugosipenne, peruvianum*, p. 2, *baeri nitidissimum, obscuriceps, argentinum, bolivianum, gounellei*, p. 3, *rufipenne* p. 4, Am. mor., *biolleyi* Costa Rica p. 3, *mezicanum* p. 2, spp. n., PIC Mél. 18.

*Dermestes truncatus* p. 180, *cylindricus* p. 181, spp. n., U.S., CASEY Mem. Col. 7.—*D. elongatissimus* sp. n. Ecuador, PIC p. 15 Mél. 17.—*D. cadaverinus*, early stages, ILLINGWORTH p. 255 P. Hawai. ent. Soc. 3.

*Hemirhopalum longipenne* Peru, *rufipenne* Mexico, PIC p. 17 Mél. 17.

*Orphnus guernei* Ceylon, *malabarensis, notaticollis, atrofasciatus*, India, spp. n., PIC p. 16 Mél. 17.

*Phradonomorphus* gen. n. near *Thaumaglossa* for *Aethriostoma rufofasciata*, PIC Mél. 17 p. 3.

*Pseudotelopes* subg. n. of *Attagenus, simoni* Manilla, *madecassus* Madagascar, *testaceipes* Tonkin, spp. n., PIC Mél. 17 p. 2.

*Thaumaglossa bimaculata* sp. n. Pretoria p. cxiii, ARROW P. ent. Soc. London 1915.—*T. pygidialis, tonkinea*, spp. n., PIC p. 16 Mél. 17.

*Trinodes carinatus* sp. n. India, PIC p. 17 Mél. 17.—*T. emarginatus* and *rotundus* Arr. are the same as *guernei* and *minutus* Pic, PIC p. 3 Echange 32.

*Trogoderma procera* p. 185, *parvula* p. 186, *plagifera, cylindrella*, p. 187, *frosti, nigrescens*, p. 188, *brunnescens, scabripennis*, p. 189, spp. n., U.S., CASEY Mem. Col. 7.

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*Byrrhus nigrosignum* sp. n. Chotan mor., REITTER Ent. Ztg. Wien 35 p. 221.

*Chelonariomorphus* gen. n. p. 2, *subconvexus* sp. n. Bolivia p. 3, PIC Mél. 20.

*Chelonarum nigromaculatum* sp. n. Brazil p. 8, PIC Mél. 19.—*C. abdominale, baeri*, spp. n., Am. mor., p. 2. PIC Mél. 20.

*Pseudochlonarium* gen. n. *hirsutum* sp. n. Sumatra, PIC Mél. 19 p. 1.

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*Heterocerus*; notes, ZAITZEV pp. 569–571 Rev. russe Ent. 15.

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*Cyclommatus zuberi*, forms=(*fullerbakeri* Hell.), SCHULTZ pl. ii p. 296 Philipp J. Sci. D 11.

*Figulus tambourinensis* sp. n. Australia p. 13 fig., MjöBERG Ark. Zool. 10 No. 10.

*Lissapterus tetrops* sp. n. N.S.W., LEA, Tr. R. Soc. S. Austral. 40 p. 275.

## SCARABAEIDAE.

*Coprini*.

*Bolboceras insigne, hoplocephalum, pentagonicum, dacoderum, trymoderum, quinquecorne, contextum, trifoveicolle*, Australia, spp. n., LEA Tr. R. Soc. S.



Austral. 40 p. 280 pl. 33.—*B. loweri* var. n. *laratinum*, ARROW p. 493 Ann. Nat. Hist. 18.

*Caccobius gibbulosus*, n. sp. p. 375 Congo, D'ORBIGNY Ann. Soc. ent. France 84 1915.

*Geotrupes stercorarius*. metamorphosis, SANO pp. 21-25 pl. v. P.S. London ent. Soc. 1915-16.

†*Geotrupes atavus* Oust. p. 5 f. 2, MEUNIER Verh. Ak. Amsterdam Sect. 2 18 No. 5.

*Helictopleurus* n. gen. p. 402 voisin de *Oniticellus*, *coruscus*, p. 406, *bivittatus* p. 410, *fulgens* p. 412, *nigricans* p. 415, *splendidus* p. 418, *pleuristriatus* p. 426, *tristis* p. 429, *semivirens*, p. 430, *seminiger* p. 431, spp. n., D'ORBIGNY Ann. Soc. ent. France 84 1915.

*Onthophagus dicerus*, *ocellidorsis*, p. 378, *babaulti* p. 380, *apicohirtus* p. 381, *lemekensis* p. 382, *delicatus* p. 383, *semicroceus*, *pseudobidens*, p. 386, *brevisetis* p. 387, *hirticulus* p. 388, *rectistriatus* p. 389, *fasciatus*, *hemichalceus*, p. 370, *bequaerti* p. 391, *hemichlorus* p. 392, *depressifrons* p. 392, *costiger* p. 395, *O. (Proagoderus) elyoni* p. 396, *confossus* p. 398, spp. n. Africa, D'ORBIGNY, T.c.—*O. laratinum* sp. n. Larat p. 494, ARROW Ann. Nat. Hist. 18.—*O. nigrescens* sp. n. Florida p. 94, BLATCHLEY Canad. Ent. 48.

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*Trox montalbanensis* sp. n. Luzon p. 272 fig., SCHULTZE Philipp. J. Sci., D. 10 1915.—*T. manilensis* sp. n. p. 295 fig., SCHULTZE Philipp. J. Sci., D 11.

#### *Melolonthini*.

List of melolonthini of Ceylon, ARROW pp. 430-433 Ann. N.H. 18.

*Apogonia prolixa*, *gracilis* p. 439, *lateralis* p. 440, *fulvosetosa* p. 441, spp. n. Ceylon, ARROW Ann. Nat. Hist. 18.—*A. aerata* p. 179 India, *rufofusca* p. 180 Hongkong, *calcuttana* p. 180, *viridimicans* p. 181 Luzon, spp. n., MOSER D. ent. Zs., 1916.

*Autoserica dubia* p. 437, *pubescens* p. 438, spp. n. Ceylon, ARROW Ann. N. H. 18.—*A. setosiventris* p. 129 India, *vethi* p. 130 Hanoi, *lombokensis* p. 131 Lombok, *buruana* p. 132 Buru,

*liliputana* p. 133 India, *togoensis*, p. 134 Togo, *jobona* p. 135, *camerunica* p. 137, *dilatatipes* p. 138, Kamerun, *insulicola* p. 139 Zanzibar, *rufa* p. 140 Kamerun, *errata* p. 141 Deutsch Ostafrika, *usambarana* p. 142 Usambara, *dahomeyensis* p. 143 Dahomey, *maritima* p. 144 Elefantenküste, *irringana* p. 145, *irringensis*, p. 146, *obscurifrons* p. 147, *boeri* p. 149, *laminifera* p. 150, Deutsch Ostafrika, *sericina* p. p. 151 Kamerun, spp. n., *sapitana* nov. n. for *lombokiana* Mos., MOSER D. ent. Zs. 1916.

*Cunderdina* gen. n. near *Diphucephala*, *variabilis* sp. n. Australia, LEA Tr. R. Soc. S. Austral. 40 p. 298.

*Diphucephala hirtipes*, *insularis*, *tar-salis*, *pygidialis*, spp. n. Australia, LEA Tr. R. Soc. S. Austral. 40 p. 294-298 T.c.

*Euphoresia laminata* p. 174, *gabonana* p. 175, *congoensis* p. 176, *rothkirchi* p. 177, spp. n. Afrika, MOSER D. ent. Zs. 1916.

