

SUPPLEMENT TO THE LIST OF MESOZOIC AND CENOZOIC INVERTEBRATE TYPES IN THE COLLECTIONS OF THE NATIONAL MUSEUM.

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This list contains a few additional types found during the arrangement of the remainder of the Mesozoic and Cenozoic invertebrate collections of the National Museum, with the addition of a few new ones lately published.

I am indebted to Mr. R. T. Hill for his assistance in finding some of these types.

LIST OF WORKS REFERRED TO.

U. S. N. Ast. Exp. S. Hem. Vol. II=The U. S. Naval Astronomical Expedition to the Southern Hemisphere during the years 1849-'50-'51-'52, Lient. J. M. Gilliss, Superintendent. Vol. II, House of Representatives, Thirty-third Congress, first session, Ex. Doc. No. 121. Washington, 1855.

Rep. Expl. Expd. in 1859 by Capt. J. N. Macomb=Report of the Exploring Expedition from Santa Fé, New Mexico, to the Junction of the Grand and Green Rivers of the Great Colorado of the West, in 1859, under the command of Capt. J. N. Macomb, Corps of Topographical Engineers (now Colonel of Engineers); with Geological Report by Prof. J. S. Newberry, Geologist of the Expedition. Washington, D. C.

JURASSIC SPECIES.

*Ammonites* ? Conrad.

U. S. N. Ast. Exp. S. Hem. vol. ii (not described, but figured), pl. xii, fig. 5. Mus. No. 5120.

*Cucullæa Haguei* Meek.

Rep. Geol. Expl. 40th Parallel, vol. iv, part 1, pp. 134, 135, pl. xii, figs. 1a, b. Mus. No. 12546.

*Cyprina* ? *Dallii* White.

Juras. Neocomian, Bull. U. S. Geol. Surv., vol. i, No. 4, p. 102, pl. vi, fig. 1. Mus. No. 19266.

*Lithotrochus Andii* (D'Orbigny sp.) Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 283, pl. xli, fig. 3. Mus. No. 5119.

*Ostrea* (*Alectryonia*) *procumbens* White.

Rev. Foss. Ostreidae N. A., p. 290, pl. xxxv, figs. 6, 7, and 8. Mus. No. 8355.

*Ostrea gregaria* (Sowerby) Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 283, pl. xli, fig. 1. Mus. No. 5117.

*Ostrea irregularis* (Munster) Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 283, pl. xlii, fig. 9. Mus. No. 5116.

*Ostrea strigilecula* White.

Rep. Geogr. & Geol. Expl. & Surv. w. 100th Meridian, vol. iv, p. 163, pl. xii; figs. 3a-d. Rev. Foss. Ostreidae N. A., p. 289, pl. xxxv, figs. 9-11. Mus. No. 8581.

*Pecten* (*Neithea*) *alatus* (Von Buch) Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 283, pl. xli, fig. 2. Mus. No. 5107.

*Terebratula meridionalis* Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 282, pl. xlii, fig. 10. Mus. No. 5121.

**Terebratula subexcavata** Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 282, pl. xli, fig. 4. Mus. No. 5109.

**Terebratula subtetrædra** Conrad.

U. S. N. Ast. Exp. S. Hem., vol. ii, p. 282, pl. xlii, fig. 8. Mus. No. 5118.

## CRETACEOUS SPECIES.

**Cardium curtum** Meek and Hayden.

Proc. Acad. Nat. Sci., Philad., vol. xiii, p. 442 (not figured). Mus. No. 1917.

**Cerithium Pillingi** White.

Bull. U. S. Geol. Surv., No. 22, p. 13, pl. v, figs. 3-6. Mus. No. 13408.

**Cerithium totium sanctorum** White.

Bull. U. S. Geol. Surv., No. 22, p. 13, pl. v, figs. 12, 13. Mus. No. 13409.

**Coralliochama orcutti** White.

Bull. U. S. Geol. Surv., No. 22, pp. 10-12, pls. i-vi. Mus. No. 12698.

**Enclimatoceras (Nautilus) Ulrichi** White.

Bull. U. S. Geol. Surv., vol. 1, No. 4, p. 105, pls. vii-ix. Mus. Nos. 8349 and 12346.

