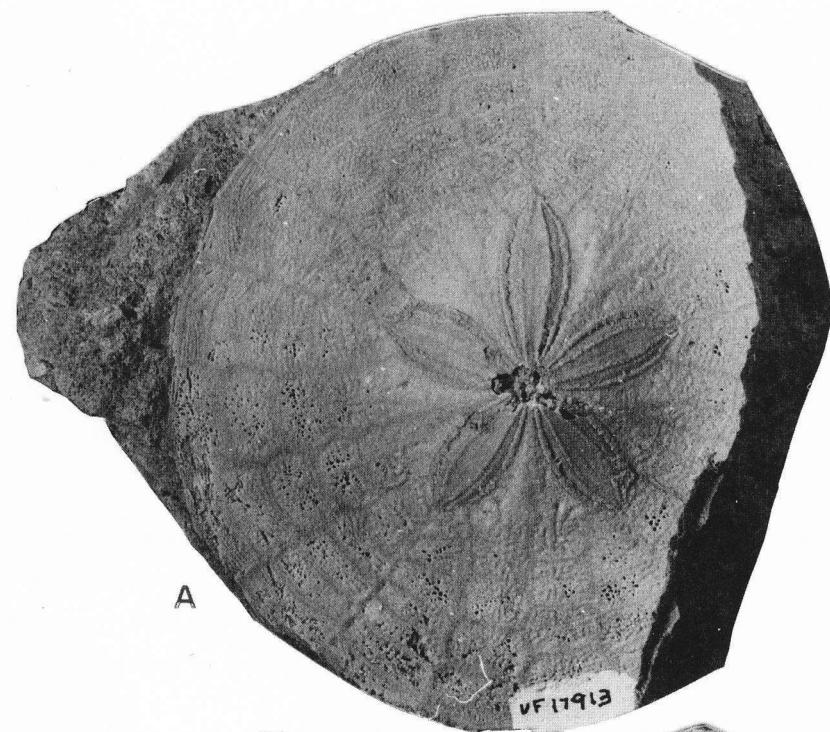


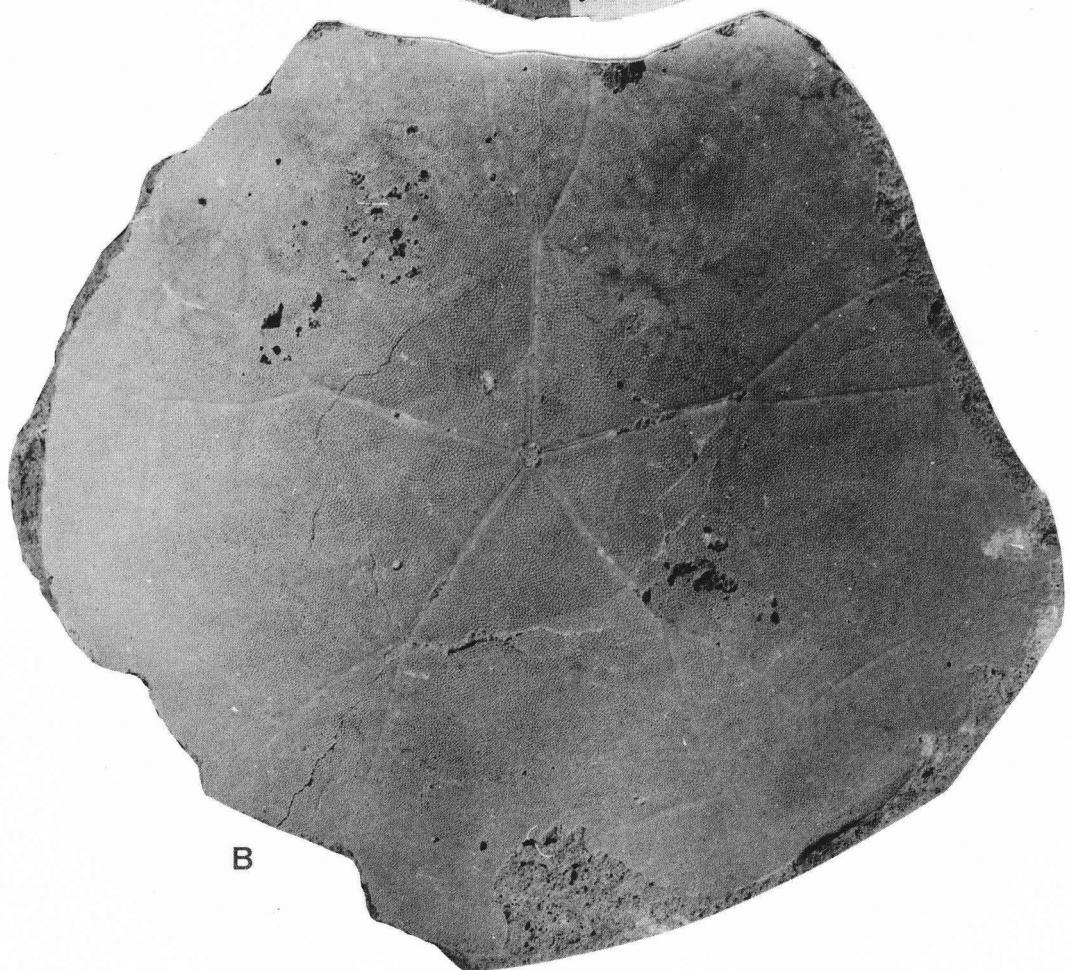
**PLATE 3**

- A) Periarchus floridanus Fischer, 1951; UF 17913; aboral view of dolomitized, partial internal mold of test; 1x.
- B) Periarchus floridanus Fischer, 1951; UF 12795; adoral