

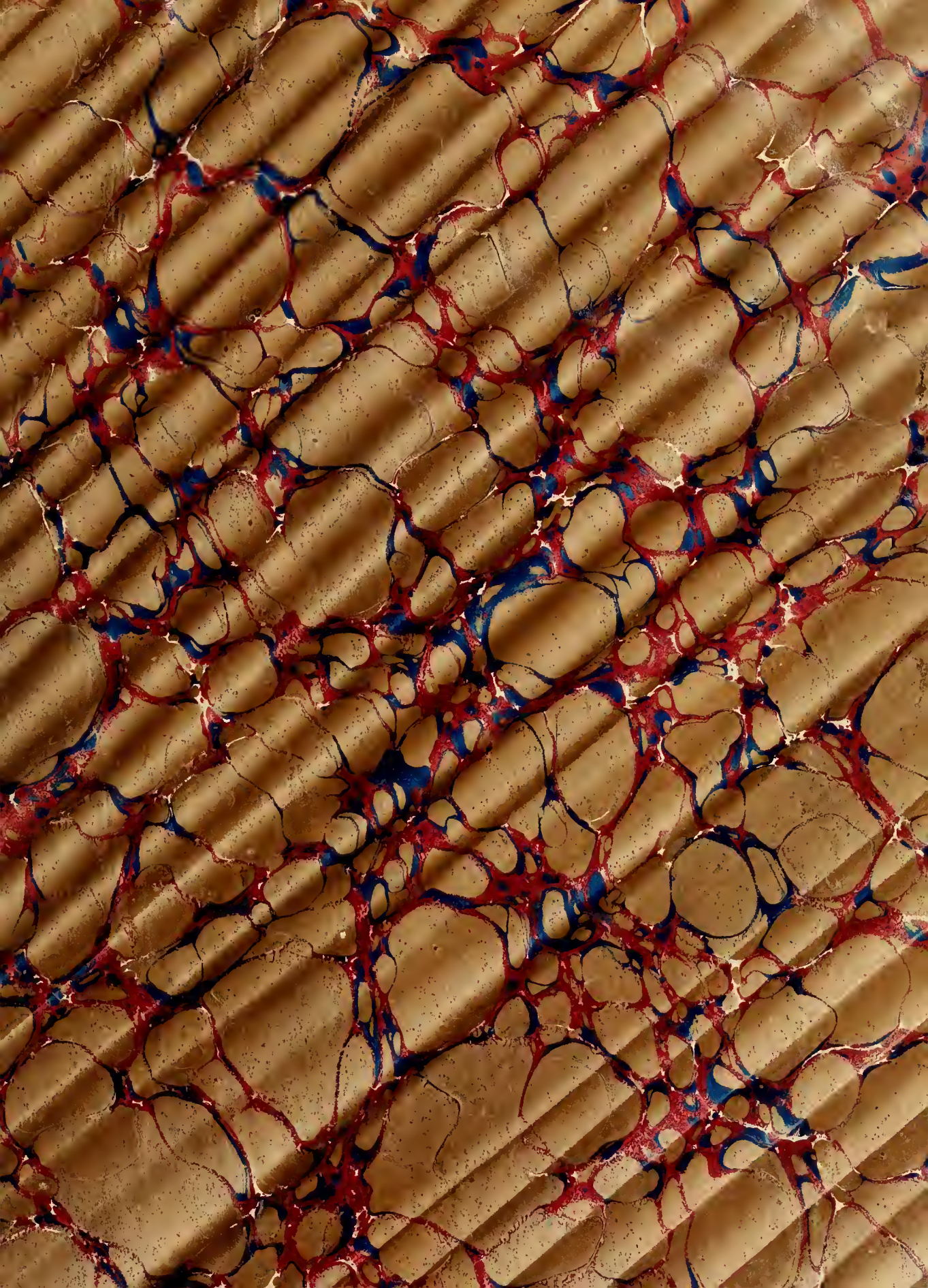
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William Healey Dall.

H. COOPER



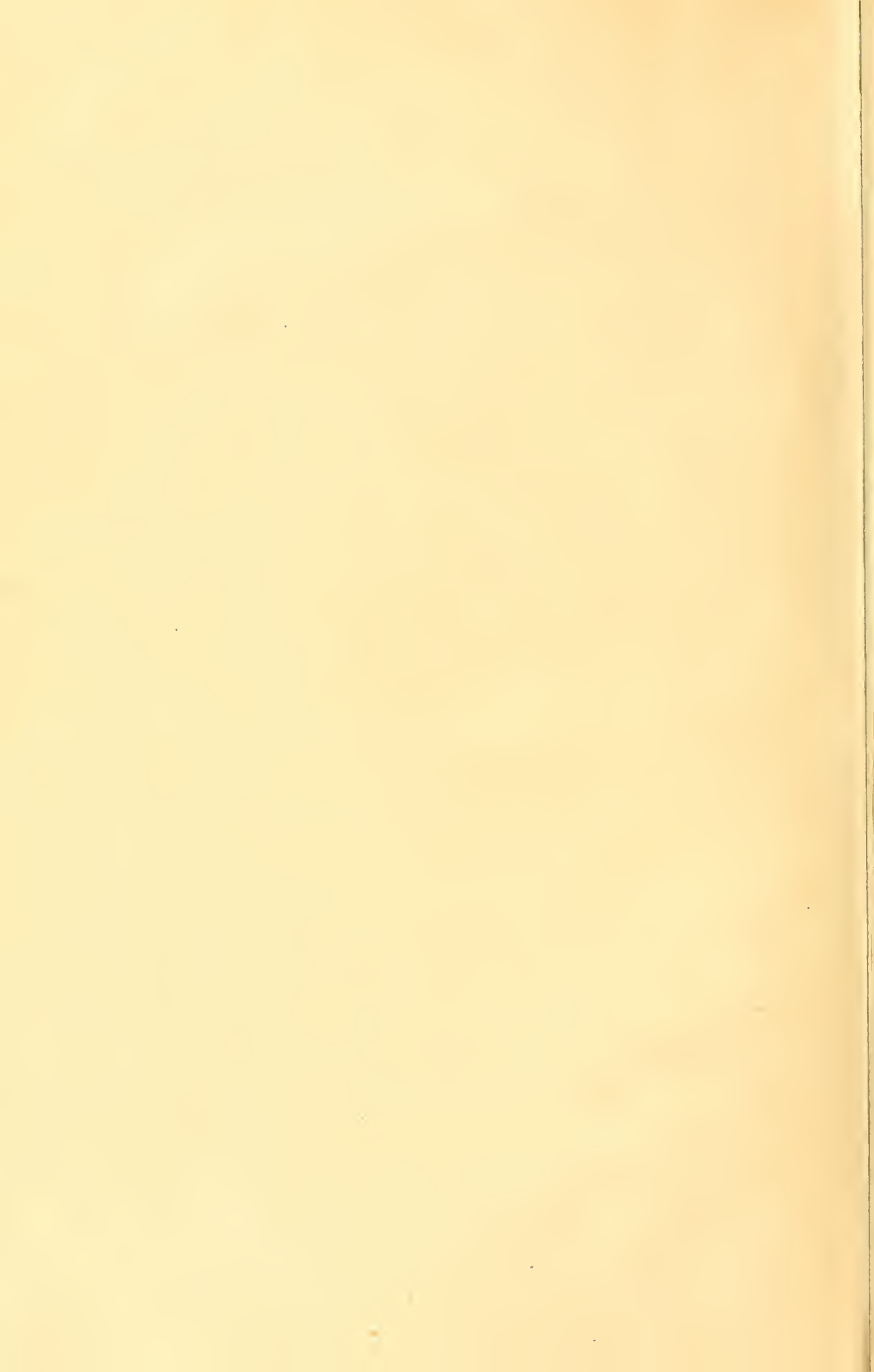
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Oct. 1870.

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GEOGRAPHICAL CATALOGUE

OF THE

M O L L U S C A .

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GEOLOGICAL SURVEY OF CALIFORNIA.

J. D. WHITNEY, STATE GEOLOGIST.

GEOGRAPHICAL

CATALOGUE OF THE MOLLUSCA

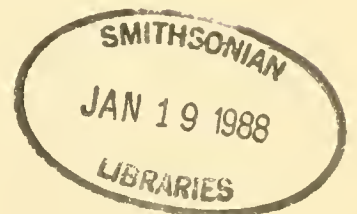
FOUND WEST OF THE ROCKY MOUNTAINS,

BETWEEN LATITUDES 33° AND 49° NORTH.

By J. G. COOPER, M. D.

SAN FRANCISCO:
Towne & Bacon, Printers.

Paul 1867.



NOTICE.

THE following list is based on that published by P. P. CARPENTER, in his Report to the British Association for the Advancement of Science, 1863, with the addition of about 130 species which have been described since then, or were omitted. The land and fresh water species, at that time only partially determined and not embodied in the general list, are also added. The changes in range of distribution here made are founded on more recent and correct information than was at his command, including unpublished collections of Dr. Canfield, of Monterey; Dr. Newcomb, of Oakland; Rev. J. Rowell, Mr. J. Hepburn and R. E. C. Stearns, of San Francisco; Mr. Gabb, Prof. Brewer and Mr. Bolander, of the Geological Survey; Mr. W. H. Dall, of the W. U. Telegraph Expedition, and others, whose special discoveries and labors have been all acknowledged and tabulated in the Report on Mollusca to be published as one of the series of the Geological Survey.

There are twenty or thirty species still undetermined, and now in Mr. Carpenter's hands, which will appear in the final report.

It need scarcely be added that this list is not intended for a final authority on the subject of names, which will probably be considerably changed by the time the volume on Mollusca is printed.

Most of these living species are found fossil also in the tertiary formations along this coast, and have a wider range of distribution, many extending inland to the Sierra Nevada, but the localities could not be included here. Specimens are found nearly as perfect as the living shells.

The list is intended for use both as a reference or check-list, and for labels. Copies may be obtained at the office of the State Geological Survey, No. 90 Montgomery Block, San Francisco.

N. B.—POLYZOA and TUNICATA are not included.

SAN FRANCISCO, April, 1867.

1. Glottidia albida, Dall, Am. J. Conch. vi, p. 157 1870. Sta. Barbara. Newe. Diego, Coop. L. Cal. Hinds. Var? Palmeri, Gulf Cal. Dr. Palmer.
2. Abundant at Sitka, l. w. m. Japan, A. Ad. Unalashka plenty 14 fms
3. Kodiak, Minor. Ounga, 4 fms. Dall, 3^d Serebratella sp. 46 fms. Nagai Harf.
4. Is from Orange Harbor, Patagonia, referred by an error to Oregon in Cpr. Rep. B. A. and Gld. Ex. Ex. It is a Serebratella.
5. Laqueus californicus, Dall, Am. J. Conch. vi, p. 123 pl. vii. 1870. N. side Catalina Id. Cooper. Port Etches.
6. Monterey, Dall, Calif. = Serebratella occidentalis Dall. Cal. Acad. Proc. 1871. The Catal. specimens are not Waldheimias. Vol IV. pt. IV. p. 182, pl. 1. fig. 7.
7. Has not been obtained from W. C. N. Am.
- 7^a Serebratella frontalis, Midd. Altu. Atka, North Japan (St. John) Ochotsk.
8. A true Serebratella. Sitka, betw. tides, abundant, very variable.
= S. transversa, sly. non. priv.
- 8^a Add Pholas sagitta, Stearns MSS.
- 8^b Pholas Pacifica, Stearns, Alameda Cal. flats.

12^a Xyotaya sp. Unalashka, in Sitka species.

GEOGRAPHICAL CATALOGUE.

- 1 *Lingula albida* *Hinds*.
Santa Barbara, 28 fms; San Diego—L. Cal. *Catalina & San Miguel Ids. Monterey.*
- U. 2 *Rhynchonella psittacea* *Lin.* ? n.s. or one of Adams! *Cooks Inlet.*
Str. Fuca, north; circumpolar—Maine.
- 3 *Terebratula unguiculus* *Cpr.* = *Terebratulina* sp.
Str. Fuca to San Diego, near l. w. to 20 fms.
- 4 *Waldheimia pulvinata* *Gld.*
Puget's Sd. to Arctic Sea.
- 5 *Waldheimia Californica* *Koch.* *H^a. Magasella albertica, Dall.*
Catalina I. 80 fms.—~~Kantschaka?~~ *Port Etches.* *Unal.- Shum. Cal. Acad. Proc. IV. p. 182.*
Pl. T. fig VII. Dec. 72. Aug. 1877.
- 6 *Waldheimia Grayi* *Dav.*
~~New Year Point to Catalina I.~~—Japan.
- U. 7 *Terebratella Coreanica* *A. Ad.*
Str. Fuca—China; Japan.
- 8 *Terebratella caurina* *Gld.* = *transversa*, *Sby.*
Puget Sound to Sitka—China? *Crescent City, Cal. Shumacher Cook's Inlet. Port Etches.*
- 9 *Navea Newcombii* *Tryon.*
New Y'r Pt. to S. Cruz—L. Cal.? (in *Haliotis*.)
- 10 *Xylotrya pennatifera* *Blainv.*
Str. Fuca to S. F. Bay—England.
- 11 *Xylotrya fimbriata* *Jeffrey.*
Str. Fuca—England.
- 12 *Xylotrya setacea* *Tryon.*
S. F. Bay (to San Pedro?)
- 13 *Zirphœa crispata* *Lin.*
Str. Fuca to San Diego—N. Atlantic.
- 14 *Pholadidea penita* *Conr.*
Str. Fuca to Santa Barbara, l. w. *Crescent City Shum*
- 15 *Pholadidea ovoidea* *Gld.*
Baulines Bay to San Diego; rare.
- 16 *Netastomella Darwinii* *Sby.*
Str. Fuca to San Diego—S. America.
- 17 *Martesia intercalata* *Cpr.*
Farallone Is. to Mazatlan—(in *Haliotis*.)