**Exogyra aquila** (Goldfuss) White.

Rev. Foss. Ostreidæ N. A., p. 304, pl. liii, figs. 1 and 2. Mus. No. 9609.

**Exogyra arietina** (Roemer) White.

Rev. Foss. Ostreidæ N. A., p. 303, pl. lvi, figs. 3-5. Mus. No. 9866.

**Exogyra costata** (Say) White.

Rev. Foss. Ostreidæ N. A., p. 304, pl. lvi, fig. 1, and pl. lvii, figs. 1 and 2. Mus. Nos. 1744 and 2213.

**Exogyra costata** (Say) *var fluminis* White.

Rep. U. S. Geogr. and Geol. Surv. west 100th Meridian, vol. iv, part 1, p. 174, pl. xvii, figs. 3a-d. Mus. No. 8654.

**Exogyra læviuscula** (Roemer) White.

Rep. U. S. Geogr. and Geol. Surv. west of 100th Meridian, vol. iv, part 1, p. 183, pl. xvii, figs. 2a-d, and Rev. Foss. Ostreidæ N. A., p. 305, pl. lii, fig. 5. Mus. No. 8646.

**Exogyra Walkeri** White.

11th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., p. 278, pl. i, figs. 1a, b, and Rev. Foss. Ostreidæ N. A., p. 307, pl. liv, figs. 1 and 2. Mus. No. 8039.

**Gervillia recta** (M. & H.) Meek.Cret. No. 5, Rep. U. S. Geol. and Geogr. Surv. Terr., 4<sup>o</sup>, vol. ix, pp. 66, 67. (pl. xxix, figs. 1a, b). Mus. No. 7843.**Gryphæa pitcheri** (Morton) White.

Rev. Foss. Ostreidæ N. A., p. 302, pl. xlix, figs. 1-3. Mus. No. 9733.

**Gryphæa vesicularis** (Lamarek) White.

Rev. Foss. Ostreidæ N. A., p. 303, pl. xliii, figs. 1-5. Mus. No. 2340.

**Inoceramus deformis** Meek.

4th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., p. 296 (not figured). Mus. No. 7744.

**Inoceramus umbonatus** Meek.Cret. No. 2, Rep. U. S. Geol. and Geogr. Surv. Terr., 4<sup>o</sup>, vol. ix, p. 44, pl. iii, figs. 1a-c; pl. iv, figs. 1a, b, and 2a, b. Mus. Nos. 480, 2038, and 2039.**Lucina profunda** White.

Proc. U. S. Nat. Mus., vol. iii, pp. 153, 159, and vol. iv, p. 138, pl. —, figs. 5, 6. Mus. No. 8362.

**Margaritana nebrascensis** Meek.

Cret. No. 1, Rep. U. S. Geol. and Geogr. Surv. Terr., 4, vol. ix, pp. 114, 115, pl. i, figs. 5a-c, and Rev. Non-Marine Foss. Moll., p. 21, pl. iv, figs. 1 and 2. Mus. No. 7719.

**Nerita** — ? White.

Bull. U. S. Geol. Surv., No. 22, p. 12, pl. v, figs. 7, 8. Mus. No. 13411.

**Ostrea (Alectryonia) Blackii** White.

Proc. U. S. Nat. Mus., vol. ii, p. 293 (not figured specimen), 12th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., p. 11, pl. xvii, fig. 5, and Rev. Foss. Ostreidæ N. A., p. 292 (not the figured specimen). Mus. No. 8024.

**Ostrea (Alectryonia) larva** (Lamarck) White.

Rev. Foss. Ostreidæ N. A., p. 296, pl. xlii, figs. 2-9. Mus. No. 2401.

**Ostrea carinata** (Lamarck) White.

Rev. Foss. Ostreidæ N. A., p. 293, pl. xliii, figs. 2-4. Mus. No. 18616.

**Ostrea diluviana** (Linnaeus) White.

Rev. Foss. Ostreidæ N. A., p. 295, pl. xl, fig. 1, and pl. xli, figs. 1 and 2. Mus. No. 8300.