view of dolomitized, partial internal mold of test; 1x.



A

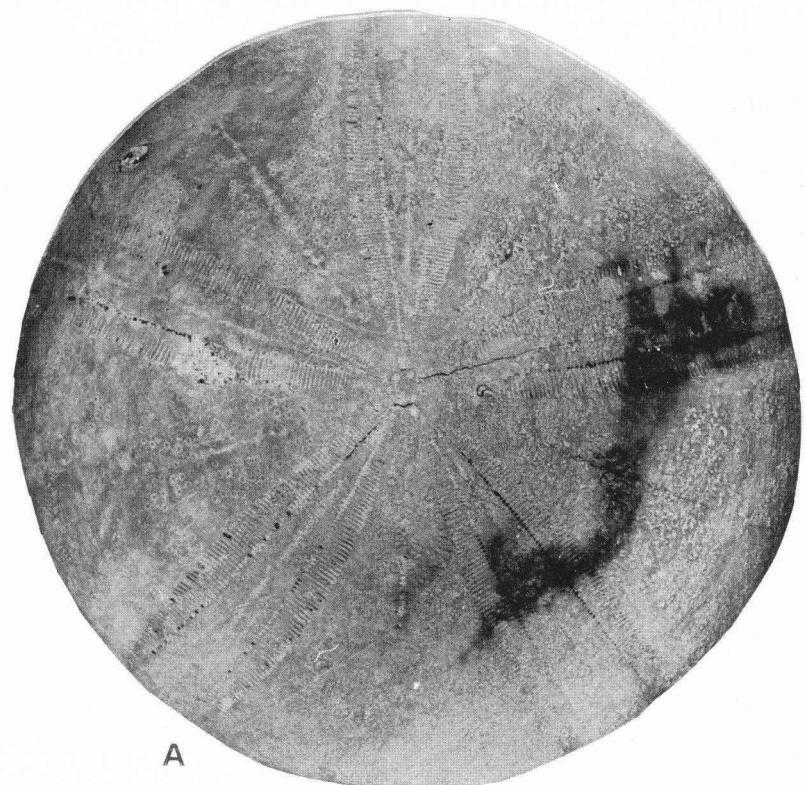
UF 17913



B

**PLATE 4**

- A) Amblypygus americanus Michelin, 1858; UF 67090; aboral view; 1x.
- B) Amblypygus americanus Michelin, 1858; UF 67090; adoral view; 1x.