*Holotrichia disparilis* sp. n. Ceylon p. 443, ARROW Ann. N. H. 18.—*H. nigrescens* p. 185, *brunneipennis* p. 186, India, spp. n., MOSER D. ent. Zs. 1916.

*Hoplia coeruleosignata* p. 187 India sp. n. MOSER T.c.

*Hyposerica madagascariensis* sp. n., MOSER p. 173, T.c.

*Idiapogonia* gen. n., *laratina* sp. n. Larat, ARROW, p. 495 Ann. N. H. 18.

*Idiochelyna* gen. n. for *Isonychus pectoralis* W., ARROW p. 444 T.c.

*Lasioserica variipennis* sp. n. Sikkim, MOSER D. ent. Zs. 1916 p. 153.

*Lepidoderma pica* sp. n. Larat p. 496, ARROW Ann. N. H. 18.

*Lepidiota pcticollis* sp. n. Queensland, LEA, Tr. R. Soc. S. Austral. 40 p. 291.

*Melolontha hippocastani* Metamorphose, Altersverschiedenheiten der Larven (Russ.), GOLOVJANKO Trd. lésn. opyt. del Ross 26 1910, p. 1-29.—*M. vulgaris* copula WEBER p. 219 Zool. Anz. 46. fig.—*M. vulgaris* und *pectoralis*, copula, FLEISCHER Ent. Ztg. Wien 35 p. 172.

*Microserica obscurella* p. 167 Sumatra, *pentaphylla* p. 168 Java, *confusa* p. 169, *hexaphylla* p. 170, *septemflabellata* p.

171, Sumatra, spp. n., MOSER D. ent. Zs. 1916.

*Microtrichia furcifer* sp. n. Ceylon p. 433, ARROW Ann. Nat. Hist. 18.

*Neoserica rubiginea* p. 154 Hanoi, *multiflabellata* p. 155 India, *longiclava* p. 156 Luzon, *preangerensis* p. 157 Java, *padangensis* p. 158, *batoeana* p. 159 Batoe Ins., *setifrons* p. 160 Sumatra, *rufofusca* p. 161 Sumatra, *validipes* p. 162 Kamerun, *transvaalica* p. 163, *litoralis* p. 165, Deutsch-Ostafrika, *harrarensis* p. 166 Abessinien spp. n. MOSER D. ent. Zs. 1916.

*Pararhopaea gigas*, *rhpidocera*, Australia, spp. n., LEA Tr. R. Soc. S. Austral. 40 p. 288.

*Periserica nigripennis* sp. n. Ceylon p. 433, ARROW Ann. N. H. 18.

*Phyllophaga* Harr. 1826 (= *Lachnosterna* Hope) p. 369, synonymy of North-American pp. 370-377, *forbesi* sp. n. Illinois p. 378.

*Phyllocididium pictum* sp. n. W. Australia, LEA, Tr. R. Soc. S. Austral. 40 p. 300 pl. 32, fig. 2.

*Polyphylla tridentata*, *adspersa*, Turkestan, metamorphose, hybrides, PLOTNIKOV Taschent 1915 pp. 50-55.

*Schizonycha angolensis* p. 182, *kameruna*, *jobona*, p. 183, *macrophylla*, p. 184, spp. n. Afrika, MOSER D. ent. Zs. 1916.

*Selaserica*, *scutellaris*, *sericea*, p. 434, *pusilla* p. 435, spp. n. Ceylon, ARROW Ann. Nat. Hist. 18.

*Serica rubescens*, *maculicauda*, spp. n. Ceylon, ARROW p. 436 T.c.

*Serica*; Bremskes Gattungen, REITER ent. Ztg. Wien 35 p. 40.

*Stephanopholis rubicundus*, *cribricollis*, spp. n. Ceylon p. 442, ARROW Ann. N. H. 18.

Neue *Melolonthiden*; *Microserica quadrinotata* sp. n.; *Apogonia brevicollis*, *mindanaoana*, *luzonica*, *monticola*, spp. n.; *Holotrichia monticola*, sp. n., *Microtrichia sericeicollis* *brunnea*, *pruinosispennis*, *montivaga*, *rugata*, spp. n.; *Hoplosternus pygidialis*, sp. n., MOSER Deutsche ent. Zeitschr., 1915 p. 579-605.

Beitrag zur Kenntnis der *Melolonthiden* iv.—*Serica maculosa*, *albosignata*, *sinuaticeps*, *nitens*, spp. n.; *Lasioserica tuberculiventris* sp. n.; *Apogonia siamensis*, *tenuipes*, *rufobrunnea*, *yunnana*, *borneensis*, *boettcheri*, *basalis*, *subaenea*, *aeneo-cuprea*, *bakeri*, *scrobicollis*, *squamifera*, *badia*, *montana*, spp. n.; *Pegylis angolensis* sp. n.; *Cyphochilus ochraceus* sp. n.; *Microtrichia subrugosa*, *luridipennis*, spp. n.; *Brahmina verticalis*, *excisiceps*, *parvula*, *yunnana*, *ruficollis*, *nuda*, *cribriceps*, *clypealis*, *pilifera*, spp. n.; *Hilyotrogus sericeus*, *setiger*, spp. n.; *Metabolus setifrons*, *brevicollis*, *kashmirensis*, spp. n.; *Schoenherria palawana* sp. n.; *Ectinohoplia auriventris* sp. n.; *Hoplia thoracica* sp. n., MOSER D. ent. Zs., 1915 p. 113-151.

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#### Rutelini.

*Anomala kirgisisca* sp. n. p. 511, BORODIN Rev. russe ent. 15.

*Eremophygus lasiocalinus* sp. n., OHAUS D. ent. Zs. 1915 p. 76.

Beitrag zur Kenntnis der *Ruteliden*.—*Paracotalpa* subg. n.; *Parabyrso-*  
*polis* subg. n.; *Ectinoplectron* gen. n.; *Pelidnotopsis* gen. n.; *Parhomonyx*  
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gen. n.; *Vayana* gen. n.; *Paratelangis*  
gen. n., OHAUS D. ent. Zs. 1915 p. 256-260.

*Dynastini.*

*Actinobolus talpipes* sp. n., OHAUS D. ent. Zs. 1915 p. 608.

*Oryctes ptesbergeni* sp. n. Bagdad, VON BODEMEYER D. ent. Zs. 1916 p. 111.—*O. nasicornis-chersonensis, mathiesseni-caspicus* and *kuntzeni-mediterraneus*, subspp. n., MINCK, D. ent. Zs. 1915, p. 3-18.—*O. hindenburgi* sp. n., *illigeri*, sp. n., *montana* f. n., MINCK D. ent. Zs. 1915 p. 532-541.

*Cetoniini.*

The cetoniidae of Madagascar, POUILLAUE Ins. 6 pp. 19, etc.; (incomplete, there are to be plates.)

*Anochilia nitida* sp. n. Madagascar. p. 159, POUILLAUE Insecta 5.

*Astraea benquetia* sp. n. Luzon p. 293 pl. i f. 7, SCHULTZE Philipp. J. Sci. D. 11.

*Bothrorrhina ochreatea* var. n. *parcesignata* p. 50, *reflexa* var. n. *squamigera* p. 62, POUILLAUE Insecta 6.

*Cetonia (Potosia) garreta*, p. 110, Tonkin, *morgoni* Cambodia, *C. (Protetia) rochei* Tonkin, p. 111, spp. n., BOURGOIN, Bull. Soc. ent. France 1916.—*C. delagrangi* Boucard et ses synonymes, BEDEL Bull. Soc. ent. France 1916 p. 218.

*Clinteria dimorpha* sp. n. Larat p. 497, ARROW Ann. N. H. 18.—*C. buffeventi*, n. sp. p. 110 Cochinchine, BOURGOIN Bull. Soc. ent. France 1916.

