

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

REVIEW OF THE CLASSIFICATION OF THE
CYRENACEA.

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In working over the Cyrenacea for the Memoir on the Tertiary Fossils of Florida, in course of publication by the Wagner Institute of Science, it was found that both the nomenclature and the classification were in a state of deplorable confusion. While the details are reserved for that memoir, it was thought that a synopsis of the arrangement adopted might be of use to the students of the group, and it is herewith presented.

Family **Cyrenidaë**.

Genus *Miodontopsis* Dall (nov.). Type *Cyrena media* Sowerby. Jurassic. This is *Miodon* Sandberger, 1870, not Carpenter, 1865.

Genus *Loxoptychodon* Sandberger, 1872. Type *Cyrena intermedia* Deshayes. Lower Eocene, France.

Genus *Plesiastarte* Fisher, 1887. Type *P. crenulata* Deshayes (as *Cyrena*). Lower Eocene, France.

This is *Anomala* Cossmann, 1886, not Hübner, 1816.

Genus *Ditypodon* Sandberger, 1872. Type *Cyrena suessii* C. Mayer. Lower Pliocene of Italy.

?Genus *Donacopsis* Sandberger, 1872. Type *Cyrena acutangularis* De-

shayes. Eocene of France. I suspect this to be merely a subdivision of *Cyrena*.

Genus *Cyrena* Lamarck, 1818. Type *Cyrena bengalensis* Lamarck. Recent. India.

Section *Polymesoda* Rafinesque, 1820. Type *Cyclas caroliniana* Bosc. Recent. South Carolina. *Cyprinella* and *Diodus* Gabb, and *Leptosiphon* Fischer are synonymous.

Section *Pseudocyrena* Bourguignat, 1854. Type *Cyrena maritima* D'Orbigny. Cuba. *Anomala* Deshayes, not Hübner, *Egeta* H. and A. Adams, and *Cyrenocapsa* Fisher are synonymous.

Section *Geloina* Gray, 1844. Type *Cyrena coaxans* Gmelin (*C. zeylanica* Lamarck). Recent. Ceylon.

Section *Egetaria* Mörch, 1861. Type *E. pullastra* Mörch. West coast Central America.

Section *Isodoma* Deshayes, 1858. Type *I. cyprinoides* Deshayes. Eocene of France.

Subgenus *Leptesthes* Meek, 1872. Type *Corbicula fracta* Meek. Eocene of Nebraska

Genus *Corbicula* Megerle, 1811. Type *Tellina fluminalis* Müller. India.

Section *Veloritina* Meek, 1871. Type *Corbicula durkeei* Meek. Cretaceous of Wyoming.

Section *Corbiculina* Dall (nov.). Type *Corbicula angasi* Prime. Australia. Smaller and more delicate than *Corbicula* s. s. and viviparous.

Section *Tellinocyclus* Dall (nov.). Type *Cyrena tellinella* Deshayes Parisian Eocene. Small, heavy, elongate and acute, with short distant lateral teeth.

Section *Cyrenodonax* Dall (nov.). Type *C. formosana* Dall. Recent. Formosa. Like *Donacopsis* but inflated, without radial sulcation and having an entire pallial line.

Subgenus *Cyanocyclus* Ferussac, 1818 (restricted). Type *Corbicula limosa* Maton. South America.

Genus *Villorita* Gray, 1833. Type *V. cyprinoides* Wood. Indo China and Japan. The name was spelled *Velorita* by Gray in 1842.

Genus *Batissa* Gray, 1853. Type *B. tenebrosa* Hinds. Australia.

Genus *Egeria* Roissy, 1805. Type *Venus paradoxa* Born. Rivers of West Africa. *Galatea* Bruguiere, *Trigona* Schumacher not Jurine, *Potamophila* Sowerby, *Galateola* Fleming, and *Megadesma* Bowdich are synonymous.

Section *Egeria* s. s. Type *E. paradoxa* Born.

Section *Profischeria* Dall (nov.). Type *Fischeria Delesserti* Bernardi. West Africa. This is *Fischeria* Bernardi, 1860, not Robineau Desvoidy, 1830.

Family Sphæriidæ.

Genus *Sphærium* Scopoli, 1777. Type *Tellina cornea* Linné. North Europe. *Cyclas* Lamarck not Link, *Cornea* Megerle, *Amesoda* Rafinesque, *Cycladites* Krüger, *Pisum* Bourguignat not Megerle, and *Corneola* Clessin, not Held, are synonymous.

Subgenus *Sphærium* s. s. Type *S. corneum* Linné.

Section *Cyrenastrum* Bourguignat, 1854. Type *S. solidum* Normand. France.

Section *Sphæriastrum* Bourguignat, 1854. Type *S. rivicola* Leach. England.

Subgenus *Musculium* Link, 1807. Type *Tellina lacustris* Müller. Denmark. *Calyculina* Clessin is synonymous.

Subgenus *Eupera* Bourguignat, 1854. Type *Pisidium moquinianum* Bourg. Brazil. *Limosina* Clessin is synonymous.

Genus *Corneocyclas* Ferussac, 1818, (restricted). Type *Tellina pusilla* Gmelin. Germany.

Subgenus *Corneocyclas*.

Section *Corneocyclas* s. s. Type *C. pusilla* Gmelin.

Section *Phymesoda* Rafinesque, 1820. Type *Tellina virginica* Gmelin. Virginia.

Section *Pisidium* C. Pfeiffer, 1821. Type *Tellina amnica* Müller. Denmark.

Section *Cyclocalyx* Dall (nov.). Type *Pisidium scholtzii* Clessin. Germany. The umbones high and constricted below the nepionic shell, otherwise like *Corneocyclas* s. s.

Subgenus *Cymatocyclas* Dall (nov.). Type *Pisidium compressum* Prime. Cambridge, Mass. Nepionic valves flat, transversely undulated, sharply marked off from the rest of the disk, otherwise as in *Corneocyclas*.

Subgenus *Tropidocyclas* Dall (nov.). Type *Pisidium henslowianum* Sheppard. England. Nepionic valves with an oblique, elevated, radial keel and distinctly delimited from the rest of the disk. *Fossarina* Clessin, 1873, not Adams, 1863, is synonymous.

Notes.

Pera Leach and *Euglesa* Leach, 1852, are synonymous with *Corneocyclas* s. s. *Galileja* Costa; *Euglesia* Leach, 1840; *Pisum* Gray, 1847, not Megerle, 1811; *Cordula* Leach; *Fluminina* Clessin; *Cycladina* Clessin; and *Rivulina* Clessin; are not separable from *Pisidium* s. s., if judged by their types; most of them are based on perfectly worthless characters. The specific determinations of Westerlund in the 'Fauna der Palæarcti-

schen Region' have been accepted in determining the synonymy of the types.

It may be of interest to state here that the group *Cyclas*, a name applied by Bruguiere, in 1798, to a heterogeneous assembly, and afterward used by Lamarck for species of the prior genus *Sphærium*, was first properly divided by Link in 1807, who segregated *Musculium* and took the largest and first species of Bruguiere as a type for the genus *Cyclas*. This was the *Venus islandica* of Linné, to which, subsequently, the names of *Cyprina* Lamarck, 1812; *Arctica* Schumacher, 1817, not Moehring, 1758; and *Cypriniadea* Rovereto, 1900, were applied. These become synonyms of *Cyclas* (Bruguiere) Link, whose only species and type is *Venus islandica* L.