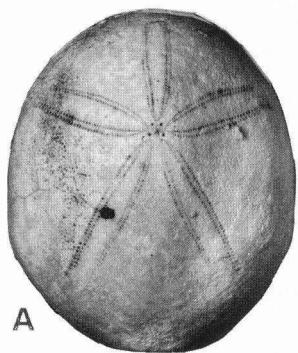
A



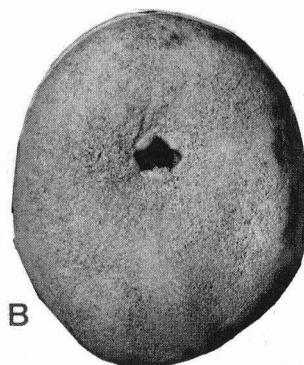
B

**PLATE 5**

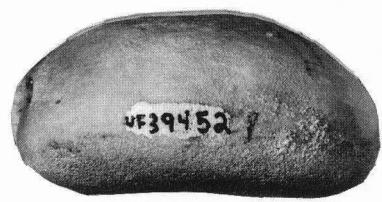
- A) Rhyncholampas conradi (Conrad, 1850); UF 39452; aboral view; 1x.
- B) Rhyncholampas conradi (Conrad, 1850); UF 39452; adoral view; 1x.
- C) Rhyncholampas conradi (Conrad, 1850); UF 39452; lateral view; 1x.
- D) Rhyncholampas ericsoni (Fischer, 1951); UF 37661; aboral view; 1x.
- E) Rhyncholampas ericsoni (Fischer, 1951); UF 37661; adoral view; 1x.
- F) Rhyncholampas ericsoni (Fischer, 1951); UF 37661; lateral view; 1x.
- G) Rhyncholampas georgiensis (Twitchell, 1915); UF 22535; aboral view of dolomitized internal mold of test; 1x.
- H) Rhyncholampas georgiensis (Twitchell, 1915); UF 22535; adoral view of dolomitized internal mold of test; 1x.
- I) Rhyncholampas trojanus (Cooke, 1942); UF 3747; aboral view; 1x.
- J) Rhyncholampas trojanus (Cooke, 1942); UF 3747; adoral view; 1x.
- K) Eurhodia patelliformis (Bouvé, 1851); UF 4932; aboral view; 1x.
- L) Eurhodia patelliformis (Bouvé, 1851); UF 4932; adoral view; 1x.
- M) Ditremaster beckeri (Cooke, 1942); UF 47040; aboral view; 1x.
- N) Ditremaster beckeri (Cooke, 1942); UF 47040; adoral view; 1x.
- O) Schizaster armiger (Clark, 1915); UF 3302; aboral view; 1x.
- P) Schizaster armiger (Clark, 1915); UF 3302; adoral view; 1x.
- Q) Schizaster ocalanus Cooke, 1942; UF 5833; aboral view; 1x.
- R) Schizaster ocalanus Cooke, 1942; UF 5833; adoral view; 1x.



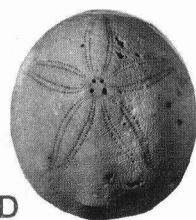
A



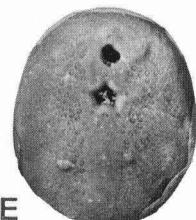
B



C



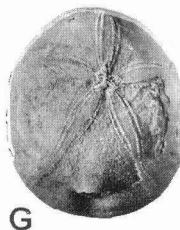
D



E



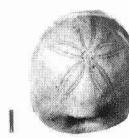
F



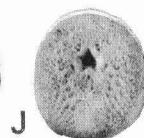
G



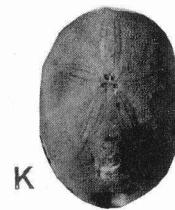
H



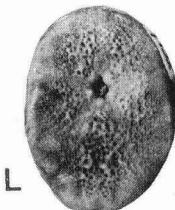
I



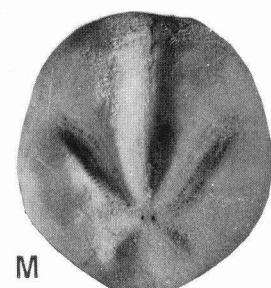
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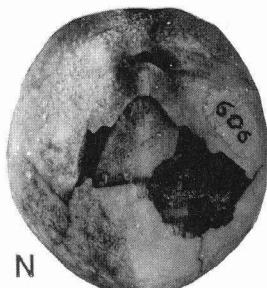
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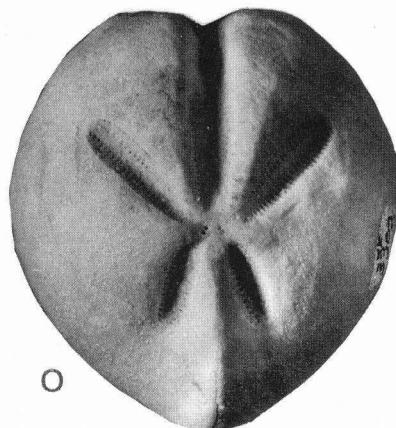
L