*Coenochilus luzonicus* sp. n. p. 349, SCHULTZE Philipp. J. Sci. D 11.

*Coptomia compacta, biguttata*, p. 159, *striatopunctata, similis, fimbriata*, p. 160, spp. n. Madagascar, POUILLAUE Insecta 5.

*Cosmiomorpha baryi*, n. sp. p. 109 Tonkin, BOURGOIN Bull. Soc. ent. France 1916.

*Euchilia striata* sp. n. Madagascar p. 159, POUILLAUE Insecta 5.

*Euchroea nigra* sp. n. Madagascar p. 156, POUILLAUE T.c.

*Glycyphana roquesi* sp. n. Tonkin, BOURGOIN Bull. Soc. ent. France 1916 p. 111.—*G. disparilis* sp. n. Larat p. 497, ARROW Ann. Nat. Hist. 18.

*Gymnetis luctuosa* p. 198, *rugosa* p. 199, spp. n. Brazil, BOURGOIN Bull. Soc. ent. France 1916.

*Heterophana propinqua* sp. n. Madagascar p. 156, POUILLAUE Insecta 5.

*Heterosoma concolor* sp. n. Madagascar p. 158, POUILLAUE T.c.

*Liostraca integripennis* sp. n. Madagascar p. 158, POUILLAUE T.c.

*Macronota vouauxi*, n. sp. p. 110 Tonkin, BOURGOIN Bull. Soc. ent. France 1916.—*M. (Coelodora) mindroni* p. 133 fig. Sumatra, *M. vuilleti* p. 135 Tonkin, *olivaceofusca* p. 136 China, spp. n., BOURGOIN, T.c.

*Pachnoda meloui* n. sp. p. 322 W. Africa, BOURGOIN Bull. Soc. ent. France 1915.

*Protetia igorota* sp. n. Luzon p. 294 pl. i f. 6, SCHULTZE Philipp. J. Sci. D. 11.

*Pseudepizanthis quadrinotata* sp. n. Madagascar p. 158, POUILLAUE Insecta 5.

*Rhomborrhina bossioni, chatanayi*, n. spp. p. 110 Tonkin, BOURGOIN Bull. Soc. ent. France 1916.

*Tetraodorrhina T-nigrum, bicolor*, spp. n. Madagascar p. 157, POUILLAUE Insecta 5.

*Thaumastopeus macgregori* sp. n. Philippines p. 271, SCHULTZE Philipp. J. Sci. D. 10 1915.

*Trigonophorus riaulti* and *lemeei*, correction, POUILLAUE p. 184 Insecta 6.

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†*Capnodis spectabilis* p. 4 f. 5, MEUNIER Verh. Ak. Amsterdam Sect. 2 18 No. 5.

*Chalcotaenia castanea* sp. n. W. Australia, CARTER Tr. R. Soc. S. Austral. 40 p. 141 pl. ix fig 1.

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*Chrysochroa mutabilis feistmanni* f. n., OBENBERGER Neue Beitr. syst. Insektenk. 1 p. 18.

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*Diplophotus mühlheimi* sp. n. Abessinien, OBENBERGER p. 20 T.c.

*Eurythyrea quercus* Herbst=(*scutellaris* Ol.), BEDEL p. 271 Ann. Soc. ent. France 85.

*Hyperantha rambouseki* sp. n. Brasilien, OBENBERGER Neue Beitr. system. Insektenk. 1 p. 11.

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*Pseudotaenia spilota* sp. n. W. Australia, CARTER Tr. R. Soc. S. Austral. 40 p. 141-2 pl. ix f. 3.

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*hoscheki* sp. n. China, OBENBERGER  
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*Trichophorus carolinensis, substriatus*, p. 261, *arizonensis, variatus*, p. 262, spp. n. U.S., SCHAEFFER T.c.

†The following extinct Elateridae from Florissant are described by WICKHAM Bull. Mus. Harvard 60 viz. :—

†*Lacon exhumatus* sp. n. p. 501 pl. 1 figs. 6 and 7.

†*Cardiophorus lithographus* p. 501 pl. ii figs 1-3, *florissantensis* p. 502 figs. 4 and 5, *cockerelli* p. 503 f. 6, *requiescens* pl. ii figs. 7 and 8, *deprivatus* figs. 9 and 10, p. 504, spp. n.

†*Horistonotus coloradensis* sp. n. p. 505 pl. ii figs. 11 and 12.

†*Cryptohypnus exterminatus* pl. i figs. 8 and 9, *hesperus* pl. iii f. 1, spp. n. p. 506.

†*Anchastus eruptus* pl. iii figs. 2 and 3, *diluvialis* f. 4, spp. n. p. 507.

†*Monocrepidius dubiosus* sp. n. p. 508 pl. iv f. 1.

†*Elater rohveri* p. 509 pl. iii figs. 5 and 6, *florissantensis* f. 9, *scudderii* figs. 7 and 8, p. 510, spp. n.

†*Megapenthes primaevus* sp. n. p. 511 pl. iv f. 2.

†*Cryptagriotes* gen. n., *minusculus* sp. n. pl. iv f. 3, p. 512.

†*Agriotes nearcticus* pl. iv f. 6, *comminutus* figs. 4 and 5, spp. n. p. 513.

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† *Athous lethalis* p. 518 pl. vi figs. 1 and 2, *contusus* figs. 3 and 4, *fractus* f. 5, p. 519, *spp. n.*

† *Paranomus exanimatus* p. 520 pl. vi figs. 6 and 7, *laevissimus* f. 10, *heeri* figs. 8 and 9, p. 521, *spp. n.*

† *Ludiophanes* *gen. n.*, *haydeni* *sp. n.* p. 522 pl. iv figs. 7-9.

† *Corymbites submersus* p. 524 pl. vii figs. 1-3 *restructus* p. 525 f. 4 *propheticus* p. 526 f. 5 *spp. n.*

† *Ozygonus primus* *sp. n.* p. 526 pl. vii f. 6.

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*Theretra radiosa* sp. n. New Guinea p. 263, ROTHSCHILD & JORDAN T.c.

#### SESHIDAE OR AEGERIIDAE.

Plates 373–381, contain figures of Aegeriidae, most of which are said to be spp. n.; the descriptions are to be published later on, LE CERF in Oberthür Et. Lep. comp. 12.

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- Apela picturata* sp. n. Guiana p. 13, DOGNIN Lep. Het. 12
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- Arctia caja* ab. *radiata*, *rosae* abb. n. GRAMANN Intern. ent. Zs. Guben 10 p. 98; *A. cajae*, var., FROHAWK p. 65, figs., Entomol. 49.—*A. caja amboinensis* subsp. n. p. 484, SWINHOE Ann. N. H. 18.—*A. caja* Zucht, HERTZ, D. ent. Zs. Iris 29 1915 pp. 142-143.
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*Dirphia flavodiscata, radiata*, spp. n. Amer. mer., *laverna albomaculata* subsp. n., DOGNIN p. 17 Lep. Het. 12.

*Disparia* gen. n. p. 3 for *Fentonia sordida* Wileman, pl. i figs. 14-26,



larva pl. ix f. 17, NAGANO Bull. Nawa Ent. Lab. 1.

*Dicophlebia fulvithorax* sp. n. Colombia p. 4, DOGNIN Lep. Het. 11.

*Drepana bouvieri*, *robusta*, p. 372, *ayna* p. 373, *opalescens* p. 374, *ocellata*, *pulvis*, p. 375 E. Tibet, spp. n. 7, OBERTHÜR Et. Lep. comp. 12. (These species are figured in vol. 13, 1917, pl. 428.)—*D. falcataria obscura* f. n., STAUDER Zs. wiss. Insektenbiol. 12 p. 111.