- 18 **Parapholas Californica** *Cour.*
Baulines Bay to San Diego.
- U.* 19 **Saxicava pholadis** *Linn.*
Str. Fuca to Santa Barbara—Universal ?
- U.*[?] 20 **Glycimeris generosa** *Gld.*
Puget Sound to San Pedro—Kamtschatka.
- U.* 21 **Mya truncata** *Linn.*
Str. Fuca, north—circumpolar—Mass.
- 22 **Platyodon cancellatum** *Cour.*
Baulines Bay to San Diego.
- 23 **Cryptomya Californica** *Cour.*
Str. Fuca to San Diego. *Mtly + Catalina + San Miguel Ids - common -*
- 24 **Schizothærus Nuttalli** *Cour.*
Str. Fuca to San Diego, Sitka—Japan. *Mtly.*
- 25 **Darina declivis** *Cpr.*
Str. Fuca—California ?
- 26 **Corbula luteola** *Cpr.*
San Pedro to San Diego; (color various.) *Catalina Id. - one valve.*
- 27 **Sphœnia ovoidea** *Cpr.*
Str. Fuca.
- 28 **Næra pectinata** *Cpr.*
Str. Fuca to Catalina I. 20—120 fms. *Catalina Id.*
- 29 **Clidiophora punctata** *Cour.*
Str. Fuca to S. Diego, l. w. to 30 fms.
- 30 **Kennerlia filosa** *Cpr.*
Str. Fuca. (Adult of *bicarinata*?)
- 31 **Kennerlia bicarinata** *Cpr.*
Catalina I. 40—60 fms. (Young?) *Catalina Id.*
- 32 **Periploma argentaria** *Cour.*
San Pedro to San Diego.
- 33 **Thracia curta** *Cour.*
Str. Fuca to San Diego.
- 34 **Cyathodonta undulata** *Cour.*
Sta. Barbara to S. Diego—Gulf of Cal. *Catalina Id. - north side.*
- 35 **Lyonsia Californica** *Cour.*
Str. Fuca to Santa Barbara. *Catalina Id Nunivak*
- 36 **Lyonsia nitida** *Gld.*
S. F. Bay to San Diego. (Young?)
- U.* 37 **Entodesma saxicola** *Baird.*
Str. Fuca to Farallone Is.
- 38 **Entodesma inflata** *Cobr.*
San Pedro, south—Panama.
- 39 **Mytilimeria Nuttalli** *Cour.*
Str. Fuca to San Diego. *Mtly.*

19. = S. arctica. Arctic seas and Attu - San Francisco. Catalina Id.
20. Fragments at Sitka, 4 fms. ? Attu and Unga -
21. Add var. præcisa, Gld. and uddevalleensis. Sitka, Avatcha, Dall. Plover Bay, Bering Sea, generally. Cape Espenberg, ^{with}
- 21^a. Mya japonica Jay. Japan, Kamchatka, Plover Bay.
25. Hinge plate slanting, no rib, otherwise like Machæra patula.
27. Ounga 4 fms. Dall. Unimak Pass. 45 fms. Kodiak, Unalaska Miner.
33. Sitka, 1 v. 14 fms. Shumagins to Attu.
35. Sitka, 4 fms. ? = + 36. Kyska. ? Attu.
37. Sitka, abundant, l. w. Unalaska. ? Kyska, Cat. Id. San Miguel Id.
38. inflata Cooper not Conrad, = diaphana Cpr, Magatlan.
= spongiophila, Dall, MSS, 1866.
- 38^a Entodesma Scammoni, Dall, Fort Simpson, B. C.



44^a. add *M. lucida*, *konias. bala.* not northern.

45, a. Add *M. borealis*, Conn. MSS. Norton Sound. = *medius* Gray, Beech. V.

45, b. Add *Cyrtodaria siliqua*, Blainw. Norton Sound, Plover Bay. ^{o Esper. bay}
_{v. unash}

47 a. Add *Tellina venulosa*, Schrenck, Unalashka, Avatcha.

= *T. alternidentata*, of Sliy. Beechey's Voyage. Attu. C. esp.

= *T. ...* + *T. ...* Unash

- 40 *Plectodon scaber* *Cpr.*
Catalina I. 40-60 fms., 2 valves only. *Catalina Id. living.*
- 41 *Solen sicarius* *Gld.*
Str. Fuca to San Pedro—Japan.
- 42 *Solen rosaceus* *Cpr.*
Santa Barbara to San Diego. *Catalina & San Miguel Ids*
- 43 *Solecurtus Californianus* *Conr.*
Santa Barbara to San Diego. *Catalina Id & San Miguel -*
- 44 *Solecurtus subteres* *Conr.*
Santa Barbara to San Diego (= *Californianus* ?)
- U. 45 *Machæra patula* *Dixon.* *Saranna Bay, Attu, Kyska &c to Cala,*
Str. Fuca to San Diego—Kamtschatka, Japan. *Cook's Inlet.*
- 46 *Sanguinolaria Nuttalli* *Conr.*
Santa Barbara to San Diego—Japan.
- 47 *Psammobia rubroradiata* *Conr.*
Str. Fuca to San Diego—Sitka. *Petropavlovsk, Kamt. Catalina Id -*
- 48 *Macoma secta* *Conr.*
Baulines Bay to San Diego—Japan ?
- 49 *Macoma edulis* *Nutt.*
Str. Fuca to Baul's Bay—Japan ? (= *secta* var ?)
- U. 50 *Macoma indentata* *Cpr.*
Monterey ; (to San Diego ?)
- U. 51 *Macoma yoldiformis* *Cpr.*
Str. Fuca to San Pedro.
- U. 52 *Macoma nasuta* *Conr.*
Str. Fuca to San Diego—Kamtschatka. *Cook's Inlet -*
- 53 *Macoma inquinata* *Desh.*
Str. Fuca to Monterey. Estuaries.
- U. 54 *Macoma edentula* *Br. & Sby.*
Str. Fuca ? Behring's Str. to Japan. *Crescent City, Cal. Shum.*
- 55 *Macoma expansa* *Cpr.*
Str. Fuca. (= *lata* *Desh.* var ?)
- U. 56 *Macoma inconspicua* *Br. & Sby.*
Str. Fuca to Santa Barbara—Arctic. *Crescent City - Cal. Grantley Harbor, Norton Sound*
Cape Cape. Cook's Inlet Nunivak
- 57 *Mera modesta* *Cpr.*
Str. Fuca.
- 58 *Mera obtusa* *Cpr.*
Str. Fuca to San Diego. (= *modesta* var ?)
- 59 *Mera variegata* *Cpr.*
Str. Fuca to Catalina I. Beh—120 fms. *Shumagins to Attu? Catalina Id - Cook's Inlet.*
- 60 *Mera Gouldii* *Haut.*
San Diego—Cerro Is., Lower Cal. *Catalina Id. San Miguel.*
- 61 *Mera salmonea* *Cpr.*
Str. Fuca to Monterey. Beh. to 20 fms.

- 62 *Tellina Bodegensis* Hds.
Str. Fuca to San Diego—Japan. *Crescent City Cal. + San Miguel Is.*
- 63 *Tellinella*
San Pedro—2 valves dredged. (No. 590)
- 64 *Arcopagia lamellata* Cpr.
San Diego—Mazatlan.
- 65 *Edalina subdiaphana* Cpr.
San Diego; (San Pedro?)
- 66 *Cooperella scintillæformis* Cpr.
Santa Barbara to San Diego.
- 67 *Lutricola alta* Conr.
Santa Barbara to San Diego.
- 68 *Semele decisa* Conr.
Santa Barbara to San Diego. *Catalina Id.*
- 69 *Semele rupium* Sby.
Santa Cruz to Barbara Is.—Galapagos.
- 70 *Semele*
Str. Fuca to Monterey.
- 71 *Semele rubrolineata* Conr.
"S. Diego, Nuttall." (=decisa var?)
- 72 *Semele pulchra* Sby.
Monterey to S. Diego—Acapulco to S. America.
- 73 *Semele incongrua* Cpr.
Catalina I. 16—40 fms. rare.
- 74 *Semele flavescens* Gld.
San Diego?—Mazatlan.
- 75 *Cumingia Californica* Conr.
Monterey to San Diego—Mazatlan. *nty. Catalina, Miguel*
- 76 *Donax Californicus* Conr.
Monterey? San Luis Obispo to S. Diego.
- 77 *Donax flexuosus* Gld.
Santa Barbara? to San Pedro.
- 78 *Donax navicula* Sby.
S. Pedro? Cape St. Lucas? to S. America.
- 79 *Heterodonax bimaculatus* D'Orb.
Monterey? S. Pedro to S. Diego—Mex.—W. I.
- 80 *Gnathodon mendicum* Gld.
Colorado estuary to Mazatlan.
- 81 *Standella Californica* Conr.
Spisula catilliformis
Str. Fuca to San Pedro. S. I., *Crescent City Cal., Long beach, San Pedro,*
(Mactra mactrotoma)
- 82 *Standella nasuta* Gld.
S. Pedro to S. Diego ~~planulata var.~~ *Lower Cala,*
Spisula
- 83 *Standella planulata* Conr.
Santa Barbara to San Diego. *Catalina Id. young. San Pedro. L. Beach.*
Mactra (mactrotoma) californica Conr. San Pedro—San Diego. (Zuf?)
Spisula Humphillii Dall. S. Pedro—S. Diego.
Mactra (Sinuomactra) dolabriformis Conr. Gulf of Cal

70. Add S. rubropicta, Dall, Monterey, Santa Cruz, Soquel.

71. = S. simplex, Ad. + Rve, teste Conn. Cat. Catalina Id.

81 = +82?

90. Sitka, 4 fm.

92^a Add Venus

Monterey, sea beach, Neeah Bay, Smith, 93 f

93. A typical Venus, Sitka 14 fms dead. Omit Kamchatka.

93^a. Add Liocyma fluctuosa (Gld.) Dall. Proc. Bost. Soc. xiii p. 256. 1870. Ber. St. L. B. C. ^{Kyokai.}

93^b. " " Beckii Dall, l. c. p. 257. Plover Bay, Ounga Id. 4 fm.

93^c. " " Scammoni, Dall, Fort Simpson.

93^d. " " viridis, Dall, Arctic Ocean.

93^e. " " arctica, Rve. " "

93^f. " Mercenaria Kennicottii, Dall Neeah Bay.

95 = Callioka sp.

Spisula (Symmophomactia) OF WEST COAST MOLLUSCA.

Spisula (Mactomeris) polyzona *Slm. var. Alaskana* *Dau*

- U? 84 **Standella falcata** *Gld.* *Attu - Shumagins. Cape Espenberg - South. Cooks Inlet. Vancouver, Nunivak*
Comot Str. Fuca to Monterey. *San Diego, S. Pedro.*
- 85 **Raeta undulata** *Gld.*
 S. Pedro, rare—La Paz, Gulf of California. *Catalina Id. - north side, young-*
- 86 **Clementia subdiaphana** *Cpr.*
Pat Etches Str. Fuca—California? *San Pedro.*
- 87 **Amiantis callosa** *Conr.*
 Santa Barbara to S. Diego—Cape St. Lucas.
- 88 **Pachydesma crassatelloides** *Conr.*
 Santa Cruz to San Diego. (Str. Fuca?)
- 89 **Psephis tantilla** *Gld.*
 Str. Fuca to Catalina I., l. w. to 25 fms. *Catalina Id. - Mtg. San Miguel-*
- 90 **Psephis Lordi** *Baird.*
 Str. Fuca to San Diego; (southern variety.) *Catalina Id. San Miguel-*
- 91 **Psephis salmonea** *Cpr.*
 Catalina I. 30—40 fms., rare.
- 92 **Psephis tellimyialis** *Cpr.*
 Farallone Is. or Lower Cal. ? on Haliotis.
- 93 **Mercenaria Kennerleyi** *Rov.*
 Str. Fuca to Monterey?—(~~Kamtschatka~~?) *Sitka*
- 4 **Meretrix toreuma** *Gld?*
 Santa Barbara to Catalina I.—“E. Indies.”
- 95 **Lioconcha Newcombiana** *Gabb.* *is a Callista north & south sides Catalina Id.*
 Monterey to Catalina I.—rare.
- 96 **Chione succincta** *Val.*
 S. Barbara to S. Diego—Mexico—S. America. *Catalina Id.*
- 97 **Chione excavata** *Cpr.*
 San Pedro to San Diego—(=*succincta* var?)
- 98 **Chione simillima** *Sby.*
 Monterey to San Diego.
- 99 **Chione fluctifraga** *Sby.*
 San Pedro to San Diego—Gulf of Cal. *Catalina Id*
- 100 **Tapes tenerrima** *Cpr.*
 Str. Fuca to San Diego—not “Panama.” *Santa Cruz-*
- 101 **Tapes laciniata** *Cpr.*
 Monterey to San Diego—(=*staminea* var?)
- U. 102 **Tapes staminea** *Conr.* *Attu - Shumagins. Aleutian tertiaryes, S. Oregon.*
 Str. Fuca to San Diego—Margarita Bay. *Catalina Id. - Cooks Inlet.*
- 103 **Tapes staminea var. Petiti** *Desh.*
 Str. Fuca to Monterey—Kamtschatka.
- 104 **Tapes staminea var. ruderata** *Desh.*
 Str. Fuca to Santa Cruz.
- 105 **Tapes staminea var. diversa** *Sby.*
 Baulines Bay to San Diego.

- 106 *Tapes staminea* var. *tumida* *Sby.*
In cavities of rocks.
- 107 *Tapes staminea* var. *orbella* (*Cpr. ?*)
In cavities of rocks.
- 108 *Saxidomus gracilis* *Gld.*
Baulines Bay to San Diego—(=*aratus* *Gld. ?*)
- 109 *Saxidomus Nuttalli* *Conr.*
S. F. Bay to San Diego—~~Sitka? Japan~~ Catalina Id.
- U. 110 *Saxidomus squalidus* *Desh.*
Str. Fuca to S. F. Bay—(=*Nuttalli* *Conr.*) north throughout the Aleutians.
- 111 *Saxidomus brevisiphonatus* *Cpr.*
Str. Fuca—Vancouver's I.
- 112 *Rupellaria lamellifera* *Conr.*
Farallone Is. to San Diego.
- 113 *Petricola carditoides* *Conr.*
Str. Fuca to San Diego—Sitka? Catalina, San Miguel, Mex.
- 114 *Chama exogyra* *Conr.*
Baulines Bay to San Diego—Mexico. Catalina, San Miguel.
- 115 *Chama pellucida* *Sby.*
Farallone Is. to San Diego—S. America. Catalina Id.
- 116 *Chama spinosa* *Sby.*
Catalina I. to S. Diego—Mexico, Galapagos.
- U. 117 *Cardium corbis* *Martyn.*
Str. Fuca to S. Barbara—Sitka, Kamtschatka. Catalina Id? Nunivak
- 118 *Cardium quadragenarium* *Conr.*
Monterey to San Diego. Catalina Id.
- U. 119 *Cardium blandum* *Gld.*
Str. Fuca to Monterey—Sitka; Asia!
- 120 *Cardium centifilosum* *Cpr.*
Monterey to Catalina I. 20—40 fms. Catalina Id.
- 121 *Hemicardium biangulatum* *Sby.*
Catalina I.—Mexico, Panama. Catalina Id. - C. St Lucas -
- U. 122 *Scrripes Grœnlandicus* *Chem.*
Str. Fuca—Sitka—circumpolar—Mass. *Alta. ...* Catalina Id. rocks inlet.
- 123 *Liocardium elatum* *Sby.*
S. Pedro to S. Diego—Gulf, Mazatlan.
- 124 *Liocardium substriatum* *Conr.*
Monterey to San Diego—S. America!
- 125 *Astarte compacta* *Cpr.*
Str. Fuca—(Like *compressa* of Atlantic.)
- 126 *Astarte Esquimalti* *Baird.*
Str. Fuca—Vancouver's I.
- 127 *Astarte fluctuata* *Cpr.*
Catalina I.; (2 valves dredged, 40—60 fms.)

108. To this 109 and 110 may probably be added.

112. Kadiak, dead. 7 fm?

114^a. Chama inermis, Dall, "Puget S^d" Rowell, Middle Am.

117. ? not corbis Mart.: from China Seas. = Nuttallii Conr. Avatcha, bch.
Crescent City Cal. Schum. Nunivak

120^a Add Cardium islandicum, ^{C. Espenbe} ^{Nunivak} Sitka large and plenty. Kadiak ^{Attu, U.} &c.
121^a. Add Serripes? Laperousei, Desh. Sitka, Avatcha, Bering Str. Plover
Bay. Unalashka, Attu. St Paul Id. Nunivak -

124^a. Astarte semisulcata Leach, fide Stm. Plover Bay. C. Espenbe

124^b. ? Astarte mirabilis, Dall, Kadiak. = s. g. Rictocyma.