**Ostrea elegantula** Newberry.

Rep. Expl. Exp. in 1859, by Capt. J. N. Macomb, p. 33, and Rev. Foss. Ostreidæ N. A., p. 295, pl. xxxvi, figs. 5-7. Mus. No. 18611.

**Ostrea plumosa** (Morton) White.

Rev. Foss. Ostreidæ N. A., p. 299, pl. xxxvii, figs. 5, 6. Mus. No. 18602.

**Ostrea testicostata** (Gabb) White.

Rev. Foss. Ostreidæ N. A., p. 301, pl. 1, figs. 3 and 4. Mus. No. 18613.

**Ostrea vomer** (Morton) White.

Rev. Foss. Ostreidæ N. A., p. 302, pl. xlviii, figs. 8-10. Mus. No. 2414.

**Pachymya austinensis** (Shumard) White.

11th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., p. 298, pl. viii, fig. 1b. Mus. No. 8043.

**Pteria (Oxytoma) erecta** White.

Proc. U. S. Nat. Mus., vol. iii, pp. 157-158, and vol. iv, p. 139, pl.—, figs. 7 and 8. Mus. No. 8771.

**Solarium wallalense** White.

Bull. U. S. Geol. Surv., No. 22, p. 14, pl. v, figs. 1 and 2. Mus. No. 13412.

**Solemia biles** White.

Proc. U. S. Nat. Mus., vol. iii, p. 158, and vol. iv, p. 139, pl.—, fig. 9. Mus. No. 8913.

**Tancredia americana** (M. & H.) Meek.

Cret. No. 5, Rep. U. S. Geol. and Geogr. Surv. Terr., 4to, vol. ix, p. 142, pl. xxxviii, figs. 1b-c. Mus. Nos. 186 and 2017.

**Trochus (Oxystele) euryostomus** White.

Bull. U. S. Geol. Surv., No. 22, p. 12, pl. v., figs. 9-11. Mus. No. 13410.

**Unio** — ? Meek.

6th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., pp. 444 and 476 (not figured nor described, but mentioned). Mus. No. 7868.

## LARAMIE SPECIES.

**Anomia gryphorhynchus** (Meek) White.

Rev. Non-Marine Foss. Moll., p. 16 or 422, pl. xii, fig. 15. Mus. No. 9050.

**Bulinus ? rhomboideus** (M. & H.) Meek.

Rep. U. S. Geol. and Geogr. Surv. Terr., 4to, vol. ix, p. 542, pl. xliii, fig. 17; Rev. Non-Marine Foss. Moll., p. 45 or 451, pl. xxv, fig. 9. Mus. No. 19181.

**Corbicula umbonella** (Meek) White.

Rev. Non-Marine Foss. Moll., p. 32 or 438, pl. xxi, figs. 7-10. Mus. No. 12468.

**Corbula subtrigonalis** (M. & H.) Meek.

Rep. U. S. Geol. and Geogr. Surv. Terr., 4to, vol. ix, pp. 529-530, pl. xl, figs. 3a-b and Rev. Non-Marine Foss. Moll. p. 36, pl. xix, fig. 10. Mus. No. 2183.

**Goniobasis macilenta** White.

12th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., p. 93, pl. xxx, fig. 10a, and Rev. Non-Marine Foss. Moll., p. 56, pl. vi, fig. 12. Mus. No. 1916.

**Goniobasis ? subtortuosa** (M. & H.) Meek.

Rep. U. S. Geol. and Geogr. Surv. Terr., 4to, vol. ix, p. 569, pl. xlii, figs. 17a, b, and figs. 75 and 76, p. 569. Rev. Non-Marine Foss. Moll., p. 57 or 463, pl. xxvii, fig. 34. Mus. No. 19180.

**Melania wyomingensis** (Meek) White.

12th Ann. Rep. U. S. Geol. and Geogr. Surv. Terr., p. 95, pl. xxviii, figs. 6a, b. Rev. Non-Marine Foss. Moll., p. 54 or 460, pl. xxvi, figs. 1, 2. Mus. No. 9018.

**Ostrea glabra** (M. & H.) White.

Rev. Foss. Ostreidæ N. A., p. 307, pl. lxi, figs. 2 and 3. Mus. No. 11889.