*Drymonia chaonia* f. n. *argentea*, CLOSS Intern. ent. Zs. Guben 20 p. 63.—*D. manleyi* var. n. *coreana* p. 5 pl. i f. 40, early stages p. 4 pl. i and pl. ix f. 5, NAGANO Bull. Nawa ent. Lab. 1.

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*Euproctis seminigra* sp. n. New Guinea pl. lxi f. 11, *pratti albonotata* subsp. n. f. 10, p. 381, JOICEY & TALBOT Tr. ent. Soc. London 1915.—*E. flava*, NAGANO Konch. Sek. Gifu 20 p. 311-320.—*E. celebensis* n.n. for *signata* W. p. 215, *moalata* n.n. for *divisa* W., *coccinata* sp. n. China, p. 216, SWINHÖE Ann. Nat. Hist. 18.—*E. flavipunctata* sp. n. New Guinea p. 381 BETHUNE-BAKER Ann. Nat. Hist. 17.—*E. chrysorrhoea*, SANDERS Nova Scotia Proc. Ent. Soc. 1 1915 47-53.

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*Phocada medina* p. 5, *lojana* p. 6, spp. n. Amer. mer., DOGNIN Lep. Het. 9.

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*Procris*; notes on algerian, OBERTHÜR and POWELL Et. Lep. comp. 12 pp. 232-242 with figures in 13 1917 pls. 431 and 432.

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- Eumichlis chlorosticta* sp. n. Mexico p. 10, DYAR, P.U.S. Nat. Mus. 51.
- Euphiusa hermione* sp. n. E. Africa f. 3 and var. *ochreatea*, FAWCETT p. 714 P.Z.S. 1916.
- Euplexia albiclausa* sp. n. East Tibet p. 228, WARREN Nov. zool. 23.—*nyassana* sp. n. Africa, *melanocyclus depravata* var. n., GAERDE D. ent. Z. Iris 29 p. 101–123, 1915.
- Eutelia grisescens* sp. n. Somaliland p. 124 pl. i f. 40, HAMPSON P.Z.S. 1916.
- Euterpiodes pictimargo* pl. i f. 15, *croceisticta* f. 16, spp. n. Somaliland p. 111, HAMPSON T.c.
- Euxoa tetratopis* sp. n. Mexico p. 9, DYAR, P.U.S. nat. Mus. 51.—*E. clavisigna* p. 8, *steniptera* p. 9, *nomina* p. 10, spp. n. Amer. mer., DOGNIN Lep. Het. 11.—*E. thanatologia* var. n. *perfida* p. 64 pl. iv figs. 1–6, Dod Canad. Ent. 48.—*E. segetis*, Auftreten, Generationen, GORJAINOV Ljub. prir. Petrograd 10 No. 1 pp. 7–13.
- Feltia agroica* sp. n. Costa Rica p. 10, DOGNIN Lep. Het. 11.—*F. exclamations*, Auftreten, GORJAINOV Ljub. prir. Petrograd 10 No. 1 pp. 7–13.
- Gabala australiata* Queensland, *quadrinigrata* Kei isld., p. 212, *sanguinata* Java, *flavimargo* Timor, *hilaris* Sambawa, p. 213, *flavicosta* New Guinea p. 214, spp. n., WARREN Nov. zool. 23.
- Galactomoia* gen. n. *Noctuinae* p. 716, *berenicæ* sp. n. E. Africa p. 717 f. 15, FAWCETT P.Z.S. 1916.
- Gelastocera viridimacula* sp. n. Porak p. 218 WARREN Nov. zool. 23.
- Giaura astarte* sp. n. E. Africa p. 711 f. 6, FAWCETT P.Z.S. 1916.
- Giria* gen. n. *Noctuinae* p. 717, *bubastis* sp. n. Mombasa p. 718 f. 14, FAWCETT T.c.
- Gizama bronsonalis*, *undilinealis*, spp. n. Amer. centr. p. 345, SCHAUS P.U.S. Nat. Mus. 50.
- Goednes* gen. n., *abnormalis* sp. n. Surinam, p. 331, SCHAUS T.c.
- Gortyna stramentosa*, WINN Rep. Ent. Soc. Ontario 46 p. 43–48.
- Grammodes frena* sp. n. Amboina p. 486, SWINHOE Ann. N. H. 18.
- Hadena lateritia* var. n. *decolor*, STERTZ D. ent. Zs. Iris 29 p. 123–132, 1915.—*H. rurea*, var. f. 27 p. 82, LJUNGDahl Ent. Tidskr. 37.
- Harmodia compta* f. n. *defasciata*, HANNEMANN Intern. ent. Zs. Guben, 10 p. 103.
- Homolagoa tritogramma* sp. n. Mexico p. 16 DYAR P.U.S. nat. Mus. 51.
- Homophlebia* gen. n. type *Clethara bilinea* Swinh., *xanthosoma* sp. n. Sambawa, WARREN p. 218 Nov. zool. 23.
- Hoplitis milhauseni*, eine Mordraupe, SCHILLE Ent. Zs. Frankfurt a. M. 30 p. 21.
- Hoplotarache ectorrida* pl. i f. 36 *caeruleotincta* f. 37, spp. n. Somaliland p. 121, HAMPSON P.Z.S. 1916.
- Hydroecia micacea*, BRITAIN Proc. Ent. Soc. Nov. Scot. 1 1915 p. 96.
- Hydroeciodes ruxis*, *cirramela*, spp. n. Mexico p. 12, DYAR P.U.S. nat. Mus. 51.
- Hylophilodes parallela* sp. n. Assam p. 222, WARREN Nov. zool. 23.
- Hypaenistis* gen. n., *purpurea* sp. n. Solomon islds., WARREN p. 219 T.c.
- Hypena flavisceta* sp. n. Peru p. 51, THIERRY-MIEG Miscell. ent. 23.—*H. kanshireiensis* sp. n. Formosa p. 267, WILEMAN & SOUTH Entomol 49.—*H. proboscidalis* f. n. *aestiva parva*, HANNEMANN Intern. Ent. Zs. Guben 10 p. 122.
- Hypeninae*, revision of American, SCHAUS P.U.S. nat. Mus. 50 pp. 209–399.
- Hypenopsis fualis* p. 301, *musalis* p. 302, spp. n. Panama, SCHAUS P.U.S. nat. Mus. 50.
- Hypenula deleona*, p. 352, *miriam* p. 353, spp. n. Cuba, SCHAUS T.c.
- Hypercodia rubritincta* sp. n. Formosa p. 180, WILEMAN & SOUTH Entomol. 49.
- Hyposcota aurata* sp. n. Hainan p. 212, WARREN Nov. zool. 23.

*Ipimorpha viridipallida* sp. n. California p. 225, BARNES & McDUNNOUGH Canad. Ent. 48.

*Ipnista* gen. n. p. 372 for *Ipnea marina* Dr., SCHAUS P.U.S. nat. Mus. 50.

*Laphygma frugiperda*, HINDS & DEW Agric. Exp. Sta. Alabama Bull. 186 1915 p. 59-92 pls. i-iv.

*Lascoria nivea*, *antigone*, p. 269, *cristata*, *maronialis*, p. 270, *naupalis*, *arenosa*, p. 271, spp. n. Amer. mer., SCHAUS P.U.S. nat. Mus. 50.

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*Lecasia* gen. n. *Noctuinae*, *othello* sp. n. E. Africa f. 4, FAWCETT p. 724 P.Z.S. 1916.