132^a Cardita (Ceropsis) minima, Dall = 133.

133. ? Trapezium halisticola, Dall, MSS. Mty.

137. Sitka, abundant 7-14 fms.

138. Sitka, very fine 14 fms.

146^a. Lepton rude, Dall, Mty.

146^b. Montacuta? Mty. Dall.

147^a. Furtonia (? Cyprinum) occidentalis, Dall, Plover Bay. E. Sit.

147^b. Furtonia minima Fabr. Uru-lashka abundant l.v. mark - illu.

- 128 *Crassatella*
San Diego, dredged; (No. 676.)
- 129 *Miodon prolongatus* *Cpr.*
Str. Fuca to Monterey; (dredged.)
- U. 130 *Venericardia borealis* *Conr.*
Vanc. I.—Catalina I. 120 fms.—N. Atlantic. *Attn - Shumagins, San Diego Tertiary*
- 131 *Venericardia borealis* var. *ventricosa*
Str. Fuca to Catal. I. 120 f.—S. Barbara. [*Gld.*]
- 132 *Lazaria subquadrata* *Cpr.* *Catalina - San Miguel - Mtg.*
Str. Fuca to San Diego.
- 133 *Trapezium*
Monterey; l. w. alive in *Haliotis*—San Diego?
- 134 *Lucina Nuttalli* *Conr.* *Catalina Id.*
Monterey to San Diego.
- 135 *Lucina Californica* *Conr.* *Catalina, San Miguel.*
Santa Cruz to San Diego.
- 136 *Lucina bella* *Conr.*
S. Diego, (fossil?)—Mazatlan.
- U. 137 *Lucina tenuisculpta* *Cpr.* *Attn - Shumagins, S. Diego Tertiary Hemphill*
Str. Fuca to Catalina I.—Mazatlan? *Catalina Id.*
- 138 *Lucina borealis* *Linn.* *Kyska, San Diego Tertiary*
Catal. I. 40—120 fms.—N. Atlantic—Asia?
- 139 *Lucina*
Monterey.
- U. 140 *Cryptodon flexuosus* *Mont.* *Catalina Id.*
Catal. I. 120 fms.—England—Asia?
- 141 *Cryptodon serricatus* *Cpr.*
Str. Fuca—Catal. I. 120 fms. (Distinct sp.?)
- 142 *Diplodonta orbella* *Gld.* *Catalina Id.*
Str. Fuca to S. Diego—in holes of rocks.
- U. 143 *Kellia Laperousii* *Desh.* *Catalina Id.*
Str. Fuca to Santa Barbara—in holes.
- 144 *Kellia Laperousii* var. *Chironii* *Cpr.*
Str. Fuca to San Diego.
- 145 *Kellia rotundata* *Cpr.*
Monterey; (= *Laperousii* var.?)
- 146 *Kellia suborbicularis* *Mont.*
Str. Fuca to S. Diego—Mex.—Pan.—Europe.
- 147 *Lasea rubra* *Mont.* *Attn?*
Str. Fuca to S. Pedro—All N. hemisphere.
- 148 *Pythina rugifera* *Cpr.*
Str. Fuca.
- 149 *Lepton mercœum* *Cpr.*
Monterey? S. Diego—shell washings, minute.

- 150 **Tellimya tumida** *Cpr.*
Str. Fuca to San Diego.
- 151 **Pristiphora oblonga** *Cpr.*
San Diego—minute.
- 152 **Sphærium striatinum** *Lam.*
Hell Gate R., Montana? Missouri R. and east.
- 153 **Sphærium dentatum** *Hald.*
"Oregon;" Nuttall coll., 1834.
- 154 **Sphærium occidentale** *Prime.*
Hell Gate R., Montana—Eastern States.
- 155 **Sphærium nobile** *Gould.*
Near San Pedro, Cal., or Colorado River.
- 156 **Sphærium patella** *Gld.*
"Oregon;" U. S. Expl. Expd'n coll., 1847.
- 157 **Sphærium lenticula** *Gld.*
Lake Tahoe and Carson River; Klamath River.
- 158 **Sphærium tumidum** *Baird.*
Sumass R., lat. 49, W. T.
- 159 **Sphærium Spokani** *Baird.*
Spokan R. to Kootenai R. lat. 49, W. T.
- 160 **Pisidium compressum** *Prime.*
"California"—North Atlantic States.
- 161 **Pisidium abditum** *Hald.*
"California"—Atlantic States.
- 162 **Pisidium occidentale** *Newc.*
Merced Lake, S. F., to Santa Cruz, Cal.
- 163 **Pisidium ultramontanum** *Prime.*
Canoe Creek, Pit River, California.
- 164 **Unio Oregonensis** *Lea.*
"Columbia River," Wheatley Museum.
- 165 **Margaritana falcata** *Gld.*
S. Cruz, California, north—Nevada; Montana.
- 166 **Anodonta angulata** *Lea.*
San Joaquin R., north; Idaho; Montana.
- 167 **Anodonta Californiensis** *Lea.*
Inland streams of Cal.—Colorado River.
- 168 **Anodonta Nuttalliana** *Lea.*
Willamette River; Idaho—Vancouver's I.?
- 169 **Anodonta Oregonensis** *Lea.*
Near San Francisco; Oregon; Montana.
- 170 **Anodonta Wahlamatensis** *Lea.*
Upper Sacramento R.; Idaho to British Col.
- 171 **Anodonta Kennerleyi** *Lea.*
Lake Chiloweyuck, lat. 49, W. T.

163^a Add Pisidium Harfordianum, Prime, MSS.

180^a. Modiola aterrima, Dall, Japan.

186^a Add Modiolaria vernica, Midd. St. Georges Id. Shumagin Is., Ural,
186^b " " denticulata, Dall, Acapulco. Cooks Inlet - Alaska

192^a Nucula exigua Lowerby, drift, San Pedro, Shepard.

193. = Acila Lyalli Baird, not castrensis, Hinds. Sta Barbara Channel 52 fms

- 172 *Mytilus Californianus* *Conr.*
Str. Fuca to San Diego—Q. Charlotte's I. *Shumagins, Crescent City, Catalina - S. Miguel*
- U. 173 *Mytilus edulis* *Linn.*
Monterey, north—Japan; N. Atlantic. *Universal, C. Espey*
- 174 *Mytilus edulis* var. *glomeratus* *Gld.*
S. F. Bay, on alga—deformed?
- 175 *Septifer bifurcatus* *Ree.* [Conr.]
Farallone Is. to San Diego. (Not *Myt. bifurc.*) *Catalina Id., Cal.*
- 176 *Modiola capax* *Conr.*
S. Barbara to S. Diego—Lower Cal. and Mex.
- U. 177 *Modiola modiolus* *Linn.*
Monterey, north—Asia; N. Atlantic. *Universal*
- 178 *Modiola fornicata* *Cpr.* *Catalina Id.*
Monterey to San Pedro.
- 179 *Modiola recta* *Conr.*
Santa Cruz to San Diego. *S. Diego tertiary*
- 180 *Modiola recta* var. *flabellata* *Gld.*
Str. of Fuca.
- 181 *Adula falcata* *Gld.*
San Francisco to San Diego—New Zealand?
- 182 *Adula stylina* *Cpr.*
Str. Fuca to Monterey.
- 183 *Lithophagus plumula* *Hant.*
Monterey to S. Diego—Mexico to Panama.
- 184 *Lithophagus attenuatus* *Desh.*
Monterey, south?—Lower Cal. to S. America.
- U. 185 *Modiolaria lævigata* *Gray.*
Str. Fuca—Japan; N. Atlantic. *Attu - Shumagins, Nunivak*
- 186 *Modiolaria marmorata* *Fbs.*
Str. Fuca—Europe.
- 187 *Crenella decussata* *Mont.*
Catalina I. 10—40 fms.—North Europe. *Kyska San Pedro, drift on beach, Shepard.*
- 188 *Barbatia gradata* *Sby.*
S. Barbara to S. Diego—Japan; Mex. and S. A.
- 189 *Axinæa intermedia* *Brod.?*
Monterey to San Diego—South America. *Catalina Id.*
- 190 *Axinæa septentrionalis* *Midd.*
Sitka to Alaska; "Ukamok I." lat. 64.
- 191 *Axinæa subobsoleta* *Cpr.*
Str. Fuca to Farallone Is. (=septent. var?)
- U. 192 *Nucula tenuis* *Mont.*
Str. Fuca to S. Barbara—Japan; N. Atlantic.
- 193 *Acila castrensis* *Hinds.*
Str. Fuca to San Diego—Sitka.

- 194 *Leda cœlata* *Hinds*.
Bodega Bay to San Diego; 6—20 fms. *Catalina Id.*
- 195 *Leda cuneata* *Sby.?*
Monterey to San Diego—Pern.
- 196 *Leda minuta* *O. Fabr.*
Str. Fuca—N. Atlantic.
- ? *V.* 197 *Leda fossa* *Baird*.
Str. Fuca—Vanc. I. 10—15 fms.
- 198 *Leda hamata* *Cpr.*
Santa Barbara 16—28 fms. *Catalina Id.*
- V.* 199 *Yoldia lanceolata* *J. Sby.*
Str. Fuca—Japan; N. Atlantic?
- V.* 200 *Yoldia amygdala*
Str. Fuca—Monterey 40 fms.
- 201 *Yoldia Cooperi* *Gabb.*
Santa Cruz to San Pedro—Beach, valves.
- 202 *Verticordia ornata* *D'Orb.*
Santa Barbara, 28 fms.—Japan; Peru? *Catalina Id.*
- 203 *Philobrya setosa* *Cpr.*
Santa Barbara—Cape St. Lucas; Acapulco. *Catalina Id.*
- 204 *Lima dehiscens* *Cowr.*
Monterey to S. Diego—(=*orientalis* Id? China.) *Catalina. San Miguel.*
- 205 *Limatula subauriculata* *Mont.*
Catalina I. to San Diego—N. Atlantic. *Catalina Id.*
- ? *V.* 206 *Pecten hastatus* *Sby.*
Str. Fuca to Santa Barbara—Sitka; Alaska. *Cooks Inlet. St Paul Id.*
- 207 *Pecten hastatus* var. *Hindsii* *Cpr.*
Str. Fuca to Santa Cruz—Sitka.
- 208 *Pecten paucicostatus* *Cpr.*
Santa Barbara (to San Pedro?) var? *Catalina Id.*
- 209 *Pecten æquisulcatus* *Cpr.*
Monterey to San Diego (= *ventricosus* var?)
- 210 *Pecten latiauritus* *Cowr.*
Monterey to San Diego.
- 211 *Pecten monotimeris* *Cowr.*
Monterey to San Diego; (= *latiauritus* var?) *Catalina Id.*
- 212 *Amusium caurinum* *Gld.*
Str. Fuca (to Santa Barbara?)—Japan.
- 213 *Janira dentata* *Sby.*
Monterey to San Diego—Gulf California. *Catalina Id.*
- 214 *Hiunites giganteus* *Gray.*
Str. Fuca to San Diego. *Crescent City. Cal. Schum. - Catalina Id. - Mtg*
- 215 *Ostrea lurida* *Cpr.*
Str. Fuca to San Diego.

199. Isanotsky Pass, Kodiak, Unga.

200^a. Goldia seminuda, Dall, St Pauls Harbor, Kodiak. 1:

200^b. Goldia Thraciaeformis - Stm, Unalaska.

200^c Goldia montereyensis Dall, Monterey, U.S.F.C.

211^a. Pecten Alaskensis - Dall, Sitka, Unga, Kodiak, Port Etches. ^{Panama deep}
compare P. Hoskynii, Forbes, Brit. seas? = Hoskynii + concentricus Fbs 1845 + fimbriatus + undigaa-
[Ogden, Bay of Biscay] [Eas, Philippi, 1844 Sicily, fossil + imbrifer, Loven 1846, Norway
teste Jeffreys.

214. Comp. H. Cortegii

Crag Moll. Bell. Ann. N. H. vi. p. 216. 1870.

222. ? not of Linne.

223. = L. Pacifica, Dall. Alaska, Mtj. Neesh Bay (= Helix Swanii, Cpr. MSS.)

223^a. Cleodora occidentalis, Dall. off Cala. coast.

223^b. Corolla spectabilis, Dall, near Aleutian Islands.

223^c. Clione elegantissima, Dall. " " "

223^d. Pareunodermon Pacificum, Dall, off Cala coast. Catalina I.

Also Atlanta two sp.

Carinaria

Salpa herculea, Dall, Unimak Pass.

" cymbiola, Dall. " "

Boltenia Beringi, Dall. St. Georges Id. Nunivak.

Cynthia pyriformis, Lin. Plover Bay, Avatcha.

montereyensis, Dall, Mtj.

Aspidicularia

Hf Pt Conception.

Hedmannia

" "

235^a. Add Tornatina harpa Dall. mss. Mtj. Victoria, Newcombe.

- 216 *Ostrea (lurida var?) laticaudata* Cpr.
San Francisco Bay to San Diego.
- 217 *Ostrea conchaphila* Cpr.
Catalina I. to Panama.
- 218 *Ostrea (conchaph. var?) expansa* Cpr.
San Diego—Margarita Bay.
- 219 *Ostrea (conchaph. var?) rufoides* Cpr.
San Diego.
2. 220 *Placunanomia macroschisma* Desh. *St. Paul Id.*
Str. Fuca to San Diego—Japan. *Attu-Shumagins, Crescent City - Poi Catal. Id.*
- 221 *Anomia lampe* Gray.
"Monterey, 60 fms." San Pedro to Mexico.
- 222 *Cavolina telemus* Linn.
Str. Fuca to Catalina I. Pelagic.
- 223 *Limacina arctica* Fabr.
Monterey?—N. Pacific; N. Atlantic.
- 224 *Bulla nebulosa* Gld.
Santa Barbara to S. Diego—Lower Cal.—Gulf. *Catalina Id -*
- 225 *Bulla Quoyi* Gray.
S. Barbara to S. Diego?—Mex. "N. Zealand."
- 226 *Bulla Adamsii* Mke.
San Pedro? to Panama.
- 227 *Haminea hydatis* Linn.
Str. Fuca—Europe.
- 228 *Haminea vesicula* Gld.
Santa Barbara to San Diego—Cape St. Lucas.
- 229 *Haminea virescens* Sbj. *Catalina Id -*
Catalina I. to San Diego.
- 230 *Atys nonscripta* A. Ad.
San Diego; (original locality unknown.)
- 231 *Tornatella punctocaelata* Cpr. *mtg*
Santa Cruz to San Diego.
2. 232 *Tornatina culcitella* Gld. *Catalina Id. Sta Barbara chan -*
Monterey to San Diego.
- 233 *Tornatina cerealis* Gld.
Monterey to San Diego.
- 234 *Tornatina eximia* Baird.
Monterey?—Vanc. I. 12 fms.
- 235 *Tornatina carinata* Cpr.
Santa Barbara to San Diego; Panama.
- 236 *Cylichna cylindracea* Linn. *Catalina Id -*
Monterey to San Diego—Europe.
- 237 *Cylichna (cyl. var?) attonsa* Cpr.
Str. Fuca to Santa Barbara.
- 237^a *Cylichna alba* Brown = *Bullinella a.* San Pedro Shepard

- 238 *Cylichna planata* *Cpr.*
San Diego. (Cassidy.)
- 239 *Cylichna inculta* *Gld.*
San Diego. (Blake ?)
- 240 *Volvula cylindrica* *Cpr.*
Santa Barbara. (Jewett.)
- 241 *Neaplysia Californica* *Cp.* *Catalina Id.*
Monterey to San Pedro.
- 242 *Navarchus inermis* *Cp.* *Catalina Id.*
Catalina I. to San Diego.
- 243 *Pleurophyllidea Californica* *Cp.*
San Diego—Vancouver's I. ?
- 244 *Doris sanguinea* *Cp.*
Barbara I. to S. Diego.
- 245 *Doris alabastrina* *Cp.*
San Diego; 1 specimen, l. w.
- 246 *Doris albopunctata* *Cp.*
Baulines Bay to Catalina I.
- 247 *Doris Sandiegensis* *Cp.*
Baulines Bay to San Diego.
- 248 *Doris Montereyensis* *Cp.*
San Francisco Bay to Barbara I.
- 249 *Triopa Catalinæ* *Cp.*
Baulines Bay to Catalina I.
- 250 *Tritonia Palmeri* *Cp.*
San Diego, l. w., sand, in December.
- 251 *Dendronotus iris* *Cp.*
Santa Barbara channel; in kelp.
- 252 *Æolis Barbarensis* *Cp.*
Santa Barbara beach, on algae.
- 253 *Phidiana iodinea* *Cp.*
Santa Cruz to San Diego.
- 254 *Flabellina opalescens* *Cp.*
Monterey to San Diego.
- 255 *Chioræra leonina* *Gld.*
Str. Fuca—Santa Barbara ?
- 256 *Ariolimax Columbianus* *Gld.*
Str. Fuca to Santa Barbara.
- 257 *Arion foliolatus* *Gld.*
Puget's Sound country—California ?
- 258 *Succinea Stretchiana* *Bland.*
Near Lake Tabo, Sierra Nevada.
- 259 *Succinea Gabbii* *Tryon.*
Northeast California and Southeast Oregon.

