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## Glossary

**Additive ribbing.** Ribbing or ribbing structures such as denticles, inner ribs, etc. that appear added onto the shell surface.

**Adductor myostraca.** Myostraca deposited in adductor muscle attachment areas.

**Alternation sublayers.** Differentiated sublayers secreted alternately by the same mantle region.

**Beak.** Apical or oldest portion of the shell with the prodissoconch at its apex.

**Combined layers.** Two or more adjacent major shell layers of similar structure which appear to form one layer.

**Complex crossed-lamellar structure.** Structure of more or less prismatic primary units themselves made up of second order lamellae radiating inwards from the axis of the primary unit.

**Complex structure.** Complex crossed-lamellar structure in association with some prismatic or other structure.

**Composite ribbing.** Ribbing composed of positionally related additive and non-additive components.

**Crossed-lamellar structure.** Structure composed of first order lamellae which themselves are made up of second order lamellae arranged normally to the major surfaces of the first order lamellae and obliquely in respect to the minor surfaces. The direction of obliquity is reversed in successive first order lamellae.

**Denticle.** Node-like projection on or near the shell periphery formed by additive deposition.

**Differentiated combined layer.** A combined layer with structurally similar component layers which may be distinguished by coloration or other characters.

**Ectostracum.** The outer major calcareous shell layer secreted by the mantle margin.

**Endostracum.** The inner calcareous shell layer, secreted by the mantle within the area surrounded by the pallial and adductor muscle attachments.

**Fibrillar structure.** Prismatic structure in which the prisms appear similar to threads or filaments.

**Flabellate structure.** Structure composed of granule-like primary units which are in turn composed of radiating prisms.

**Flange.** Keel-like projection on either side of a denticle.

**Foliated structure.** Structure consisting of calcite leaves which usually can easily be separated from each other, and are generally slightly oblique to the growth planes.

**Grained structure.** Structure composed of irregular granules.

**Grooves.** Radial depressions on the inner shell surface underneath and corresponding to external ribs.

**Growth lines.** Lines formed by the intersection of growth planes with other planes and surfaces.

**Growth plane.** A surface within the shell representing a former position of the depositional surface of the mantle.

**Growth sublayers.** Alternation sublayers in which there is alternation of fast-growth and slow-growth sublayers.

**Heterochronous secretion.** Secretion such that the periods of fast-growth and slow-growth do not correspond on the apical and marginal sides of the pallial line.

**Hinge plate.** An interior dorsal platform supporting the hinge structures, usually, if not always, composed of mesostracum.

**Homochronous secretion.** Secretion such that the periods of fast-growth and slow-growth correspond on both sides of the pallial line.

**Homogeneous structure.** A structure wherein there is no recognizable pattern.

**Hypostracum.** Name given to the inner layer or endostracum by THIELE (1893), PRASHAD (1928), etc.; or to the adductor myostracum by THIELE (1893), JAMESON (1912), etc.

**Inclined.** Oblique outwards towards the periphery.

**Indentation.** Embayment of the shell margin between two denticles.

**Inner ribs.** Radial elevations on the inner surface of the shell, not directly related to the outer ribbing.

**Internal ribs.** Ribbing structures within the shell substance produced by peripheral or subperipheral denticles.

**Interrib.** A relatively small rib in an interspace.

**Interspace.** External radial depression between two ribs.

**Interspace area.** Area of a transverse section of a composite-ribbed pelecypod that lies between the partitions of a denticle and inside an interspace.

**Layers.** The major structural divisions of the molluscan shell. Each is deposited by a distinct part of the mantle, and is generally nearly parallel to the outer shell surface.

**Ligament.** Portion of the connecting mechanism of the two valves of a pelecypod shell, external to the hinge plate and composed largely of conchiolin.

**Lobate ribbing.** Ribbing produced by lobations of the mantle margin.

**Margin.** The outermost zone of the marginal region of the shell, just beneath the outer surface.

**Mesectostracum.** A combined mesostracum and ectostracum.

**Mesendostracum.** A combined mesostracum and endostracum.

**Mesostracum.** The middle major calcareous shell layer, secreted by the mantle between the pallial muscle attachments and the zone secreting the ectostracum.