*Leocyma candace* sp. n. E. Africa p. 712, FAWCETT T.c.

*Lithacodia subcoena* sp. n. Formosa p. 181, WILEMAN & SOUTH Entomol. 49.

*Lithopoma* gen. n. p. 379 for *Ipnea ardulus* Dr., SCHAUS P.U.S. Mus. 50.

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*Luberta* gen. n., *nymbisalis* sp. n. Bolivia, p. 320, SCHAUS T.c.

*Lycophotia margaritella* sp. n. Costa Rica p. 11, DOGNIN Lep. Het. 11.

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*Magularba grisea* sp. n. Somaliland p. 138 pl. ii f. 4, HAMPSON P.Z.S. 1916.

*Mamerthes croceilinea* sp. n. Mexico p. 309, SCHAUS P.U.S. nat. Mus. 50.

*Mania maura*, Treiben, WOHLFAHRT Ent. Zs. Frankfurt a. M. 30 p. 54.

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*Maronia* gen. n., *celadon* sp. n. Guiana, SCHAUS p. 273 T.c.

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*Mastigophorus augustus*, *nomius*, Cayenne p. 289, *majoralis* Mexico, *jamaicalis*, p. 290, spp. n., SCHAUS T.c.

*Mastixis dukinfieldi*, *hippocoon*, p. 326, *castronialis*, *aeneas*, p. 327, spp. n. Amer. mer., SCHAUS T.c.

*Matiloxis* gen. n. p. 380, *curalis* Cuba, *josealis* Costa Rica, p. 381, *guianalis* Cayenne p. 382, spp. n., SCHAUS T.c.

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*Matopo heterochroa* sp. n. Somaliland p. 105 pl. i f. 5, HAMPSON P. Z. S. 1916.

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*Monodes olivescens* sp. n. Guiana p. 15, DOGNIN Lep. Het. 11.

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*Naarda nigripalpis* sp. n. Somaliland p. 139 pl. ii f. 5, HAMPSON P.Z.S. 1916.

*Nagadeba brunnealis* sp. n. Formosa p. 202, WILEMAN & SOUTH Entomol. 49.

*Negeta abbreviata* sp. n. Hainan p. 211, WARREN Nov. zool. 23.

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- Nephelistis oomae* sp. n. Mexico p. 16, DYAR P.U.S. nat. Mus. 51.
- Nertobriga olivaria* sp. n. Sikkim p. 211, WARREN Nov. zool. 23.
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- Oederemia marmorata* sp. n. Tibet p. 228, WARREN Nov. zool. 23.
- Oedicodia strigipennis* p. 115 pl. i f. 24, *melanographa* f. 25 p. 116, spp. n. Somaliland, HAMPSON P.Z.S. 1916.
- Oglasa marmorea* sp. n. Formosa p. 202, WILEMAN & SOUTH Entomol. 49.
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- Omphalagria togoensis* sp. n. Africa, GAÈDE D. ent. Z. Iris 29 p. 101-123, 1915.
- Oroscopta electrona* Brazil p. 394, *cordobensis* Mexico p. 395, spp. n., SCHAUS P.U.S. nat. Mus. 50.
- Orthosia blidaensis* sp. n., *ruticilla* var. n. *fuliginosa*, STERTZ D. ent. Zeitschr. Iris 29 p. 123-132, 1915.
- Ozarba semitorrida* p. 116 pl. i f. 26, *endoscota* f. 27, *hemipyra* f. 28, p. 117, *hemisarca* f. 29, *exolivacea* f. 30, p. 118, *mesozonata* f. 31, *endoplaga* f. 32, p. 119, spp. n. Somaliland, HAMPSON P.Z.S. 1916.—*O. ochrivincta* sp. n. Formosa p. 181, WILEMAN & SOUTH Entomol. 49.
- Pachycoa* gen. n. p. 109 near *Xantholepis olivacea* sp. n. Somaliland p. 110 pl. i f. 12, HAMPSON P.Z.S. 1916.
- Palthis angustipennis* Cayenne, *serapealis*, p. 293, *misanthalis*, Mexico, p. 294, spp. n., SCHAUS P.U.S. nat. Mus. 50.
- Pallhisomis* gen. n. p. 344 type *Herminia baresalis* Walk., SCHAUS T.C.
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- Panolis griseovariegata*, Viviperität, Spermatophore (Russ.), JACENTKOVSKI Rev. russ. ent. 14 pp. xcix-ciii.
- Panthea coenobita ussuriensis* subsp. n., WARNECKE Neue Beitr. system. Insektenk. 1 p. 32.
- Papaipema*: list, collecting, KWIAT pp. 228-234 Ent. news 27.—*P. nelita* var. n. *linda* p. 14, *nepheleptena* Dy. = (*moeseri* B.) p. 15, BIRD Canad. Ent. 48.
- Paracrama latimargo* New Guinea, *angustimargo* Ceylon, spp. n., WARREN p. 222 Nov. zool. 23.
- Paragona dubia* sp. n. Formosa p. 82, WILEMAN Entomol. 49.
- Parastichtis sordida* f. n. *nigrescens*, HANNERMANN Intern. ent. Zs. Guben 10 p. 121.
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- Parerastria* gen. n., *castaneata* sp. n. Queensland, WARREN p. 217 Nov. zool. 23.
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- Physula albipunctilla* Cuba, *aristina* Cayenne, p. 295, *cristina*, *inscitalis*, *paganacalis*, p. 296, Mexico, *ecuadoralis* p. 296, spp. n., SCHAUS P.U.S. nat. Mus. 50.
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*Prothymnia viridaria* f. n. *hoffmanni*, STAUDER D. ent. Z. Iris 29 p. 20-34, 1915.

*Pseudarista* gen. n. p. 286, *geldersi* sp. n. Surinam p. 287, SCHAUS P.U.S. nat. Mus. 50.

*Pseudogyrtone ochreopuncta* sp. n. Formosa p. 266, WILEMAN & SOUTH entomol. 49.

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*Pterogonia cassidata* sp. n. Coorg p. 220, WARREN Nov. zool. 23.

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*Stenhyperna costalis* sp. n. Formosa p. 268, WILEMAN & SOUTH Entomol. 49.

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*Tortricodes majoralis* sp. n. Costa Rica p. 267, SCHAUS P.U.S. nat. Mus. 50.

*Trachea brunneicosta* sp. n. New Guinea p. 377 pl. lxi f. 7, JOICEY & TALBOT Tr. ent. Soc. London 1915.

*Trachymatis* gen. n., *ignobilis* Panama, *mogia* Cayenne, spp. n., SCHAUS p. 274 P.U.S. nat. Mus. 50.

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*Tympanistis rufimaculata* sp. n. Assam p. 220, WARREN T.c.

*Ulochlaena sagittata, schaeferi, reducta, ferruginea*, spp. n. Africa, GAEBDE, D. ent. Z. Iris 29 p. 101-123, 1915.

*Ulotrichopus longipalpus* sp. n. New Guinea p. 378 pl. lxi f. 9, JOICEY & TALBOT Tr. ent. Soc. London 1915.

*Uzomathis* gen. n., *dissensa* sp. n. Guiana, SCHAUS p. 300 P.U.S. nat. Mus. 50.

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*Xylomiges simplex* (= *pullidior* Sm.), DOD, p. 367 Canad. Ent. 48.

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GEOMETRIDAE (Incl. URANIDAE, EPIPLEMIDAE, CYMATOPHORIDAE).

Annotated list and figures of species described by Guenée (continuation); OBERTHÜR Et. Lep. comp. 12 pp. 67-94 pls. 382-401. Pp. 101 et seqq. are occupied by descriptions that may be of new forms.