240. Monterey.

243^a. Lateribranchia festiva, Stearns, Mty. Catalina Id.

249^a. Triopa Carpenteri, Stearns, Mty.

255^a. albopapillosa, Dall Sitka.

255^b. Onchidella borealis, Dall, Sitka. Port Etches.

275. = Nyalina chersinella.

- 260 *Succinea Hawkinsii* Baird.
Near lat. 49, Wash. Territory.
- 261 *Succinea rusticana* Gld.
Oregon to Tulare Valley, Cal.
- 262 *Succinea Nuttalliana* Lea.
Wright's Lake, Cal. to Snake R. Oregon.
- 263 *Succinea lineata* W. G. Binn.
Northeast Cal. to Nebraska and Brit. Col.
- 264 *Succinea Oregonensis* Lea.
Oregon to Santa Cruz, Cal.
- 265 *Succinea Sillimani* Bland.
Humboldt Lake, Nevada.
- 266 *Vitrina Pfeifferi* Newc.
Carson Valley, Nev., to Owen's Valley, Cal.
- 267 *Binneya notabilis* Cp.
Barbara I. Cal.; southeast side only.
- 268 *Hyalina arborea* Say.
San Gorg. Pass, Cal.—Montana—E. States.
- 269 *Hyalina Breweri* Newc.
"Big Trees," Calaveras Co., north.
- 270 *Macrocyclis Newberryana* W. G. Binn.
Temescal Mountains, near San Diego.
- 271 *Macrocyclis Vancouverensis* Lea.
Santa Cruz, Cal. north; Idaho.
- 272 *Macrocyclis sportella* Gld.
Shasta Co., Cal., to Puget's Sound.
- 273 *Macrocyclis Voyana* Newc.
Cañon Creek, Trinity Co., Cal.
- 274 *Conulus chersina* Say.
San Gorgonio Pass to Lake Tahoe—E. States. *attu. Petropavlovsk,*
- 275 *Conulus? chersinella* Dall.
"Big Trees," Calaveras Co., Cal.
- 276 *Pseudohyalina milium* Morse?
Monterey to Nevada Co., Cal.—Maine.
- 277 *Pseudohyalina minuscula* Binn.
San Bernardino, eastward to Maine—W. I.
- 278 *Pseudohyalina conspecta* Bland.
San Francisco; Monterey.
- 279 *Patula Hornii* Gabb.
Fort Grant, Arizona.
- 280 *Patula Whitneyi* Newc.
Near Lake Tahoe, California.
- 281 *Patula Cronkhitei* Newc.
Alameda Co., Cal., to Klamath Lake.

- 282 *Patula striatella* *Anth.*
Montana?—Northern States to Slave Lake.
- 283 *Patula Durantii* *Newc.*
Barbara I., Cal.; southeast side only.
- 284 *Helicodiscus?* *polygyrella* *Bld.*
Bitter-root Mountains, Montana; in moss.
- 285 *Anguispira solitaria* *Say.*
Montana? Missouri to Lake Erie.
- 286 *Anguispira Cooperi* *W. G. Binn.*
Montana to Arizona; in mountains.
- 287 *Anguispira strigosa* *Gld.*
Montana to Arizona; in mountains.
- 288 *Anguispira?* *Idahoensis* *Newc.*
Eastern Idaho; in mountains.
- 289 *Helix Hillebrandi* *Newc.*
Mariposa and Tuolumne Cos., Cal.
- 290 *Helix Mormonum* *Pfiff.*
Fresno Co. to Shasta Co., Cal.
- 291 *Helix sequoicola* *Cp.*
Santa Cruz Co., Cal.
- 292 *Helix infumata* *Gld.*
Contra Costa Co. to Mendocino Co., Cal.
- 293 *Helix fidelis* *Gray.*
Humboldt Bay, Cal., to Vancouver's I.
- 294 *Helix Dupetithouarsi* *Desh.*
Monterey, Cal. (Point Cypress.)
- 295 *Helix Ayresiana* *Newc.*
Santa Cruz I., Cal. (Newcomb Coll.)
- 296 *Helix Traskii* *Newc.*
Near Los Angeles to San Luis Obispo, Cal.
- 297 *Helix rufocincta* *Newc.*
Catalina I., Cal.; ~~San Diego?~~
- 298 *Helix Gabbii* *Newc.*
Clemente I., Cal.; ~~Catalina I.~~
- 299 *Helix facta* *Newc.*
Barbara and Nicolas Is., Cal.
- 300 *Helix Rowellii* *Newc.*
"Arizona?" (Frick.)
- 301 *Helix Carpenteri* *Newc.*
Tulare Valley. Very rare.
- 302 *Helix Tryoni* *Newc.*
Barbara and Nicolas Is., Cal.
- 303 *Helix intercisca* *W. G. Binn.*
"Oregon"—San Miguel I., Cal.?

291. = hybrid of Dupetitouvansi?

294^a Helix Diablaensis, Cooper.

319. Is certainly the same as 318.

- 304 **Helix crebristriata** *Newc.*
Clemente I.; San Miguel I., Cal. ?
- 305 **Helix Kellettii** *Fbs.*
Catalina I., San Diego and south.
- 306 **Helix Californiensis** *Lea.*
Monterey, Cal. Rare.
- 307 **Helix redimita** *W. G. Binn.*
San Francisco to Monterey.
- 308 **Helix Nickliniana** *Lea.*
Santa Cruz to Mendocino Co., Cal.
- 309 **Helix Bridgesii** *Newc.*
Contra Costa Co., Cal. (=Nickl. var.?)
- 310 **Helix arrosa** *Gld.*
Santa Cruz to Mendocino Co., Cal.
- 311 **Helix exarata** *Pfeiff.*
Santa Cruz Co., Cal.; Marin Co. ?
- 312 **Helix ramentosa** *Gld.*
Napa Co. to Santa Clara Co., Cal.
- 313 **Helix reticulata** *Pfeiff.*
Locality unknown; (=ramentosa var.?)
- 314 **Helix tudiculata** *Binn.*
Placer Co. to S. Diego, Cal.; Oregon ? *Santa Barbara - Baker - smooth var.*
- 315 **Helix Townsendiana** *Lea.*
Crescent City, Cal., north; Montana.
- 316 **Helix anachoreta** *W. G. Binn.*
California ? Oregon. (Rowell Mus.)
- 317 **Odotropis devia** *Gld.*
Oregon to Vancouver's I.
- 318 **Aplodon Columbiana** *Lea.*
Wash. Territory to Santa Cruz, Cal.; Sitka ? *St. George & Paul Ids. ?*
- 319 **Aplodon germana** *Gld.*
"Oregon." Probably = Columb. var.
- 320 **Triodopsis Mullani** *Bld.*
Western Mountains of Montana.
- 321 **Triodopsis loricata** *Gld.*
Near San Francisco to Klamath Co., Cal.
- 322 **Pupa hordacea** *Gabb.*
Fort Grant, Arizona.
- 323 **Pupa Arizonensis** *Gabb.*
Fort Grant, Arizona.
- 324 **Isthmia corpulenta** *Morse.*
Lake Tahoe to Washoe Co., Nev.
- 325 **Pupilla Californica** *Rowell*
Near San Francisco to Monterey.

- 326 *Pupilla Rowellii* *Newe*.
Near Oakland, Alameda Co.
- 327 *Pedipes unisulcata* *Cp.*
San Pedro, Cal. ; on beach.
- 328 *Pedipes lirata* *W. G. Blun.*
Cape St. Lucas, Lower Cal.—San Diego †
- 329 *Melampus olivaceus* *Cpr.*
Salinas River, Cal., to Mazatlan.
- 330 *Limnæa stagnalis* *Lim.*
Ruby Valley, Utah, north—circumboreal.
- 331 *Limnæa lepida* *Gld.*
"Lake Vancouver," Wash. Ter. ; Oregon.
- 332 *Limnophysa Rowellii* *Tryon.*
Near San Francisco.
- 333 *Limnophysa palustris* *Mull.*
Near San Francisco—circumboreal.
- 334 *Limnophysa proxima* *Lea.*
Alameda County, Cal., to Oregon.
- 335 *Limnophysa Gabbii* *Tryon.*
Clear Lake, California.
- 336 *Limnophysa Adelinae* *Tryon.*
Near San Francisco, California.
- 337 *Limnophysa Traskii* *Tryon.*
Mountain Lake, San Francisco Co., Cal.
- 338 *Limnophysa umbrosa* *Say.*
Near San Francisco, Cal. ; Eastern States.
- 339 *Limnophysa bulimoides* *Lea.*
San Francisco, north and east ; S. Diego †
- 340 *Limnophysa solida* *Lea.*
Willamette River, Oregon.
- 341 *Limnophysa ferruginea* *Hald.*
"Oregon." (=humilis *Say.*?)
- 342 *Limnophysa humilis* *Say.*
Alameda County, Cal. ; Eastern States.
- 343 *Limnophysa Sumassi* *Baird.*
Oregon to British Columbia.
- 344 *Limnophysa Binneyi* *Tryon.*
"Hell Gate River," Montana.
- 345 *Limnophysa Nuttalliana* *Lea.*
San Francisco to Oregon.
- 346 *Limnophysa Tryonii* *Lea.*
Alameda County, California.
- 347 *Limnophysa obrussa* *Say.*
"Oakland," Cal. ; Eastern States.

348^a Limnæa (Bulinna) Palmeri, Dall, Yaqui River near Guaymas.

365. Costabella costata, Dall, An. N. Y. Lycæum 12 p. 238. 1870.

- 348 *Limnophysa caperata* *Say.*
"S. F. to Oregon." Eastern States.
- 349 *Acella*
Spring on Spokan Plain, W. T.
- 350 *Physa Grosvenorii* *Lea.*
Dayton, Nevada. (Wheatley Mus.)—Kansas.
- 351 *Physa coniformis* *Tryon.*
Humboldt River, Nevada.
- 352 *Physa Cooperii* *Tryon.*
Crane Lake Valley, northeast Cal.
- 353 *Physa sparsestriata* *Tryon.*
San Joaquin Valley, Cal.
- 354 *Physa diaphana* *Tryon.*
Oakland, Alameda Co., Cal.
- 355 *Physa malleata* *Tryon.*
Goose Lake Valley, N. E. Cal.—Montana.
- 356 *Physa Nuttallii* *Lea.*
Lewis River, Idaho.
- 357 *Physa distinguenda* *Tryon.*
Marysville to Stockton, Cal.
- 358 *Physa politissima* *Tryon.*
Sacramento, California.
- 359 *Physa parva* *Lea.*
Little Valley, Nev. (Wheatley Mus.)
- 360 *Physa propinqua* *Tryon.*
Jordan Creek, southwest Idaho.
- 361 *Physa gyrina* *Say.*
Carson River, Nev.; Utah. Eastern States.
- 362 *Physa ampullacea* *Gld.*
Lake Osoyoos, lat. 49, Wash. Ter.
- 363 *Physa occidentalis* *Tryon.*
Most of Cal. northward; Idaho.
- 364 *Physa Gabbii* *Tryon.*
Mountain Lake, S. F. Co., to Los Angeles.
- 365 *Physa costata* *Newc.*
Clear Lake, California.
- 366 *Physa virginea* *Gld.*
• Sacramento River, Cal.; San Francisco?
- 367 *Physa venusta* *Lea.*
Near Vancouver, Columbia R., W. T.
- 368 *Physa humerosa* *Gld.*
Colorado R., Cal.; Pecos R., Texas.
- 369 *Physa virgata* *Gld.*
S. Pedro to S. Diego; Mojave R. to Gila R.

- 370 *Physa triticea* *Lea.*
Shasta Co., Cal.; South and East Oregon.
- 371 *Physa concolor* *Hald.*
"Oregon"—probably young of another.
- 372 *Physa Traskii* *Lea.*
Los Angeles River, Cal.
- 373 *Physa Blandii* *Lea.*
Marysville, California.
- 374 *Aplexus hypnorum* *Linn.*
Montana? Russian Am.—circumboreal.
- 375 *Aplexus hordaceus* *Lea.*
Near Puget's Sound, W. T.; Vancouver's I.
- 376 *Planorbis subcrenatus* *Cpr.*
Oregon; Wash. Ter.? Vancouver's I.
- 377 *Planorbis gracilentus* *Gld.*
Colorado Desert, California.
- 378 *Planorbis tumens* *Cpr.*
San Francisco to Petaluma; Mazatlan.
- 379 *Planorbis glabratus* *Say.*
New Mexico! (=sinuosus *Bourq.*?)
- 380 *Planorbis Oregonensis* *Tryon.*
Nevada; Oregon; Idaho. (Hot spring.)
- 381 *Gyraulus vermicularis* *Gld.*
Walla Walla, W. T.; Oregon.
- 382 *Gyraulus parvus* *Say.*
Ruby Valley, Utah; Montana; Eastern States.
- 383 *Helisoma ammon* *Gld.*
Colorado R.; Kern Lake to Klamath Lake.
- 384 *Helisoma corpulentus* *Say.*
Columbia River, east to Lake Winnipeg.
- 385 *Helisoma trivolvis* *Say.*
Whole United States; Cuba.
- 386 *Menetus opercularis* *Gld.*
Santa Cruz, Cal., to Str. Fuca, W. T.
- 387 *Carinifex Newberryi* *Lea.*
Clear Lake, Cal., to Klamath Lake, Or.
- 388 *Pompholyx effusa* *Lea.*
Carson River, Nev., to Pit River, Cal.
- 389 *Ancylus Kootaniensis* *Baird.*
Spokane to Kootanie River, W. T.
- 390 *Ancylus altus* *Tryon.*
Klamath River, California.
- 391 *Ancylus Newberryi* *Lea.*
Klamath Lake, Oregon.