**Myostracum.** Deposits secreted within muscle attachment areas.

**Nacreous structure.** Small, thin plates of aragonite alternating with thin films of conchiolin, and producing a nacreous luster.

**Non-additive ribbing.** Ribbing produced directly by folds of lobations of the mantle margin, where the marginal region of the shell is non-reflected.

**Non-reflected marginal region.** Marginal region in which the periphery of the shell coincides with the margin.

**Ossicle.** Isolated calcareous plate within some pelecypod ligaments.

**Ostracum.** 1. THIELE's (1893) designation for the outer 2 or for all 3 calcareous layers of the shell.

2. NEWELL's (1937) designation of the whole shell within the periostracum.

**Outer ribs.** Radial elevations on the external surface of the shell.

**Overlap sublayer.** Sublayer featuring the overlap, convergence and merging of growth sublayers, usually of slow-growth sublayers in areas of slow secretion.

**Pallial line.** Actually a zone, often depressed, which is the attachment area of the pallial muscles on the inner shell surface.

**Pallial myostracum.** Thin aragonitic layer deposited along the pallial «line».

**Partitions.** Nearly vertical zones of translucent slow-growth deposits formed on the lateral flanks of the denticles.

**Periostracum.** The outermost major shell layer, composed entirely of conchiolin, and secreted by the extreme margin of the mantle outside the zone secreting the ectostracum.

**Periphery.** Zone of the marginal region of the shell furthest removed from the apex.

**Plicate ribbing.** Ribbing resulting directly from plications or folds of the mantle margin.

**Prismatic structure.** Structure composed of polygonal prisms.

**Reclined.** Oblique inwards towards the periphery.

**Reflected marginal region.** A marginal region in which the periphery is located inside the margin.

**Rib.** Major radial or semi-radial elevation above the general surface of the shell, either inner or outer and excluding the teeth.

**Rib area.** Area of a transverse section of a composite-ribbed pelecypod that lies between the partitions of two adjacent denticles and directly inside a rib.

**Ribbing.** Continuous radial or semi-radial structures, excepting the teeth on the surface or within the shell.

**Ribbing structures.** Internal modifications of the shell, especially the growth laminae, resulting from ribbing.

**Riblet.** Minor radial elevation superimposed on rib or interspace.

**Ridge.** Radial elevation on the inner shell surface underneath and corresponding to an interspace on the outer shell surface.

**Secondary partitions.** Supernumerary partitions resulting from the presence of secondary flanges.

**Sublayers.** Subdivisions of layers or combined layers of much less regular occurrence than the layers.

**Subperipheral region.** Region located directly beneath or inside the periphery of the shell.

**Supraperipheral region.** Region located directly above or outside the periphery of the shell.

Tubules. Small tubes originating at the inner shell surface and extending outwards.

They are produced by the mantle surface.

Undifferentiated combined layer. Combined layer in which the component layers are indistinguishable.

### Species examined<sup>1</sup>

#### Family Nuculidae

*Acila castrensis* (Hinds); *Acila packardi* (Clark), Oligocene, Oregon.

#### Family Solemyidae

*Solemya velum* (Say), Connecticut; *Solemya* sp., no locality.

#### Family Pinnidae

*Atrina* sp., no locality; *Pinna mutica* (Reeve), no locality.

#### Family Pteriidae

*Meleagrina margaritifera* (Linnaeus), no locality.

#### Family Mytilidae

*Mytilus edulis* (Linnaeus); *M. californianus* (Conrad); *Hormomya searnsi* (Pilsbry and Raymond); *Septifer bifurcatus* (Conrad); *Volsella capax* (Conrad); *Brachidontes demissus* (Dillwyn); *Botula falcata* (Gould); *Lithophaga plumula* (Hanley).

#### Family Unionidae

*Unio* sp., no locality; *Anodonta* sp., no locality.

#### Family Trigoniidae

*Trigonia* (*Neotrigonia*) *pectinata* Lamarck, Australia.

#### Family Periplomatidae

*Periploma planiusculum* Sowerby.

#### Family Pandoridae

*Pandora glacialis* Leach, Northern Seas.

<sup>1</sup> Unless otherwise indicated, the species listed are represented by Recent specimens from the West Coast of North America. The species listed here have generally been sectioned or otherwise closely examined. Other species not listed here have been examined superficially.