*Abraxas*; variabilité de la nervulation, KOZMINSKIJ Bull. Soc. entom. Moskva 1 pp. 91-94.—*A. cophia* sp. n. New Guinea p. 75, PROUT Nov. zool. 23.

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- Myrioblephara prospila* sp. n. Madagascar p. 282, PROUT T.c.—*M. trifaria* p. 58, *transcendens* p. 59, *pallidipars* p. 60, *cnecobathra* p. 61, *polytrochia*, *distanticlara*, p. 62, spp. n. New Guinea, *vivida signata* p. 59, *olivacea brunnescens* p. 60, *ligdioides contradicta* p. 61, subsp. n., PROUT T.c.
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- Naxa textilis parvipuncta* subsp. n. p. 4, PROUT *Nov. zool.* 23.
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*Neromia manderensis* sp. n. Somaliland p. 144 pl. ii f. 24, PROUT P.Z.S. 1916.—*N. gen. n.* p. 153, *articulicornis* p. 153 pl. xxv f. 41, *cohaereus* p. 154 f. 2, spp. n.; *N. unilinea* ab. *inornata* p. 154 n. ab., PROUT Ann. Transv. Mus. 5.

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*Oenospila lucifimbria glaucilinea* subsp. n. p. 208, PROUT T.c.

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*Ophthalmodes prasinospila* sp. n. Tibet p. 55, PROUT T.c.—*O. pulsaria* & *lectularia* are valid, SWINHÖE p. 219 Ann. Nat. Hist. 18.

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- Agriope (Aglossa) subpurpuralis* n. sp. p. 291 Tunis, CHRÉTIEN Ann. Soc. ent. France 84 1915.
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*Cotachena fuscimarginalis* sp. n. New Guinea p. 370, HAMPSON Ann. Nat. Hist. 18.

*Crambus palmitiellus* p. 290, *ochrosignellus*, p. 291, spp. n. Algeria, CHRÉTIEN Ann. Soc. ent. Franco 84 1915.—*C. jucundellus* var. *kulojaensis*, Dsungeroi, *rostellus* var. *nigerrimus* Russland var. nov., *juldusellus* p. 4 sp. n. Turkestan, *chrysomutellus ditutalis* var. nov. p. 4, Turkestan, CARADJA D. ent. Zs. Iris. 1916.—*C. chalcostomus*, *harpipterus* spp. n. Mexico p. 26, DYAR P.U.S. nat. Mus. 51.

*Curicia metaxanthalis* New Guinea, *peruviensis*, spp. n. p. 353, HAMPSON Ann. Nat. Hist. 18.

*Cybolomia intermedialis* n. sp. p. 294 Biskra, CHRÉTIEN Ann. Soc. ent. France 84, 1915.—*C. lutosalis nigralis* var. n., *funesalis*, *claralis*, varr. n., p. 27, *rivasalis* sp. n. Spanien p. 28, CARADJA D. ent. Zs. Iris. 1916.

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*Desmia funeralis*, natural history, STRAUSS Bull U.S. Dep. Agric. 419 16 pp., pls.

*Diatraea saccharalis* and *zencolella*, HOLLOWAY J. Agric. Res. 6 p. 621 pl.

*Dichrocrocis pulalis* sp. n. Burma p. 488, SWINHÖE Ann. N. H. 18.

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*Dysodea hypothyris* sp. n. Mexico p. 34, DYAR P.U.S. nat. Mus. 51.

*Elophilaavernalis* Grote = (*Argy-ractis confusalis* Med.), McDUNNOUGH p. 28 Canad. ent. 48.

*Ematheudes magnetella* sp. n. Ost-Turkestan, CARADJA D. ent. Zs. Iris 1916 p. 5.

*Endocrossis kenricki* sp. n. New Guinea p. 488, SWINHÖE Ann. N. H. 18.

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*Telespasta cuprealis* Sw. (as *Pygospila*) = (*evanidalis* Sn.), SWINHOE p. 221 Ann. Nat. Hist. 18.

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*siderca*, *intricata*, *curviflaca*, *tenebrosa*, *cedra*, *mysterica*, *phacostigma*, spp. n. Australia, TURNER Tr. R. Soc. S. Austral. 40 p. 530-533.

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*Dichelopa heterozygus* sp. n. Queensland TURNER Tr. R. Soc. S. Austral. 40 p. 518.

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*Glyphidoptera* gen. n. near *Lamyrodes polymita* sp. n. New South Wales, TURNER Tr. R. Soc. S. Austr. 40 p. 505-506.

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W. to *Eufairmairia, C. acer* W. to *Tri-*  
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Denmark's *Jassidae*, continuation, JENSEN-HAARUP pp. 33–40 etc. Flora og Fauna 1916.

Morphology of Jassidae—COGAN Ohio J. Sci. 16 pp. 299–322 pls. xx–xxii.

Life-histories in Maine, OSBORN Bull. 248 Agric. Exp. Stat. Maine pp. 53–82 pls.

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*Neotriozaella bicolor* sp. n. Luzon p. 265, CRAWFORD T.c.

*Pauropsylla bakeri* p. 258 Luzon, *floccosa* p. 259, *spondiasae* p. 260, Ceylon, *orientalis* p. 261 Luzon, spp. n. figs., CRAWFORD T.c.

*Psylla bagnalli* sp. n. Northumberland p. 62, HARRISON Naturalist 1916.—*P. mali*, AWATI pp. 247-272 Ann. Appl. Biol. 1 1915; Egg, LEES pp. 251-257 figs. Ann. Appl. Biol. 2.

†*Strophingia oligocaenica* sp. n. Prussian amber p. 247, ENDERLEIN Zool. Anz. 45 1914.

*Triozza bussei* sp. n. West Afrika, ZACHER Zs. Angew. Ent. 3 p. 418 figs.—*T. eugeniae* p. 265 Ceylon, *asiatica* p. 266 Luzon, spp. n., CRAWFORD Philipp. J. Sci. D. 10.

#### APHIDÆ.

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# XIII. PROCHORDATA

INCLUDING

## ENTEROPNEUSTA AND PTEROBRANCHIA

BY

C. TATE REGAN, F.R.S.

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(GENERAL)

*i.e.*, complementary to Mammalia, Aves, Reptilia, and Pisces

BY

D. S H A R P,

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#### PLEURONECTIDAE.

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*Tetrodon sazanami* sp. n. Japan, TANAKA Fish. Japan 22 p. 384 pls. cv f. 324 cx f. 333.

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# XVI. REPTILIA AND BATRACHIA

ARRANGED BY

C. TATE REGAN, F.R.S.

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W. L. SCLATER, M.A.

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†Omitted accidentally from Zool. Rec. lii. 1915.

# XVIII. MAMMALIA

ARRANGED BY

MARTIN A. C. HINTON.

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†*Dipoides* sp. Miocene Kansas figs., COPE & MATTHEW 92 pl. cxixc.

*Glis glis* Gub. Kiev, CHARLEMAN Kiev Mat. pozn. faun. j.-z. Ross. 1 p. 55.

†*Leithia* Maltese and Balcaric species BATE P. Z. S., 1916 p. 423.

†*Mylagaulus* Miocene Nebraska and Kansas figs., COPE & MATTHEW 92 pl. cxixc.

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*Tragulus kanchil williamsoni* subsp. n. North Siam, KLOSS J. Nat. Hist. Soc. Siam 2 p. 88; *näpu niasis* Nias Island, *pinus* Pulo Pinie p. 455, *russulus masae* Tana Masa Island p. 456 subsp. et sp. n., LYON Proc. U. S. Nat. Mus. 52, see *Moschiola* and *Hyomoschus*.