- 386^a. Add Carinifex Birneyi, Meek, Proc. Phil. Acad. 1870.
- 387^a. Add Vorticifex Joyoni, Meek, Nevada Test. An. N. Y. Lyc. ix, p. 353.
- 388^a. Add Pompholyx solida, Dall, An. N. Y. Lyc. ix, p. 335. pl. ii. fig. 7a.
Clear Lake, Nevada.

399. Siphonaria (Liriola) thersites, Dall, Ann. J. Conch. vi. p. 1870. Sitka.

399^a. Add Siph. (Liriola) peltoides, Cpr. Mty. Mag. Catalina, Galapagos.

This may be an Anisomyon, and is Canfieldia, Cpr. MSS.

399^b Siphonaria Porannani, Stearns, Zool. Proc. IV. 249. pl. I fig 4.4a. Cat. 2d? 3. n. 13. 1. 12

400^a Zanithina

a. ad. see H. Knoeker, R. N. paper on Pteropods. P. Z. S.

402. = 401?

408. Tonicella lineata, Cpr.

OF WEST COAST MOLLUSCA.

- 392 *Ancylus crassus* *Hald.*
"Oregon." (Nuttall coll., 1834.)
- 393 *Ancylus caurinus* *W. Cp.*
Black River, Puget's Sound, W. T.
- 394 *Ancylus patelloides* *Lea.*
San Francisco to Santa Cruz, Cal.
- 395 *Ancylus fragilis* *Tryon.*
Laguna Honda, near San Francisco.
- 396 *Ancylus subrotundatus* *Tryon.*
Umpqua River, Oregon.
- 397 *Ancylus Nuttallii* *Hald.*
"Oregon." (Nuttall coll. 1834.)
- 398 *Gundlachia Californica* *Rowl.*
Feather River, Cal., near mouth.
- 399 *Siphonaria thersites* *Cpr.*
Nceah Bay; Str. Fuca, W. T.
- 400 *Ianthina globosa* *Sw.*?
S. Diego to Cape St. Lucas—Atlantic.
- 401 *Dentalium pretiosum* *Nutt.*
"California," (Nuttall.) Mexico!
- 402 *Dentalium Indianorum* *Cpr.*
Str. Fuca to Santa Barbara. *Monterey-*
- 403 *Dentalium rectius* *Cpr.*
Str. Fuca.
- 404 *Dentalium semipolitum* *Br. and Sby.*
San Diego to Gulf of California.
- 405 *Dentalium hexagonum* *Sby.*
Santa Barbara to Mexico—"E. Indies, China."
- 406 *Crypochiton Stelleri* *Midd.*
Str. Fuca to Monterey—Kamtschatka. *Uta-Shumagin's, Cat. deina and San Miguel Ids.*
- 407 *Katherina tunicata* *Wood.*
Str. Fuca to Monterey—Sitka. *Cook's Inlet - Unalaska - Uta-*
- U.* 408 *Tonicia lineata* *Wood.*
Str. Fuca to Monterey—Sitka; Kamtschatka.
- 409 *Tonicia submarmorea* *Midd.*
Str. Fuca to Oregon—Kamtschatka.
- 410 *Mopalia muscosa* *Gld.*
Str. Fuca to San Diego.
- 411 *Mopalia Wosnessenskii* *Midd.*
Str. Fuca to Santa Cruz—Sitka.
- 412 *Mopalia Kennerleyi* *Cpr.*
Str. Fuca, W. T.
- U.* 413 *Mopalia Kennerleyi* *var?* *Swannii* *Cpr.*
Nceah Bay, W. T.

Ischnochiton radians, *Cpl.*

Ischnochiton Cooperi, *Cpl.*

- 414 **Mopalia Hindsii** *Gray.*
Str. Fuca to Monterey.
- 415 **Mopalia Simpsonii** *Gray.*
San Francisco, California.
- 416 **Mopalia vespertina** *Gld.*
Str. Fuca to Monterey, Cal.
- 417 **Mopalia lignosa** *Gld.*
Str. Fuca to Monterey—Sitka.
- 418 **Mopalia acuta** *Cpr.*
"Monterey," (Nuttall coll.)
- 419 **Mopalia?** *sinuata* *Cpr.*
Str. Fuca, W. T.
- 420 **Mopalia?** *imporcata* *Cpr.*
Str. Fuca, W. T.
- 421 **Acanthopleura scabra** *Roe.*
Str. Fuca to Santa Barbara.
- 422 **Acanthopleura fluxa** *Cpr.*
Catalina I., or Santa Barbara I., Cal.
- 423 **Ischnochiton Magdalensis** *Hds.*
Monterey to San Diego—Lower Cal.
- 424 **Ischnochiton veredentiens** *Cpr.*
Monterey, or islands off South California.
- 425 **Lepidopleurus regularis** *Cpr.*
Monterey or southward.
- 426 **Lepidopleurus scabricostatus** *Cpr.*
Catalina I., 20 fms., rare.
- 427 **Lepidopleurus pectinatus** *Cpr.*
Catalina I., l. w., rare.
- 428 **Lepidopleurus Mertensii** *Midd.*
Str. Fuca to Monterey.
- 429 **Trachydermon retiporosus** *Cpr.*
Str. Fuca, W. T.
- 30 **Trachydermon interstinctus** *Gld.*
Puget's Sound to Monterey.
- 431 **Trachydermon trifidus** *Cpr.*
Str. Fuca, W. T.
- 432 **Trachydermon dentiens** *Gld.*
Puget's Sound, W. T. ?
- 433 **Trachydermon pseudodentiens** *Cpr.*
Str. Fuca, W. T.
- 434 **Trachydermon gothicus** *Cpr.*
Catalina I., 20 fms., l. w. ?
- 435 **Trachydermon Hartwegii** *Cpr.*
San Francisco to Monterey.

417. Is M. merckii, Midd.

421. Is Nuttallina scabra, Cpr.

423. Is Lepidoradsia magdalenensis, Cpr.

425. Is Ischnoradsia regularis, Cpr.
add Ischnoradsia trifida, Cpr. Sitka.

434^a add Trachydermon fallax Cpr.

435. Is Chaetopleura Hartwegii, Cpr.

Symetrozephyrus Callassii Midd. ~~Sitka~~ Nunivak.

add Callisto chiton fimbriatus, Cpr.

Lepto chiton rugatus, Cpr.

Placiphorella latior, Cpr.

Chaetopleura gemma, Cpr.

Ischnochiton radians, Cpr.

Ischnochiton Cooperi, Cpr.

436. Is Lepidopleurus Nuttallii, Cpr.

439. Is Leptochiton internexus, Cpr.

441. Is not a Nacella. Crescent City Cal. Id.

442. Is a typical Acmaea.

443. Is an abnormal Liriola peltoides Cpr. from examination of the type.

444. This and the two following do not belong to the genus Nacella but are probably Acmaeids.

445. Is a Collisella.

446. Comp. Patella pygmaea, Dunk. Moll. Jap. p. 24 pl. iii fig. 20.
The normal var. is casta Cpr. MSS. probably a Collisella.

446^a. 'Nacella? rosea, Dall. Cal. Acad. iv. 270. pls. fig. 2. Strophomagus. - Kyska

447^a Acmaea (Collisella) peramabilis, Dall. Cal. Acad. l. c. 446^a Strophomagus

448. Acmaea, subgenus Collisella, Dall. Add var. ochracea, Dall. _{mtg. Cal.}

449. Type of subg. Collisella. Add var. nacelloides, Dall. 1st July, Cal.

450. A good species of Collisella. Lives on Chlorostoma funebre.

451. Collisella persona.

452. Collisella scabra. Sitka? V. Id. Kennicott.

453. Collisella spectrum.

454. This species? was probably founded on a young pelta.
What it might have been is now impossible to determine.

455. A good species.

455^a Add Collisella sybaritica, Dall = carneosa Cpr. St George Id., Unal. Alto.

457. Not a Scurria. Acmaea mitra, Esch. type of the genus
as now restricted. St. Paul's Id. Bering Sea, most northern point. Kyska?

- 436 *Trachydermon Nuttallii* Cpr. ? = jun of 433 + 435 Cpr.
Str. Fuca to Monterey.
- 437 *Trachydermon flectens* Cpr.
Str. Fuca to San Diego.
- 438 *Callochiton fimbriatus* Cpr., (Mss.)
Catalina (or other?) I., Cal.
- 439 *Leptochiton nexus* Cpr.
Catalina I., Cal.
- 440 *Acanthochites avicula* Cpr.
Monterey? Catalina I. 8—20 fms.
- 441 *Nacella instabilis* Gld.
Str. Fuca to Monterey.
- 442 *Nacella insessa* Hds.
Baulines Bay to San Diego. Catalina Id. Mtg. San Miguel -
- 443 *Nacella subspiralis* Cpr.
Catalina I. 6—10 fms.
- 444 *Nacella depicta* Hds.
Santa Barbara to San Diego.
- 445 *Nacella paleacea* Gld.
Monterey to Santa Barbara. Catalina Id - one specimen -
- 446 *Nacella triangularis* Cpr.
Baulines Bay to Monterey.
- 447 *Tyrodina fungina* Gabb.
Barbara I., Cal. San Pedro Shepard, San Diego Miss Lowe.
- U. 448 *Acmæa patina* Esch.
Str. Fuca to San Diego—Mazatlan—Sitka—Athu. Crescent City - Kenai pen.
- U. 449 *Acmæa pelta* Esch.
Str. Fuca to San Diego—Sitka—Athu. Kenai pen. Crescent City.
- 450 *Acmæa pelta* var. *Asmi* Midd.
Baulines Bay to Monterey—Sitka? Catalina Id -
- U. 451 *Acmæa persona* Esch.
Str. Fuca to San Diego—Mazatlan—Sitka. Kenai Crescent City.
- 452 *Acmæa scabra* Nutt.
Baulines Bay to San Diego—Mazatlan.
- 453 *Acmæa spectrum* Nutt.
Cape Mendocino to San Diego.
- 454 *Acmæa pileolus* Midd.
Sitka.
- 455 *Acmæa pileolus* var. *rosacea* Cpr.
Monterey to Santa Barbara. Catalina Id.
- 456 *Lottia gigantea* Gray. (Sly.?)
Farallone Is. to San Diego—S. A.? Catalina Id -
- U. 457 *Scurria mitra* Esch.
Str. Fuca to San Diego—Sitka. Cooks Inlet. Crescent City
Catalina Id -

- 458 *Scurria mitra* var? *funiculata* Cpr.
Monterey; deep water.
- U. 459 *Lepeta cœcoides* Cpr.
Str. Fuca to Farallone Is.
- 460 *Rowellia radiata* Cp.
Farallone Is. to Catalina I.
- 461 *Fissurella volcano* Ree.
Santa Cruz to San Diego. *Cat. Id. Mty. San Miguel*
- 462 *Fissurella violacea* Esch.
Crescent City, Cal., to Sitka? S. Amer.
- 463 *Glyphis aspera* Esch.
Str. Fuca to Santa Barbara—Sitka. *Cat. Id. Miguel*
- 464 *Glyphis densiclathrata* Ree.
Baulines Bay to San Diego. = 463 var
- 465 *Lucapina crenulata* Shy.
Monterey to San Diego. *Catalina & Mty. San Miguel*
- 466 *Puncturella cucullata* Gld.
Str. Fuca to Monterey.
- U. 467 *Puncturella galeata* Gld.
Str. Fuca, W. T.
- 468 *Puncturella Cooperi* Cpr.
Catalina I. 40 to 120 fms.
- 469 *Clypidella callomarginata* Cpr.
Lobitos to San Diego.
- 470 *Clypidella bimaculata* Dall, (Mss)
Farallone Is. to Barbara I. *San Miguel*
- 471 *Emarginula bella* Gabb.
Santa Cruz to Monterey.
- 472 *Haliotis Cracherodii* Leach
Farallone Is. to San Diego—Lower Cal. *Catalina, San Miguel - Mty.*
- 473 *Haliotis splendens* Ree.
Catalina I. to San Diego—Lower Cal. *Catalina,*
- 474 *Haliotis corrugata* Gray.
Santa Barbara to San Diego. *Catalina*
- 475 *Haliotis rufescens* Sw.
Farallone Is. to San Nicolas I.—Galapagos? *Catalina, San Miguel - Mty.*
- 476 *Haliotis Kamtschatkana* Jonas.
Str. Fuca to Monterey—Japan. *Kenai. mty.*
- 477 *Phasianella compta* Gld.
San Pedro to Mazatlan. *Catalina*
- 478 *Phasianella compta* var? *pulloides*
Santa Cruz to San Diego. *[Cpr. Catalina - San Miguel, Mty.]*
- 479 *Pomaulax undosus* Wood.
Santa Barbara to Cape St. Lucas—Monterey? *Catalina, San Miguel.*

458. May be var. of A. mitra or young of Patella pallida, Gld + Lamani, Schrenck.

459. Normal form of what Midd. desc. as Cryptobranchia concentrica, subg. of Lepetā. Sitka, Oruga. 2-30 fms. Unalaska, Cook's Inlet.

460. Gadinia reticulata, Sley. Subg. is imaginary and will not stand.

464. The densiclathrata of Rvc. = aspera jun. The densiclathrata of Cala. conchologists is G. var. murina, of Cpe. MSS. Mtg. Cal. Miguel

470. Is probably an extreme var. of the preceding. Fissurellidea not Clypidella.

490. Is Cyniscus, a. ad., and is Collonia Forickii, Crosse.

495. Add var. fluctuatum Dall. Mtg. Catalina - San Miguel -

497. Better Omphalius, from the shell. characters; if these genera are good for anything.

499. Sitka?

500. A var. with three blue sutural ribs, and another with alternate dark brown + yellow radiating patches. Mtg.

- 480 *Pachypoma gibberosum* Chem.
Str. Fuca to Catalina I.—~~New Zealand~~ Catalina, Mty.
- 481 *Leptothyra sanguinea* Cpr.
Str. Fuca to San Diego—Japan—Europe? Mty. Catalina, rare
- 482 *Leptothyra bacula* Cpr.
Santa Barbara to Catalina I. Catalina Id. abundant—lw. & deep w.
- 483 *Leptothyra paucicostata* Dall, (Mss.)
Monterey.
- 484 *Liotia fenestrata* Cpr.
Monterey to Catalina I. Mty. Catalina—
- 485 *Liotia acuticostata* Cpr.
Monterey to Catalina I.
- 486 *Ethalia supravallata* Cpr.
San Diego—shell washings.
- 487 *Ethalia invallata* Cpr.
San Diego—shell washings—var?
- 488 *Livona picoides* Gld.
Pt. Conception or San Buenaventura? Cal.
- 489 *Trochiscus Norrisii* Sbj.
Santa Barbara to San Diego—Monterey | Mty. Catalina. San Miguel—
- 490 *Trochiscus convexus* Cpr.
"Monterey," (Jewett coll.) not a Trochiscus.
- 491 *Chlorostoma funebre* A. Ad.
Str. Fuca to San Diego—Sitka. Mty. Catalina—San Miguel—
- 492 *Chlorostoma funebre* var. suba-
Neeah Bay, W. T. (Young?) [pertum Cpr.
- 493 *Chlorostoma gallina* Fbs.
Cruz I., Cal., to Margarita Bay, Lower Cal.
- 494 *Chlorostoma gallina* var. pyriformis
San Diego. [Gld.
- 495 *Chlorostoma brunneum* Phil. Catalina Id.—Mty.
Cape Mendocino to Santa Barbara.
- 496 *Chlorostoma Pfeifferi* Phil. San Miguel Id.—Mty.
Baulines Bay to Nicolas I., Cal.
- 497 *Chlorostoma aureotinctum* Fbs.
Monterey? Santa Barbara to Lower Cal. Catalina Id.—
- 498 *Omphalius fuscescens* Phil. Catalina Id.—
Catalina I. to San Diego, Cal.
- 499 *Calliostoma canaliculatum* Mart. Mty. Catalina Id.—
Str. Fuca to San Diego, Cal.
- 500 *Calliostoma costatum* Mart. Mty.
Str. Fuca to Barbara I., Cal.—Sitka.
- 501 *Calliostoma annulatum* Mart. Mty. Catalina
Str. Fuca to San Diego.