**Physa kanabensis** White.

Rep. Geol. Eastern Uinta Mts., J. W. Powell, p. 119 (not figured). Mus. No. 8890.

**Unio priscus** (M. & H.) Meek.

Rep. U. S. Geol. and Geogr. Surv. Terr., 4, vol. ix, p. 516, pl. xliii, figs. 8a, b, and d. Rev. Non-Marine Foss. Moll., p. 26 or 432, pl. xiv, fig. 1. Mus. Nos. 2162 and 2180.\*

**Unio vetustus** (Meek) White.

Rev. Non-Marine Foss. Moll., p. 24 or 430, pl. vii, figs. 2-4. Mus. No. 8147.

## EOCENE SPECIES.

**Anodonta decurtata** Conrad.

Amer. Jour. Conch., vol. vi, p. 200, pl. xi, fig. 8, and Rev. Non-Marine Foss. Moll., p. 73, pl. xxix, figs. 27 and 28. Mus. No. 13574.

**Cardita planicosta** (Lamarek) White.

Bull. U. S. Geol. Surv. No. 18, pp. 7-9, pl. i, figs. 1-3. Mus. No. 13405.

**Limnæa (Leptolimnæa) minuscula** White.

Proc. U. S. Nat. Mus., vol. iii, p. 160, and Rev. Non-Marine Foss. Moll., p. 40, pl. xxix, figs. 24 and 25. Mus. No. 8907.

**Ostrea compressirostra** (Say) Heilprin.

Rev. Foss. Ostreidæ N. A., p. 309, pl. lxxv, figs. 1 and 2. Mus. No. 18597.

**Ostrea sellæformis** (Conrad) Heilprin.

Rev. Foss. Ostreidæ N. A., p. 311, pl. lxii, figs. 1 and 2, and pl. lxiii, fig. 1. Mus. No. 18598.

**Ostrea thirsæ** (Gabb) Heilprin.

Rev. Foss. Ostreidæ N. A., p. 311, pl. lxiii, figs. 4-6. Mus. No. 570.

**Ostrea vicksburgensis** (Conrad) Heilprin.

Rev. Foss. Ostreidæ N. A., p. 312, pl. lxiii, figs. 2 and 3. Mus. No. 6182.

**Physa pleromatis** White.

Rep. Geogr. & Geol. Surv. west 100th meridian, vol. iv, part i, p. 211, pl. xxi, figs. 1a, b. Rev. Non-Marine Foss. Moll., p. 44, or 450, pl. xxx, figs. 6, 7, and 8. Mus. Nos. 8867 and 8876.

\* Mus. No. 2180 are the specimens from which the composite figures 8a, b are made up.

## MIOCENE SPECIES.

**Helix** (*Aglaia*) *fidelis* (Gray) White.

Bull. U. S. Geol. Surv. No. 18, p. 14, pl. iii, figs. 1-3. Mus. No. 13400.

**Helix** (*Monodon*) *Dallii* Stearns (Ms.).

Bull. U. S. Geol. Surv. No. 18, pp. 14, 15, pl. iii, figs. 4-6. Mus. No. 13401.

**Helix** (*Patula*) *perspectiva* (Say) White.

Bull. U. S. Geol. Surv. No. 18, p. 14, pl. iii, fig. 7. Mus. No. 13402.

**Gonostoma** *Yatesii* (Cooper) White.

Bull. U. S. Geol. Surv. No. 18, p. 16, pl. iii, figs. 8-12. Mus. No. 13403.

**Ostrea** *subfalcata* (Conrad) Heilprin.

Rev. Foss. Ostreidæ N. A., p. 313, pl. xlviii, figs. 1-3. Mus. No. 1668.

**Unio** *condoni* White.

Bull. U. S. Geol. Surv. No. 18, pp. 13, 14, pl. ii, figs. 1-3. Mus. No. 13404.

## POST-TERTIARY AND TERTIARY SPECIES OF DOUBTFUL AGE.

**Ostrea** *lurida* (Carpenter) Heilprin.

Post-Pliocene Rev. Foss. Ostreidæ N. A., p. 316, pl. lxii, figs. 3 and 4. Mus. No. 18614.