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Rate, RETTERER et NEUVILLE Paris C. R. soc. biol. 79 p. 428.

*Lama* notes on Peruvian species, OSGOOD Chicago Field Mus. N. H. Zool.

Ser. 10 p. 201; *vicuna* metatarsa glands, POCOCK P. Z. S. 1916 p. 747.

†*Miolabis transmontanus* Miocene Oregon figs. of type, COPE & MATTHEW 92 p. clii.

†*Paratylopus sternbergi* Oligocene Oregon figs. of type, COPE & MATTHEW 92 pl. cxvi.

†*Poëbrotherium* Oligocene Colorado figs. of types, etc., COPE & MATTHEW 92 pls. cxv. and cxva.

†*Procamelus inaeqidens* Miocene Nebraska figs. of type, COPE & MATTHEW 92 pl. cliv.

†*Protolabis heterodontus* pl. clii, *angustidens* pl. cliv. figs. of types Miocene Colorado, COPE & MATTHEW 92.

†*Stenomylus hitchcocki* mounted skeleton Miocene Nebraska, ANDREWS Geol. Mag. 3 p. 1.

## HIPPOPOTAMIDAE, SUIDAE, &amp; DICOTYLIDAE.

†*Boöchaerus humerosus* Oligocene Oregon figs. of type, COPE & MATTHEW 92 pls. cixa and cx.

†*Chaenohyus decedens* Oligocene Oregon figs. of type, COPE & MATTHEW 92 pls. cxa and cxi.

*Hippopotamus amphibius* new-born external characters, TOLDT Denksch. k. Ak. Wiss. Wien 92 p. 653.

†*Perchaerus* Oligocene Oregon figs. of types etc., COPE & MATTHEW 92 pls. cixa., cxa., cxi.

*Suidae* glands, POCOCK P. Z. S. 1916 p. 745.

*Sus scrofa* behaviour, YERKES & COBURN J. Anim. Behav. Boston 5 p. 185; glands de Moll, ARGAUD et FALLOURY Paris C. R. soc. biol. 74 p. 1272; *scrofa ferus* Roman level St. Albans, BULLEN Trans. Herts Nat. H. Soc. 16 p. 49; *babi tuancus* p. 453 Banjak Islands, *b. enganus* p. 454 Engano Island subsp. n., LYON Proc. U. S. Nat. Mus. 52; *major* machoires dentition faune méotique de Taraklia, KHOMENKO Trav. Soc. Bessar. nat. 5 p. 40.

## †EXTINCT FAMILIES.

†*Agriochœrus* Oligocene Oregon figs. of types, COPE & MATTHEW 92 pls. cxi., cxii., cxiii. and cxiiia.

†*Anthrocotherium sannoisien* du bassin d'Aix-en-Provence, VASSEUR C. R. Acad. Sci. Paris 163 p. 556.

†*Entelodon imperator* Oligocene Oregon fig. COPE & MATTHEW 92 pl. cixa.

*Merycochoerus* White River Oligocene casts of sinus paranasales and brain described, MOODIE J. Morph. 28 p. 135.

†*Pelonax ramosus* fig. of type Oligocene Colorado, COPE & MATTHEW 92 pl. cix and cixa.

## B.—Perissodactyla.

Catalogue, LYDEKKER 250a p. 1.

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Prazak's "Wild Horses" cited by Trouessart and later by Lydekker never published, TROUSSERT Bul. Soc. zool. 41 p. 36; vena cava valves, MOBILIO Monitore Zool. Ital. Firenze 27 p. 85.

†*Anchitherium praestans* Oligocene Oregon fig. of type, COPE & MATTHEW 92 pl. cviii; see also under *Kalobatippus*.

*Equus* Pleistocene Malta, BATE P. Z. S. 1916 p. 424; *caballus* in NIEDERLÄNDISCH OSTINDIEN, GROENEVELD Batavia Veearts. Blad. Ned. Ind. 28 p. 197; Abstammung des Indischen Pferdes, DE ROO VAN ALDERWERELT p. 553 and VAN DEN AKKER p. 597 Batavia Veearts. Blad. Ned. Ind. 28; unbehaart aus Afghanistan, POGOŽRELISKIJ Věstn. zool. sada 6 p. 350; zebroid striping in Asiatic species, KRIEG Zool. Anz. 47 p. 185; chevaux pensants d'Elberfeld, LEBAILLY Caen Bul. soc. linn. 5 p. 104; *przewalskii* × *caballus* description, IVANOV Věstn. životnovod. 3 p. 952; *chapmanii* × *caballus* description, IVANOV Věstn. životnovod. 3 p. 959; *caballus* × *chapmani* caractère et dimensions du crâne, FILIPENKO Arch. veter. nauk. 45 p. 871; sterility in mule, WODSEDALEK Biol. Bul. Woods Hole Mass. 30 p. 1.

†*Hipparion* dentition squelette faune méotique de Taraklia, KHOMENKO Trav. Soc. Bessar. nat. 5 p. 26; *gracile* from Tertiary of S. Russia, PAVLOW Moscow Nouv. Mem. soc. Imp. Nat. 17 (22) p. 18.

†*Hypohippus matthewi* sp. n. Nebraska Pliocene, BARBOUR Univ. Nebr. Stud. 14 p. 197.

†*Kalobatippus* gen. n. for *Anchitherium praestans* Cope, Oligocene Oregon, OSBORN in Cope & Matthew 92 description of pl. cviii.

†*Merychippus isonesus*, *sejunctus* and *sphenodus* Miocene N. America figs. of types etc., COPE & MATTHEW 92 pls. cxlv., cxlvii., cxlviii., cxlviiiia, cxlix, cl. and cli.

†*Pliohippus spectans* Miocene Oregon figs. of type, COPE & MATTHEW 92 pl. cxlviiiia; *lillianus* sp. n. Pliocene Rosebud Indian Reservation, TROXELL Amer. J. Sci. 42 p. 335.

†*Protohippus labrosus* Miocene Colorado figs. of type pl. cxlviiiia sp. aff. *perditus* figs. pls. cxlviiiia and cxlix., COPE & MATTHEW 92.

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Rate du Rhinoceros et du Tapir-RETTERER et NEUVILLE Paris C. R. soc. biol. 79 p. 267.

†*Aceratherium* from Tertiary of S. Russia, PAVLOW Moscow Nouv. Mem. soc. Imp. Nat. 17 (22) p. 5; *incisivum* dentition, extrémités faune méotique de Taraklia, KHOMENKO Trav. Soc. Bessar. nat. 5 p. 19.

†*Aphelops megalodus* Miocene Colorado figs. of type etc. pls. cxxv., cxxvi., cxxvii. cxxix., cxxx., cxxxiv., cxxxv.; *malacorhinus* Miocene Nebraska figs. of type etc. pls. cxxxix., cxl., cxli., cxlii., and cxliiii., COPE & MATTHEW 92.

†*Caenomus milis* Oligocene Colorado figs. of type, COPE & MATTHEW 92 pls. civ. and cv.

†*Diceratherium pacificum* Oligocene Oregon figs. of type, COPE & MATTHEW 92 pls. civ. and cv.

†*Epiaceratherium turgaicum* teeth, BORISIAK Bul. Ao. Sc. Petrograd 10 p. 343.

†*Hyracodon arcidens* Oligocene Colorado figs. of type, COPE & MATTHEW 92 pl. cii.

†*Indricotherium* gen. n. Kontinentale Schichten des Turgai-Gebietes, BORISIAK Geol. věstu 1 p. 131 and C. R. A. Sci. Paris 162 p. 520.

†*Peraceras superciliosus* Miocene Nebraska figs. of type, COPE & MATTHEW 92 pls. cxliv. and cxliia.