- 502 *Calliostoma variegatum* *Cpr.*
Str. Fuca, W. T.
- 503 *Calliostoma tricolor* *Gabb.*
New Year Point to San Diego.
- 504 *Calliostoma supragranosum* *Cpr.*
Santa Cruz to Monterey.
- 505 *Calliostoma gemmulatum* *Cpr.*
San Pedro to San Diego.
- 506 *Calliostoma splendens* *Cp.*
Monterey to Catalina I.
- 507 *Thalotia coffea* *Gabb.*
Monterey, 20 fms. (S. Barb. and S. Pedro, F.)
- 508 *Phoreus pulligo* *Mart.*
Str. Fuca to Monterey—Sitka.
- 509 *Gibbula parcipicta* *Cpr.*
Str. Fuca to Santa Barbara.
- 510 *Gibbula optabilis* *Cpr.*
San Pedro, Cal. ? (1, Palmer coll.)
- 511 *Gibbula funiculata* *Cpr.*
Necah Bay, W. T.
- 512 *Gibbula succincta* *Cpr.*
Str. Fuca to Barbara I., Cal.
- 513 *Gibbula lacunata* *Cpr.*
Necah Bay, W. T.
- 514 *Solariella peramabilis* *Cpr.*
Catalina I., 40—120 fms.
- 515 *Margarita cidaris* *A. Ad.*
Necah Bay, W. T.
- 516 *Margarita pupilla* *Gld.*
Str. Fuca to Monterey.
- U. 517 *Margarita pupilla* *var. salmonea* *Cpr.*
Monterey to Catalina I.
- 518 *Margarita acuticostata* *Cpr.*
Baulines Bay to Santa Barbara.
- U. 519 *Margarita inflata* *Cpr.*
Str. Fuca, W. T.
- 520 *Margarita lirulata* *Cpr.*
Str. Fuca to Baulines Bay.
- 521 *Margarita VahlII* *Moll.*
Str. Fuca, W. T.—Greenland.
- 522 *Margarita tenuisculpta* *Cpr.*
Str. Fuca, W. T.
- U. 523 *Margarita helicina* *Mont.*
Necah Bay, W. T.—North Atlantic. *Cook's Inlet*

505^a. Calliostoma gloriosum, Dall, Mtg. Soquel. (Mtg. Mrs Lambert)

Add C. affinis, Dall, B. of Yedo, Japan.

506. Comp. Costatum jun.

506^a. Add. C. Palmeri, Dall, Guaymas.

508^a. Add Gibbula Canfieldii, Dall. Mtg.

509 + 510 + 511 + 512 + 513? + 518 + 520 + 522 = Margarita lineolata, vars.

516 + 517 + 519 = M. pupilla, vars.

523^a Margarita sp. obscura? like Eastern & Arctic form of Coalthony. Ural.
C. Esperby

524^a Margarita sp. vorticifera, Dall. Flattened with expanded mouth, a good subgenus. Unalaska, Atka.

- 524 *Galerus fastigiatus* *Gld.*
Puget's Sound to Str. Fuca—Vancouver's I.
- 525 *Galerus contortus* *Cpr.*
Lobitos Creek to Santa Barbara. *Catalina Id - Mtg?*
- 526 *Crucibulum spinosum* *Sby.*
San Pedro south to Peru, South America. *Monterey, Harford - Stearns.*
- 527 *Crucibulum scutellatum* *Gray.*
Santa Cruz, Cal.—Lower Cal. to Peru.
- 528 *Crepidula aculeata* *Gmel.*
Monterey south—Asia—Atlantic. *Catalina*
- 529 *Crepidula dorsata* *Brod.*
Str. Fuca to Santa Barbara?—Peru. *Catalina?*
- 530 *Crepidula dorsata* *var. ? lingulata* *Gld.*
Str. Fuca to Mazatlan.
- 531 *Crepidula excavata* *Brod.*
Santa Barbara? Sitka? Mexico to Peru.
- 532 *Crepidula adunca* *Sby.*
Str. Fuca to Santa Barbara—Mexico? *San Miguel - Catalina -*
- 533 *Crepidula rugosa* *Nutt.*
Sta. Barbara to S. Diego—Mex. to Peru?
- 534 *Crepidula navicelloides* *Nutt.*
Str. Fuca to Santa Barbara. *Crescent City Catalina -*
- 535 *Crepidula navicelloides* *var. num-*
Str. Fuca to San Pedro. *[maria Gld.]*
- 536 *Crepidula navicelloides* *var. fimbri-*
Str. Fuca. *[ata Ree.]*
- 537 *Crepidula navicelloides* *var. explan-*
Str. Fuca to San Pedro. *[ata Gld.]*
- 538 *Hipponyx cranioides* *Cpr.* *Catalina*
Str. Fuca to Santa Barbara.
- 539 *Hipponyx antiquatus* *Lin.*
Monterey south?—S. America. Atlantic. *Crescent City Cal. & Peru.*
- 540 *Hipponyx serratus* *Cpr.*
Santa Barbara south—Mazatlan.
- 541 *Hipponyx tumens* *Cpr.* *Catalina - San Miguel -*
Monterey to San Diego and islands.
- 542 *Serpulorbis squamigerus* *Cpr.*
Santa Barbara to San Diego.
- 543 *Bivonia compacta* *Cpr.*
Neeah Bay, W. T.
- 544 *Petalocochus macrophragma* *Cpr.*
San Diego to Panama.
- 545 *Spiroglyphus lituella* *Morch.*
Santa Barbara to Cape St. Lucas.

- 546 *Cœcum crebricinctum* *Cpr.*
Monterey to San Diego.
- 547 *Cœcum Cooperi* *Cpr.*
San Diego Bay, 8—10 fms.
- 548 *Turritella Cooperi* *Cpr.*
Santa Barbara to San Diego.
- 549 *Turritella Jewettii* *Cpr.*
Santa Barbara; (Jewett coll., fossil !)
- 550 *Mesalia lacteola* *Cpr.*
Puget's Sound to Vancouver's I.
- 551 *Mesalia lacteola* *var.?* *subplanata* *Cpr.*
Str. Fuca, W. T.
- 552 *Mesalia tenuisculpta* *Cpr.*
San Diego Bay, 4—6 fms., mud.
- 553 *Cerithidea sacrata* *Gld.*
Baulines Bay to San Diego—Mazatlan?
- 554 *Bittium filosum* *Gld.*
Str. Fuca to Monterey. *Sitka, Cook's Inlet.*
- 555 *Bittium filosum* *var.?* *esuriens* *Cpr.*
Str. Fuca to San Pedro.
- 556 *Bittium attenuatum* *Cpr.*
Str. Fuca to Monterey.
- 557 *Bittium quadriflatum* *Cpr.*
Monterey to San Diego.
- 558 *Bittium asperum* *Cpr.*
Santa Barbara to Catalina I.
- 559 *Bittium armillatum* *Cpr.*
Farallone Is. to San Diego.
- 560 *Bittium fastigiatum* *Cpr.*
Santa Barbara; (Jewett coll.)
- 561 *Goniobasis occata* *Hds.*
Upper Sacramento River.
- 562 *Goniobasis plicifera* *Lea.*
Willamette R., Oregon, to Montana.
- 563 *Goniobasis rudens* *Live.*
Sacramento and Columbia Rivers.
- 564 *Goniobasis silicula* *Gld.*
Shasta R., Cal., north, near coast.
- 565 *Goniobasis Bairdiana* *Lea.*
"Near Astoria," Oregon. (Expl. Exp.)
- 566 *Goniobasis Draytonii* *Lea.*
Napa and Butte Counties, Cal.—Oregon.
- 567 *Goniobasis nigrina* *Lea.*
Napa Co. to Shasta Co., Cal.

549. Add Mesalia polaris, Beck, Aleutian Islands, Plover Bay, Cape
Espenberg. Nunivak.

550 = reticulata, Mighels

552. = Mesalia acicula, Stm in part, from type.

571^c. Litorina aleutica, Dall, Cal. Acad. IV, p. 271, pl. 1, fig. 3.3a. Dec. 1872 Ukutan Pass

- 568 *Goniobasis rubiginosa* *Lea.*
"Oregon," Newcomb Mus., (Lea.)
- 569 *Goniobasis circumlineata* *Tryon.*
San Antonio Creek to Pit River, Cal.
- 570 *Goniobasis Newberryi* *Lea.*
Upper Des Chutes R., Oregon.
- 571 *Goniobasis bulbosa* *Gld.*
"Columbia R." (upper?) Expl. Exp.
- 572 *Litorina planaxis* *Nutt.*
Mendocino to San Diego—Sitka? *Catalina - Mty. Miguel.*
- 573 *Litorina Sitkana* *Phil.*
Str. Fuea to Monterey—Sitka—Asia?
- 574 *Litorina scutulata* *Gld.* *Mty. Catalina. Miguel.*
Str. Fuea to San Diego.
- 575 *Assimineia?* *subrotundata* *Cpr.*
Neeah Bay, W. T.—Monterey.
- 576 *Paludinella?*
Neeah Bay, W. T.
- U? 577 *Lacuna vineta* *Mont.* *Kenai.*
Str. Fuea, W. T.—North Atlantic.
- 578 *Lacuna porrecta* *Cpr.*
Neeah Bay, W. T., to Monterey.
- 579 *Lacuna porrecta* *var?* *effusa* *Cpr.*
Neeah Bay, W. T., to Lobitos, Cal.
- 580 *Lacuna porrecta* *var.* *exæquata* *Cpr.*
S. F.? Neeah Bay, W. T.
- 581 *Lacuna solidula* *Loven.*
Str. Fuea to San Pedro—Norway.
- 582 *Lacuna solidula* *var?* *compacta* *Cpr.*
Neeah Bay, W. T., to Monterey, Cal.
- 583 *Lacuna variegata* *Cpr.*
Neeah Bay, W. T.
- 584 *Lacuna unifasciata* *Cpr.*
Farallone Is. to Santa Barbara.
- 585 *Lacuna unifasciata* *var.* *aurantiaca* *Catalina.*
Catalina I. [Cpr.]
- 586 *Isapis fenestrata* *Cpr.*
Str. Fuea to San Diego.
- 587 *Isapis obtusa* *Cpr.*
Monterey to San Diego.
- 588 *Rissoina interfossa* *Cpr.*
Monterey to San Diego—deep water.
- 589 *Rissoina purpurea* *Cpr.*
Monterey? Santa Barbara to San Diego.

- 590 **Rissoa compacta** *Cpr.*
Str. Fuca, W. T.
- 591 **Rissoa acutelirata** *Cpr.*
Santa Barbara to San Diego.
- 592 **Rissoa? Cooperi** *Tryon.*
Monterey or San Diego. (Fresh water?)
- 593 **Rissoa? exilis** *Tryon.*
Santa Barbara or S. Diego. (Fresh water?)
- 594 **Alvania reticulata** *Cpr.*
Neeah Bay, W. T.
- 595 **Alvania filosa** *Cpr.*
Monterey, (from shell-washings.)
- 596 **Fenella pupoidea** *Cpr.*
Monterey, 20 fms., dead.
- 597 **Barleeia subtenuis** *Cpr.*
Baulines? S. Diego—Mazatlan, Panama?
- 598 **Barleeia subtenuis** *var? rimata* *Cpr.*
San Diego.
- 599 **Barleeia haliotiphila** *Cpr.*
Lower Cal.? ("On *H. splendens*," *Ruel.*)
- 600 **Amphithalamus inclusus** *Cpr.*
Santa Barbara to San Diego.
- 601 **Amphithalamus? lacunatus** *Cpr.*
San Pedro. (Palmer coll.)
- 602 **Hydrobia? Californica** *Tryon.*
Oakland to Martinez, Cal.
- 603 **Amnicola? turbiniformis** *Tryon.*
Northeast California, in streams.
- 604 **Amnicola? longinqua** *Gld.*
Colorado Desert, (fossil only?)
- 605 **Fluminicola Nuttalliana** *Lea.*
Willamette River, Oregon, near mouth.
- 606 **Fluminicola fusca** *Hald.*
Sacramento R. to Green R., Utah.
- 607 **Fluminicola Hindsii** *Baird.*
Kootanie River, Montana.
- 608 **Fluminicola virens** *Lea.*
Willamette R., Oregon, near mouth.
- 609 **Bythinella? intermedia** *Tryon.*
Owyhee River, Southeast Oregon.
- 610 **Bythinella Binneyi** *Tryon.*
Near Baulines Bay, Cal.
- 611 **Cochliopa Rowellii** *Tryon.*
Clear Lake, California.

595^a. Alvania purpurea, Dall, Mtg.

'015^a J. Stimpsoni, ~~Dall~~, Stearns, San Diego, Cal. Acad. IV. 248. pl. 1. fig. 5.

- 612 *Tryonia clathrata* *Stp.*
Colorado Desert, Cal.; fossil only?
- 613 *Tryonia protea* *Gld.*
Colorado Desert, Cal.; fossil only?
- 614 *Valvata virens* *Tryon.*
Clear Lake, California.
- 615 *Truncatella Californica* *Pf.*
San Pedro to San Diego—Mazatlan?
- 616 *Jeffreysia Alderi* *Cpr.*
S. Diego—Cape St. Lucas to Mazatlan.
- 617 *Jeffreysia translucens* *Cpr.*
S. Diego. (*Barleeia* or *Rissoa*?)
- 618 *Cythna albida* *Cpr.*
San Pedro—Mazatlan? (= *C. tumens* *Cpr*?)
- 619 *Diala marmorea* *Cpr.*
Monterey to San Pedro—Cape St. Lucas. *Mty. Catalina.*
- 620 *Diala acuta* *Cpr.*
Monterey to Catalina I.
- 621 *Styliferina turrita* *Cpr.*
San Pedro; shell-washings. (Palmer coll.)
- 622 *Radius variabilis* *C. B. Ad.*
Santa Barbara?—Lower Cal. to Panama.
- 623 *Luponia spadicea* *Sw.*
Santa Barbara to San Diego and islands. *Catalina, Miguel-*
- 624 *Trivia Californiana* *Gray.*
Monterey to San Diego and islands. *Catalina, Miguel-*
- 625 *Trivia radians* *Lam.*
S. Pedro—Lower Cal. to Peru. *Catalina-*
- 626 *Trivia sanguinea* *Gray.*
Catalina I. 60 f.—Lower Cal. to Peru.
- 627 *Trivia Solandri* *Sby.*
Santa Barbara and S. Nicolas I. to Panama.
- 628 *Erato vitellina* *Hds.*
New Year Pt. to San Diego—Margarita Bay. *Catalina -*
- 629 *Erato columbella* *Mke.*
Monterey to San Diego—Mazatlan. *Mty Catalina*
- 630 *Terebra specillata* *Hds.*
San Pedro—Cerro Is. to San Blas, L. Cal.
- 631 *Myurella simplex* *Cpr.*
Santa Barbara to San Diego.
- 632 *Drillia inermis* *Hds.*
Santa Barbara to San Diego—Lower Cal.
- 633 *Drillia incisa* *Cpr.*
Str. Fuca, W. T., to Santa Cruz, Cal.

- 634 *Drillia mœsta* Cpr.
Santa Barbara to San Diego.
- 635 *Drillia torosa* Cpr. *Mty.*
Santa Cruz to Santa Barbara.
- 636 *Drillia torosa* var? *aurantia* Cpr.
San Pedro to Santa Barbara.
- 637 *Drillia penicillata* Cpr.
S. Pedro south—Cerros I. (= *inermis* var?)
- 638 *Drillia cancellata* Cpr.
Str. Fuca, W. T.
- 639 *Surcula Carpenteriana* Gabb.
Monterey to San Diego.
- 640 *Pleurotoma perversa* Gabb.
Catalina I. 60—120 fms., dead. *no. Sta. Barbara chan. 52 f. Str. Fuca Hwy*
- 641 *Mangelia levidensis* Cpr.
Str. Fuca, W. T.
- 642 *Mangelia tabulata* Cpr.
Neeah Bay, W. T.
- 643 *Mangelia interfossa* Cpr.
Neeah Bay, W. T.
- 644 *Mangelia crebricostata* Cpr.
Neeah Bay, W. T.
- 645 *Mangelia variegata* Cpr.
Monterey to San Diego.
- 646 *Mangelia variegata* var? *nitens* Cpr.
Santa Barbara.
- 647 *Mangelia angulata* Cpr.
Str. Fuca to Santa Barbara.
- 648 *Mangelia hexagona* Gabb.
Monterey and Catalina I.
- 649 *Clathurella*
Catalina I.; San Diego. (No. 663-a.)
- 650 *Clathurella constricta* Gabb.
Catalina I. 80 f.
- 651 *Clathurella crystallina* Gabb.
Catalina I. 40 f.
- 652 *Daphnella clathrata* Gabb.
Catalina I. 60 f.
- 653 *Bela fidicula* Gld.
Str. Fuca, W. T.—Kamtschatka?
- 654 *Bela excurvata* Cpr.
Str. Fuca, W. T.
- 655 *Mitromorpha aspera* Cpr.
Monterey, Cal.

- 633^a Drillia Montereyensis, Stearns, Mtg.
- 633^b Drillia Hemphillii, Stearns, Todos Santos Bay, L. Cal.
- 638^a, Drillia Kennicottii, Dall, Unga, 4 fms. Chirachi Id.
- 640^a. Pleurotoma circinata, Dall, Unalaska, Cal. Acad. V. p. pl. 11. f.
- 640^b Pleurotoma (Succula) vinosa Dall, Hyska Id. Aleutians.
- 648^a. Mangelia alaskensis, Dall, Unga.
- 648^b. " aleutica, Dall, Unga.
- 648^c. " funerale, Dall, Sitka.
- 648^d " interlirata Stearns Mtg. Cal. Acad. IV, 226. pl. 1. fig 10
- 651^a. Clathrella Canfieldi, Dall, Mtg.
- 651^b. " affinis, Dall, C. St. Lucas.
- 652^a Daphnella fuscotigata, Dall, Mtg. San Diego, Stearns
- 652^b. Bela? laevigata, Dall, Norton Sound. Chirikoff Id. - Nunivak.

658^a Conus Dalli, Stearns, Gulf of Adal.

667^a. Odostomia Beringi, Dall. Norton Sound.

- 656 *Mitromorpha filosa* *Cpr.* *Catalina Id., l.w.*
Monterey to Santa Barbara.
- 657 *Mitromorpha effusa* *Cpr.*
Neeah Bay, W. T.
- 658 *Conus Californicus* *Hinds.* *Catalina, Mty. San Miguel.*
Farallone Is. to San Diego—Lower Cal.
- 659 *Obeliscus variegatus* *Cpr.*
San Diego—Cape St. Lucas; Guaymas.
- 660 *Odostomia nuciformis* *Cpr.*
Neeah Bay, W. T.
- 661 *Odostomia nuciformis* *var? avellana*
Neeah Bay, W. T. [*Cpr.*]
- 662 *Odostomia satura* *Cpr.*
Neeah Bay, W. T.
- 663 *Odostomia satura* *var. Gouldii* *Cpr.*
Neeah Bay, W. T.
- 664 *Odostomia gravida* *Gld.*
Monterey to San Diego.
- 665 *Odostomia inflata* *Cpr.*
Neeah Bay to Farallone Is.
- 666 *Odostomia straminea* *Cpr.*
San Pedro to San Diego—Lower Cal.
- 667 *Odostomia tenuisculpta* *Cpr.*
Neeah Bay, W. T.
- 668 *Chrysallida cincta* *Cpr.*
Loc. uncertain, south of Monterey.
- 669 *Chrysallida pumila* *Cpr.*
Loc. uncertain, south of Monterey.
- 670 *Dunkeria laminata* *Cpr.*
Santa Barbara to San Diego.
- 671 *Chemnitzia tridentata* *Cpr.*
Str. Fuea to San Pedro.
- 672 *Chemnitzia chocolata* *Cpr.*
Monterey to San Diego.
- 673 *Chemnitzia chocolata* *var. aurantia*
Str. Fuea to Santa Barbara. [*Cpr.*]
- 674 *Chemnitzia tenuicula* *Gld.*
Monterey to San Pedro.
- 675 *Chemnitzia tenuicula* *var? subcuspi-*
San Diego, 6 fins. [*data Cpr.*]
- 676 *Chemnitzia crebriflata* *Cpr.*
Santa Barbara.
- 677 *Chemnitzia torquata* *Gld.*
Str. Fuea to Santa Barbara.

- 678 *Chemnitzia torquata* var. *stylina* Cpr.
Monterey to Santa Barbara.
- 679 *Chemnitzia virgo* Cpr.
Santa Barbara.
- 680 *Chemnitzia Gabbiana* Cp.
Mt'y and Cat. I. ? (=gracillina Gabb not Cpr.)
- 681 *Chemnitzia*
Monterey to San Pedro. (No. 459.)
- 682 *Chemnitzia*
San Diego, dredged. (No. 428 a.)
- 683 *Chemnitzia*
Monterey to Catalina I. (No. 421.)
- 684 *Chemnitzia*
San Diego, dredged (No. 671a.)
- 685 *Eulima micans* Cpr.
Str. Fuca to San Diego.
- 686 *Eulima compacta* Cpr.
San Diego (=micans var.?)
- 687 *Eulima rutila* Cpr.
Monterey (=micans var.?)
- 688 *Eulima thersites* Cpr.
Monterey to Santa Barbara.
- 689 *Scalaria Indianorum* Cpr.
Str. Fuca to Baulines; (and San Diego?)
- 690 *Scalaria Indianorum* var? *tincta* Cpr.
Santa Cruz to San Diego.
- 691 *Scalaria Cumingii?* Cpr.
San Diego or islands?—Panama.
- 692 *Scalaria gracilis?* Sby.
San Diego.
- 693 *Scalaria subcoronata* Cpr. Catalina Id.
Baulines Bay to San Diego.
- 694 *Scalaria crebricostata* Cpr.
Monterey to San Diego.
- 695 *Scalaria bellastriata* Cpr.
San Pedro to San Diego.
- 696 *Opalia borealis* Gld.
Str. Fuca to San Pedro—Kamtschatka? Shumag
- 697 *Opalia crenatoides* Cpr.
Cape St. Lucas—Portugal?
- 698 *Opalia crenatoides* var? *insculpta* Cpr. Catalina Id.
Santa Cruz to Santa Barbara.
- 699 *Opalia spongiosa* Cpr.
Monterey; shell washings, $\frac{1}{3}$ inch long.

708. Unga. Sitka. Unalaska ^{U. sterna Steud. Unga Unalaska 0.11}

708^a add Cancellaria sp. n. (Trigonostoma) unalaskensis, Dall, Unalaska C. Ac. V. p. Pl. II, fig. 1

708^b Cancellaria (Trigonostoma) circumcincta, Dall, C. Acad. V. p. Pl. II, fig. 2. Unga. Amict. ^{Unalaska?}

709^a Voluta (Scaphella) Stearnsii, Dall, U-Sh. Cal. Acad. IV. p. 270, pl. 1, fig. 1. 1872 ^{Unalaska Shv.}

U. 711^a. Trichotropis insignis, Midd. Bering Sea, Aleutian Ids. Nunivak -

711^b. Trichotropis bicarinatus, Sly. Bering Strait, Plover Bay. Nunivak

711^c. " " " var. alta, Dall. Plover Bay.

711^d. " " " " spectabilis, Dall. Seniavine Str.

711^e. Ophiole peramabilis, Dall, Unga.

U. 713^a. Velutina cryptospira, Midd. Bering Sea. Cook's Inlet. Nunivak. St Paul.

U. 714^a. Natica russa, Sld. abundant in Bering Sea & Aleutian Ids. C. 20 p. 1872. ^{Cook's Inlet. Sitka}

717^a. Amauropsis purpurea, Dall, Norton Sound. Grantley Harbor. Sea Cape. Nunivak.

719^a L. Stearnsii, Dall. M=

720. L. Stearnsii, var. orbiculata, Dall.

721. L. rhombica, Dall.

- 700 *Opalia retiporosa* Cpr.
Catalina I. 40 fms.
- 701 *Opalia bullata* Cpr.
Santa Barbara.
- 702 *Cerithiopsis tuberculata* Mont.
Str. Fuca to Catalina I.—Europe.
- 703 *Cerithiopsis columna* Cpr.
Str. Fuca to San Diego.
- 704 *Cerithiopsis munita* Cpr.
Neeah Bay, W. T.
- 705 *Cerithiopsis fortior* Cpr.
Santa Barbara.
- 706 *Cerithiopsis assimilata* C. B. Ad.
Monterey to Panama.
- 707 *Triforis adversa* Mont.
Str. Fuca to Catalina I.—England.
- U. 708 *Cancellaria modesta* Cpr. *Cook's Inlet?*
Neeah Bay, W. T.
- 709 *Cancellaria Cooperi* Gabb.
Monterey to San Diego.
- U. 710 *Trichotropis cancellata* Hds.
Str. Fuca and Puget Sound—Sitka.
- U. 711 *Trichotropis inermis* Hds.
Neeah Bay, W. T.—Sitka.
- U. 712 *Velutina lævigata* Linn.
Str. Fuca to Monterey—North Atlantic. *Cook's Inlet? Catalina?*
- 713 *Velutina prolongata* Cpr.
Str. Fuca to New Year Point. *Cook's Inlet, Nunivak?*
- 714 *Natica clausa* Brod. & Sby.
Str. Fuca—Kamtschatka—North Atlantic. *Kenai*
- 715 *Lunatia Lewisii* Gld.
Str. Fuca to San Diego. *Mty.*
- U. 716 *Lunatia pallida* Brod. & Sby.
Str. Fuca—Circumboreal.
- 717 *Neverita Recluziana* Petit.
Monterey? Catalina I. to Lower Cal. *Cal. Id - Mty.*
- 718 *Sigaretus debilis* Gld.
Catalina I. 40 f.—La Paz, Lower Cal. *San Miguel -*
- 719 *Lamellaria Stearnsii*, Dall
Santa Cruz to Santa Barbara. (No. 1050.)
- 720 *Lamellaria Stearnsii*, var. *articulata*. Dall
Monterey.
- 721 *Lamellaria rhombica*, Dall
Monterey.

- U. 722 **Priene Oregonensis** *Redf.*
Str. Fuca to Monterey—Japan. *Cook's Inlet.*
- 723 **Ranella Californica** *Hds.*
Monterey to San Diego. *Catalina Id*
- 724 **Mitra maura** *Spr.*
Farallone I. to San Diego—South America? *Catalina - large.*
- 725 **Marginella Jewettii** *Cpr.*
Monterey to Santa Barbara.
- 726 **Marginella subtrigona** *Cpr.*
Monterey to Santa Barbara.
- 727 **Marginella regularis** *Cpr.*
Monterey to San Diego.
- 728 **Marginella pyriformis** *Cpr.*
Monterey to San Diego.
- 729 **Volvarina varia** *Sly.*
Santa Barbara to San Diego—Mexico; W. I. *Catalina Id - Wg.*
- 730 **Olivella biplicata** *Sly.*
Str. Fuca to San Diego. *Crescent City, Catalina, Miguel, Mty.*
- 731 **Olivella boëtica** *Cpr.*
Str. Fuca to San Diego—Sitka. *Catalina Id -*
- 732 **Olivella dama** *Mawe.*
San Pedro—Gulf of Cal.
- 733 **Olivella intorta** *Cpr.*
Baulines Bay to Monterey; Gulf of Cal.?
- 734 **Nassa fossata** *Gld.*
Str. Fuca to San Diego. *Crescent City*
- 735 **Nassa perpinguis** *Hds.*
S. F. Bay to San Diego; Margarita Bay. *Catalina Id -*
- 736 **Nassa insculpta** *Cpr.*
Catalina I., California. *Catalina Id -*
- 737 { **Nassa mendica** *Gld.*
Str. Fuca to San Diego. *Catalina Id -*
- 738 { **Nassa Cooperi** *Fhs.*
Baulines Bay to San Diego.
- 739 **Nassa tegula** *Ree.*
Santa Barbara to San Diego—Lower Cal.
- 740 { **Amycla carinata** *Hds.*
Baulines Bay to San Diego.
- 741 { **Amycla carinata** *var? Hindsii* *Ree.*
Neeah Bay to San Diego.
- 742 { **Amycla gausapata** *Gld.*
Str. Fuca to San Diego.
- 743 { **Amycla gausapata** *var? Californiana*
Santa Cruz to San Diego. [*Gask.*

722. *Unalaska* specimens bright pink & yellow inside.

723. = add *Scaphella* sp. (see 709^a) *Unalaska*.

728.^a *Parsicula dubiosa*. Dall, Acapulco.

P. catenata. C. St. Lucas, Panama, Galapagos.

737 = 738.

740. Is an *Astynis*. 741 + 742 + 743 are merely varieties. Catalina, City
San Miguel.

744 is an Astynis.

744^a. Add Astynis aurantiaca, Dall, Mtg. Catalina Id.

744^b " Astynis variegata, Stearns, San Diego.

746. is not an Amycla.

747^a, Add Amphissa versicolor, Dall, Mtg. San Miguel-

747^b Amphissa versicolor var. lineata, Stearns. Cal. Acad. IV, pl. 1. fig. 8. Cal

747^c Anachis penicillata sp., San Pedro Atlepan.