†*Rhinoceros schleiermacheri* dentition faune méotique de Taraklia, KHOMENKO Trav. Soc. Bessar. nat. 5 p. 24; †*pachygnatus* mâchoire inf. dentition extrémités faune méotique de Taraklia, KHOMENKO Trav. Soc. Bessar. nat. 5 p. 22.

†*Teleoceras fossiger* Miocene Kansas figs. of type etc., COPE & MATTHEW 92 pls. cxxxI., cxxxII., cxxxIII., cxxxIV., cxxxV., cxxxVI., cxxxVII., and cxxxVIII; †*gagnense* sp. n. Oligocene Laugnac France, REPELIN C. R. Acad. Sci. Paris 163 p. 981.

#### †TITANOTHERIIDAE.

†*Allops walcotti* sp. n. Oligocene S. Dakota, OSBORN Bul. Amer. Mus. A. H. 35 p. 721.

†*Megacerops riggsi* sp. n. Oligocene N. E. Colorado, OSBORN Bul. Amer. Mus. N. H. 35 p. 723.

#### C. and D.—HYRACOIDEA and PROBOSCIDEA.

Catalogue, LYDEKKER 250a p. 80; *Proboscidea* from Tertiary of S. Russia, PAVLOW Mascou Nouv. Mem. soc. Imp. Nat. 17 (22) p. 35; ligamentum teres in fossil species of Nebraska, BARBOUR Amer. J. Sci. 41 p. 251; the Ye-Sin or Water Elephant (Folk Lore), HORWOOD J. Bombay Nat. Hist. Soc. 24 p. 379.

*Hyracoidea* distribution, BRAUER Sitzb. k. pr. Ak. Wiss. Berlin 35 p. 436.

*Dendrohyrax dbrsalis* dorsal gland, POCOCK P. Z. S. 1916 p. 749; see *Procavia*.

†*Dinotherium giganteum* dent astragalus faune méotique de Taraklia KHOMENKO Trav. Soc. Bessar. nat. 5 p. 41.

*Elephas* molars of †American species, GREGORIO Naturalista Sicil 23 p. 104; (and *Loxodonta*) temporal gland p. 750, probable presence of gland in Mammoth p. 755, POCOCK P. Z. S. 1916; height to which elephants ascend, ELWES J. Bombay N. H. S. 24 p. 355; *africanus* date of disappearance from North Africa place names and classical references, JOLEAUD Rec. Not. Mem. Soc. achem Constantine 48; †*antiquus recki* f. n. Diluvium Deutsch-Ostafrika, DIETRICH Arch. Biont. Berlin 4 p. 10; dentition

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†*Eubelodon* gen. n. type *morrilli* sp. n. Nebraska, Pliocene, BARBOUR Univ. Nebr. Stud 14 p. 194.

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*Loxodonta* origine des figures losangiques des lames dentaires, STEFANESCU C.R. Acad. Sc. 162 p. 983; See also under *Elephas*.

†*Mastodon turicensis* p. 42, *longirostris* p. 43 mâchoires, dentition, faune méotique de Taraklia, KHOMENKO Trav. Soc. Bessar. nat. 5; *americanus* (?) New York, Pleistocene, SHELDON Science New York 41 p. 98.

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†*Tetralodon osborni* sp. n., Pliocene Nebraska, BARBOUR Amer. J. Sci. 41 p. 523; *willistoni* sp. n. Nebraska, Pliocene BARBOUR Univ. Nebr. Stud. 14 p. 192.

†*Tetralophodon campester* Miocene Kansas figs. of type Pls. cxx, cxxi, cxxii, and cxxiii; *ligoniferus* Cope 1880-3 name not previously published Pl. cxxiv, COPE & MATTHEW 92.

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*Cetacea* British stranded, HARMER 160; New Jersey, Fox Science New York 42 p. 798; Whales threatened extinction, BOSSIÈRE 65; morphologie de la rate, RETTERER et NEUVILLE Paris C. R. soc. biol. 79 p. 60.

*Sirenia* phylogeny and place of origin p. 26, molar-premolar formula p. 28, MATTHEW Ann. N.Y. Acad. Sci. 27.

*Balaenoptera borealis* history habits external anatomy osteology and relationships ANDREWS p. 291; anatomy of foetus SCHULTE p. 389 Mem. Amer. Mus. N.H. 1: *rostrata* young cervical vertebrae BURLET Amsterdam Werk. Gen. Nat. Genees. Heelk. 8 p. 353.

*Delphinus* in the Delaware FOWLER Science New York 42 p. 220; *delphis* rhinencephalon ADDISON Anat. Rec. Philadelphia 9 p. 45; structure du pouton BARBOSA J. Anat. Physiol. 11 p. 285.

†*Dioplodon taramellii* sp. n., Pliocene Italy PELIZZOLA Rend. Ist. Lomb. 49 p. 154.

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*Phocaena* in Delaware FOWLER Science New York 42 p. 220; *dioptrica* sexual characters, BRUCH Physis Rev. Soc. Argentina Ci. Nat. 2 p. 461.

†*Trichechus* rib and vertebrae pre-historic Santo Domingo, MILLER Smithson Misc. Coll. 66 No. 12 p. 9.

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#### IX.—EDENTATA.

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*Dasypus* inheritance of double scutes organic symmetry, NEWMAN Biol. Bul. Woods Hole Mass. 30 p. 173; *novemcinctus* tooth development, MARTIN J. Morph. Philadelphia 27 p. 550.

†*Glyptodon petaliferus* carapace and osteology, HAY Proc. U.S. Nat. Mus. 51 p. 107.

*Manis crassicaudata* notes on young specimen, TRENCH J. Bombay Nat. Hist. Soc. 24 p. 590.

*Myrmecophagidae* biology, GUTIERREZ Bol. dir. Est. Biol. Mexico 1 p. 594.

†*Nothrotherium texanum* sp. n., Pleistocene Texas, HAY Proc. U.S. Nat. Mus. 51 p. 116.

*Orycteropus capensis* scent - glands, Pocock P. Z. S. 1916 p. 742; †*gaudryi* Tertiary of S. Russia, PAVLOW Moscou Nouv. Mem. soc. Imp. Nat. 17 (22) p. 45.

*Tamandua tetradactyla punensis* sub. sp. n. Puna Island, Ecuador, ALLEN Bull. Amer. Mus. Nat. Hist. 35 p. 83.

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†*Cimolcstes culleri* sp. n., mandible Upper Cretaceous Alberta Canada, WOODWARD P.Z.S. 1916 p. 525.

*Didelphys virginiana* formation of blastocyst, HARTMAN J. Morph. Philadelphia 27 p. 1.

†*Bodelphis browni* gen. et sp. n., Cretaceous (Belly River), MATHEW Bul. Amer. Mus. N.H. 35 p. 482.

*Metachirus nudicaudatus antioquiæ*, subsp. n., Colombia, ALLEN Bull. Amer. Mus. Nat. Hist. 35 p. 83.

†*Palorchestes* in Tasmanian Pleistocene, SCOTT Proc. R. Soc. Tasmania 1915 p. 100.

*Perameles* skull structure and development, laryngeal cartilages, cranial nerves, ESDAILE Phil. Trans. R. Soc. 207 p. 439.

*Philander laniger* type identified, preserved at Madrid, CABRERA Bol. Soc. Esp. Hist. Nat. 16 p. 514.

†*Thlaedon padanicus* Cope re-described MATHEW Bul. Amer. Mus. N.H. 35 p. 492.

*Trichosurus* colour variation, LE SOUEF Austr. Zool. 1 p. 62.

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