758^a. Monoceros paucilirata Stearns, Coronado Id. San Diego.

758^b. Ocinetra gracillima " Mtg. S. Diego. Catalina

758^c. Ocinetra circumtexta " " Catalina

- 744 *Amycla tuberosa* Cpr.
Neeah Bay to San Diego.
- 745 *Amycla chrysalloidea* Cpr.
San Pedro and San Diego.
- 746 *Amycla undata* Cpr. *Catalina Id.*
Catalina I.
- 747 *Amphissa corrugata* Ree.
Str. Fuca to ~~San Diego~~. *Shumner Mtg.*
- 748 { *Purpura crispata* Chem.
Str. Fuca to Oregon—Sitka. *Crescent City - S. F. Bay - Mtg. Kenai (smooth)*
- 749 { *Purpura crispata* var. *septentrionalis*
Santa Barbara north. {Rev.
- 7/ 750 *Purpura canaliculata* Ducl.
Str. Fuca to Monterey—Behring's Straits. *Crescent City, Kenai - Catalina Id. - Mtg.*
- 751 *Purpura saxicola* Val.
Str. Fuca to S. Barbara—Lower Cal. ? *Catalina Id.*
- 752 *Purpura saxicola* var. *fuscata* Fbs.
Str. Fuca to Santa Cruz, Cal.
- 753 *Purpura saxicola* var. *ostrina* Gld.
Str. Fuca to Santa Barbara.
- 754 *Purpura saxicola* var. ? *emarginata*
S. F. Bay to S. Diego—N. Zealand ? {Desh.
- 755 *Purpura triserialis* Blainv.
Santa Barbara to San Diego—Mexico.
- 756 *Monoceros engonatum* Conr. *Catalina Id. - Miguel - Mtg.*
Baulines Bay to San Diego.
- 757 *Monoceros engonatum* var. ? *spiratum*
San Pedro to San Diego. {Blainv.
- 758 *Monoceros lapilloides* Conr. *Catalina Id.*
Monterey to Catalina I.
- 759 *Ocenebra lurida* Midd.
Str. Fuca to Catalina I. —Sitka.
- 760 *Ocenebra lurida* var. *aspera* Baird.
Str. Fuca to Baulines Bay—Sitka.
- 761 *Ocenebra lurida* var. *munda* Cpr.
Str. Fuca to Baulines Bay.
- 762 *Ocenebra lurida* var. ?
Santa Barbara to Catalina I.
- 763 *Ocenebra interfossa* Cpr. *Cook's Inlet*
Str. Fuca to Monterey.
- 764 *Ocenebra interfossa* var. *atropur-*
Str. Fuca to Monterey. [purea Cpr.
- 765 *Ocenebra interfossa* var.
Santa Barbara to Catalina I.

- 766 *Ocenebra interfossa* var.
Santa Cruz to San Diego.
- 767 *Ocenebra Poulsoni* Cpr.
Santa Barbara ?—Cerros Is.; Panama ?
- 768 *Cerostoma foliatum* Gmel.
Str. Fuca to Santa Barbara—Asia ? Catalina Id -
- 769 *Cerostoma Nuttallii* Conr.
Baulines Bay to San Diego. Crescent City Catalina Id -
- 770 *Cerostoma monoceros* S.
California ? Lower Cal., and Mexico.
- 771 *Chorus Belcheri* Hds.
Catalina I. to San Diego; Lower Cal.
- 772 *Nitidella Gouldii* Cpr.
Str. Fuca to San Diego.
- 773 *Pedicularia Californica* Newe.
Farallone Is., on coral, deep water.
- 774 *Pteronotus festivus* Hds.
San Pedro and San Diego—Lower Cal. Catalina Id
- 775 *Muricidea incisa* Brod.
Cruz I. to Catalina I.; Mexico; Panama. Catalina Id
- 776 *Muricidea Californica* Hds. ?
Baulines Bay to San Diego.
- 777 *Muricidea Barbarensis* Gabb.
Santa Barbara to Catalina I.
- U. 778 *Trophon multicostatus* Esch.
Str. Fuca to Monterey—Sitka; Greenland. Cook's Inlet -
- J. 779 *Trophon Orpheus* Gld.
Str. Fuca, W. T.—Vancouver's I. Cook's Inlet
- 780 *Trophon triangulatus* Cpr.
Cruz I. to Catalina I. Catalina -
- 781 *Siphonalia Kelletii* Fbs.
Santa Barbara to San Diego—Japan. Catalina 15 fms. long -
- 782 *Siphonalia fuscotineta* Cpr.
Monterey to Catalina I.
- 783 *Chrysodomus tabulatus* Bd.
Str. Fuca to Catalina I.
- U. 784 *Chrysodomus liratus* Mart.
Str. Fuca—Sitka; Kodiak I. Cook's Inlet -
- 785 *Chrysodomus dirus* Ree.
Str. Fuca to Monterey—Sitka. Cook's Inlet ?
- 786 *Chrysodomus rectirostris* Cpr.
Str. Fuca, east end, or Puget's Sound.
- 787 *Fusus ambustus* Gld.
Santa Barbara to San Diego—Mazatlan.

- 772^a. Add Nitidella elegans, Dall, Panama.
 773^a. " P. Japonica, Dall, Japan.
 774^a. " Lyphis sp. Catalina Id -
 774^b. " Muricidea sp? " "
 776^a. Muricidea sp? Nagai Shumaguni.
 776^b. Muricidea subangulata, Stearns, San Miguel Catalina Id. young
 777^a. Ptychotractus occidentalis, Stearns, Nagai - Prime.

784. is quite distinct from decemcostatus, Say. E. C.
 785. ^a Chrysodomus Harfordii, Stearns, Mendocino Co, Cal -
 786.
 786^a Chrysodomus ^{grooved} terrestris, Gould, Icey Cape, Unalaska C. Esperberg
 786^b Chrysodomus ^{shouldered} sp. glacialis, Gray, Unalaska - ~~Kenai, Alaska~~
 787
 786^c Chrysodomus sp. Kenai.

793 = A. Pacifica, Dall. Catalina Id.

793^a A. expansa, Dall, Gulf. Cal. Cal. Acad. IV, 303. Dec. 1872

795^a. Onychoteuthis lobipennis, Dall. S.W. Farallones.

795^b. Loliolus Steenstrupi, Dall. Gulf of Cala.

795^c. ? Pinnoctopus sp.

Unalaska.

796 = M. Japonica

- 788 *Fusus geniculus* *Conr.?*
Farallone Is. to Cruz I. (Oregon, *foss.*) *Catalina Id -*
- 789 *Macron Kelletii* *A. Ad.*
California? Cerros Is. and Lower Cal.
- 790 *Macron lividus* *A. Ad.*
San Diego; (Farallone Is.?)—Lower Cal. *Catalina - abundant.*
- 791 *Anachis subturrita* *Cpr.*
San Diego (shell washings.)
- 792 *Anachis penicillata* *Cpr.*
Santa Barbara to San Diego.
- 793 *Argonauta Argo* ~~*Linn.*~~
Cruz I., south—Middle Atlantic.
- 794 *Octopus punctatus* *Gabb.*
San Francisco Bay to San Diego—Lower Cal.
- 795 *Ommastrephes giganteus* *D'Orb.*
Clemente I., Cal.—South America.

ADDITIONAL SPECIES FROM SITKA, ETC.*

- 796 *Mya arenaria* ~~*Linn.*~~
Sitka to Kamtschatka—North Atlantic.
- 797 *Astarte corrugata* *Brown.*
Sitka—Circumpolar.
- 798 *Placunanomia patelliformis* ~~*Linn.*~~
Sitka?—Europe. = *machoschistoma* var -
- 799 *Æolis? crassicornis* *Esch.*
Sitka.
- 800 *Æolis? subrosaceus* *Esch.*
Sitka.
- 801 *Eolidia pinnata* *Esch.*
Sitka.
- 802 *Dendronotus arborescens* *Mull.*
Str. Fuca? Sitka—Circumpolar.
- 803 *Planorbis Hornii* *Tryon.*
Fort Simpson, lat. 54° 40'.
- 804 *Dentalium politum* *Linn.?*
Sitka—North Atlantic.
- 805 *Tonicia? insignis* *Ree.*
Sitka.
- 806 *Tonicia? Brandtii* *Midd.*
Sitka.
- 807 *Tonicia? Sitkensis* *Midd.*
Sitka.

* These species complete the list of known Mollusca of the temperate and boreal fauna of our coast, and many of them may yet be found south of lat. 49°. Others will doubtless prove identical with species of the first list, or to have been wrongly located on our coast. By adding to them all mentioned before as found either at Sitka or on each side of that place, the Mollusca of the locality may be approximately known. It is likely that several Arctic species also occur there, besides those mentioned in the first list, as there are no fixed limits to the regions, though pretty well separated by the peninsula of Alaska. Some of the Lower California species, especially terrestrial, may be found to be limited to the temperate zone, but this is yet undecided.

- 808 *Toncia?* *Escholtzii* *Midd.*
Sitka.
- 809 *Lepidopleurus?* *lividus* *Midd.*
Sitka.
- 810 *Lepidopleurus?* *serobiculatus* *Midd.*
Sitka? "California."
- 811 *Lepeta caeca* *Moll.* *coccoides* *Cpr* = *concentrica* *Midd.*
* Sitka—Japan—North Europe.
- 812 *Haliotis aquatilis* *Ree.*
Sitka?—Japan.
- 813 *Margarita arctica* *Leach.*
Sitka; "var. major."
- U. 814 *Crepidula grandis* *Midd.*
Sitka to Asia; (= *princeps* *Cour.*, *fin?*)
- 815 *Lacuna glacialis* *Moll.*
Sitka—Circumpolar.
- 816 *Litorina grandis* *Midd.*
Fort Simpson, lat. 54° 40'—Asia. *Petro-paulovsk. Kamohatka Dall*
- 817 *Velutina Sitkensis* *A. Ad.*
Sitka.
- 818 *Chrysodomus tenebrosus* *Harr.*
Sitka—Lapland.
- 819 *Chrysodomus carinatus* *Dunk.*
Sitka.
- 820 *Chrysodomus Morchianus* *Dunk.*
Sitka.
- 821 *Chrysodomus rutilus* *Morch.*
Sitka.
- 822 *Chrysodomus Rombergi* *Dunk.*
Sitka.
- 823 *Chrysodomus harpa* *Morch.*
Sitka. *Icy Cape, Unal. Shumagin, Kodiak.*
- 824 *Chrysodomus castaneus* *Morch.*
Sitka.
- 825 *Volutharpa ampullacea* *Midd.*
Sitka—Asia.
826. *Buccinum ciliatum*, *Icy Cape, C. Esenberg*

NEW CALIFORNIAN SPECIES.

- 163a *Pisidium Angelicum* *Wrl.*
Angel I., Cal. (Rowell coll., Apr. 1867.)

N. B.—Persons receiving two or more copies of this catalogue, will confer a favor by returning one by mail to the State Geologist, with such notes as they may be able to add, for publication in the final report, where all such assistance will be duly acknowledged. In consequence of the time necessary for completing the engravings, the report cannot be issued in less than two years.

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811. This species has not been found either in Sitka or Japan.

813^a Add Margarita vorticifera, Dall, Cal. Acad. V, p. 1873 pl. ² 77. f. 4
Unalashka, Akutan Pass.

815^a Scalaria grönländicum, Linn - C. Espeberg - St. Paul Id.

818 = Buccinum t.

817^a add Buccinum Dalei Sby or a related form, Nagai W.

819 = Buc. glaciale, Linn, Stm + 820 + 821 + 822 + Pitonium angulosum, Moench
all vars. Arctic to Cook's Inlet. Icy Cape.

823. = Heliotropis harpa, Dall. Cal. Acad. V, p. 1873. Shum- Unal. ^{Icy Cape}

824. = Volutopsis Beringi, Midd. A. Ad. + Nept. badii Moench + ?

V. norvegica, Chemn. Aleutians. ? N. Eur. seas. Icy Cape

824^a. Add Volutopsis var. regularis Dall. Cal. Acad. V, p. ^{Att. 6}

824^b. Add Sipho Hallii, Dall, Nagai, Cal. Acad. V, p. pl. ^{Att. 3}

824^c Add Volutopsis attenuata, Dall Cape Espeberg. Smith Kenai

825. Add var. acuminata, Dall, Sitka. Typical at Plover Bay and Petropavlovsk.

819 = add Buccinum glaciale Stm. Plover Bay. Aleutians, Icy Cape

819^a " " polare " "

819^b " " cyaneum + Baeri, Sitka, Aleutians, Kenai

819^c Chrysodomus Kennicottii. Dall, ^{Amchitka} ~~Sitka~~, Shumagins

819^d Buccinum Moerchianum, Fischer, Sitka

819^e " Fischerianum, Dall, St. George Id.

819^f Chrysodomus deforme Gray, Avatcha, Plover Bay.

" Icy Cape, C. Espeberg Norton Sound.

819^g Chrysodomus tornatus Gld - C. Espeberg

817^b Buccinopsis? canaliculata Dall - C. Espeberg, Uniwak

10. Curculionina, sp Long slender, polished, 12 sharp ridges crossed by ~~10 sharp~~ threads broad
and faint, whorls seven $1\frac{1}{2}$ long x $\frac{1}{2}$ wide. Caudal sharply curved
whorls squared above & below.
11. Chrysodomus n.s. imperfect, mammillate very slender with flattened strong long ribs.

Post pliocene fossils from
 Esmeralda, Ecuador. U.C.S.Am.
 Collected by Capt. A. R. Hodgkins, Sch. Urania
 1872-3

Chama sp - large.
 Casts of Dosinia sp. do.
 Placunanomia macroschioma, jun.
 Ostrea sp - very large and heavy.
 Pecten sp. like Paurina Gld.
 Arca grandis -
 Trochita
 Crucibulum spinosum
 " imbricatum
 Crepidula, flat, coarsely striate.
 Purpura callio-ensis
 Perpura (large like melo)
 Purpura bituberculata
 Muricidea sp. small -
 Conus
 Cusma tectiformis = hispidiformis.
 Turritella tigrina
 Turbo (like pica)
 Litorina conspersa.

Undetermined San Diego Pliocene fossils

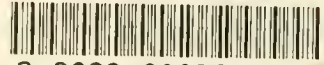
1. Drillia sp. polished, small like Stearns sp. fine revolving lines overhanging canal short.
2. Drillia sp. 1 in long. large, 16 ribs, shell strong & long. suture appressed not conspicuous, spiral sculpture, but evanescent on periphery.
3. Drillia sp. $1\frac{1}{2}$ in long, slender, fusiform, short oblique ribs on lower part of whorl - evanescent on the last whorl. whorl behind smooth. suture conspicuous, canal long slender, last whorl more than half shell.
4. Mangelia sp. finely cancellate elongate, 5. do. half cancellate shorter
6. do. sharply conoid base wide, short thin canal.
7. Cancellaria, sp. like M. lapilloides, short, stout, smooth with fine revolving lines.
8. do tabulated, rather medium in length, ribs 18, stronger than revolving lines, finely cancellate.
9. do $1\frac{1}{2}$ in long, thin whorls angulate ribs sharply tuberculate on angle, not strong in lower part of whorl. revolving lines like Buc. cyaneum

Carded





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