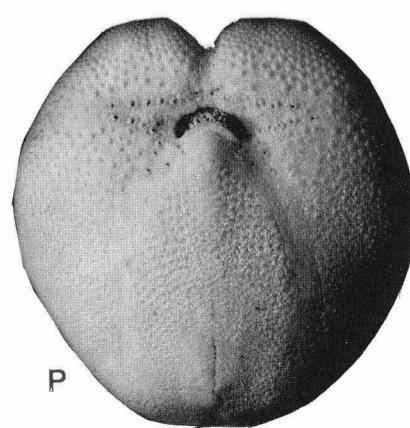
M



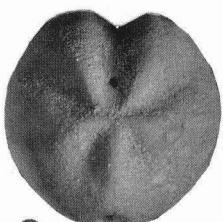
N



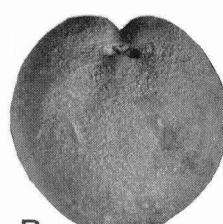
O



P



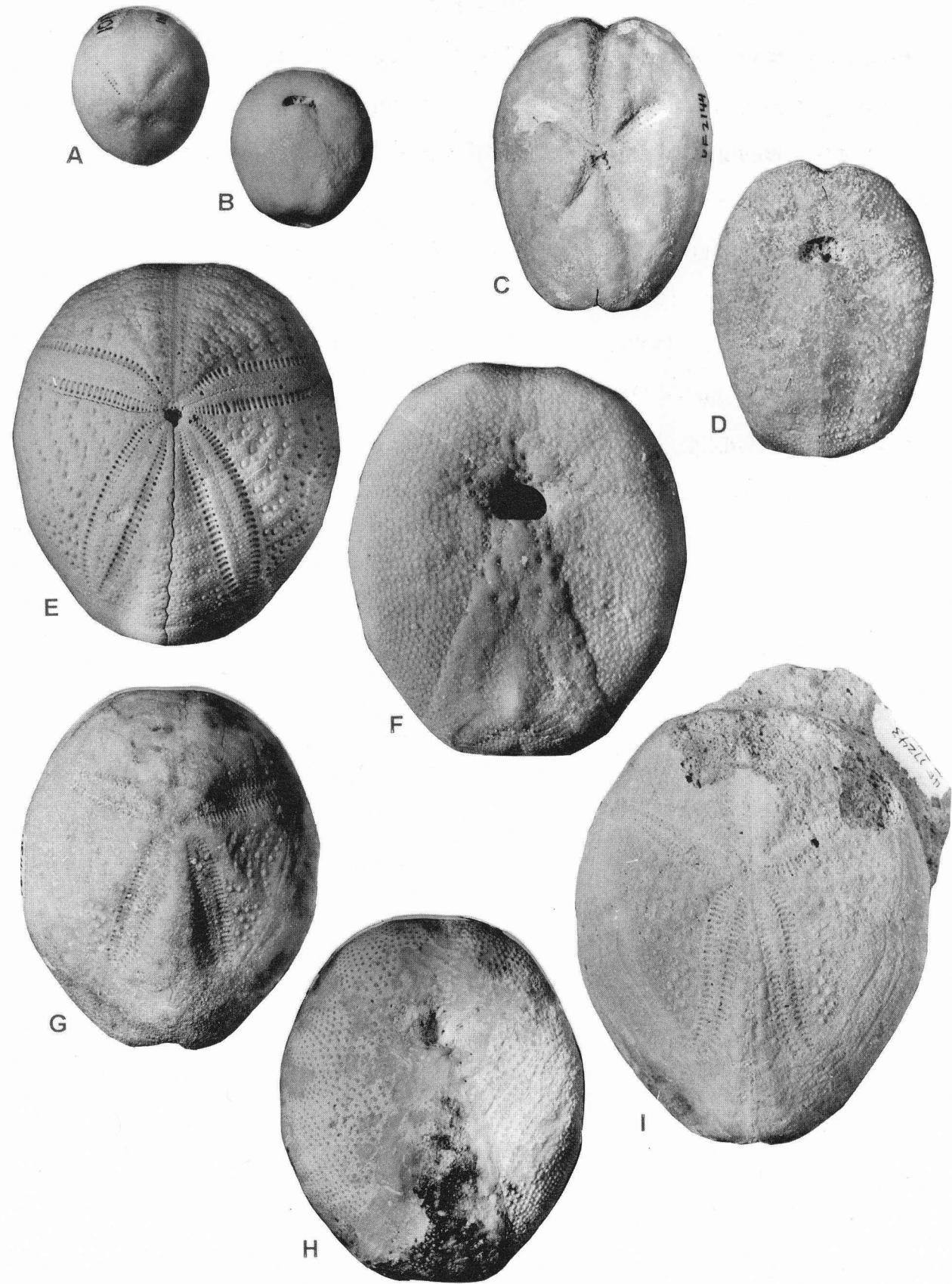
Q



R

**PLATE 6**

- A) Agassizia clevei Cotteau, 1875; UF 5841; aboral view; 1x.
- B) Agassizia clevei Cotteau, 1875; UF 5841; adoral view; 1x.
- C) Brissopsis steinhatchee Cooke, 1942; UF 2144; aboral view; 1x.
- D) Brissopsis steinhatchee Cooke, 1942; UF 2144; adoral view; 1x.
- E) Eupatagus antillarum (Cotteau, 1875); UF 3913; aboral view; 1x.
- F) Eupatagus antillarum (Cotteau, 1875); UF 3913; adoral view; 1x.
- G) Eupatagus ocalanus Cooke, 1942; UF 46942; aboral view; 1x.
- H) Eupatagus ocalanus Cooke, 1942; UF 46942; adoral view; 1x.
- I) Plagiobrissus curvus (Cooke, 1942); UF 17243; aboral view of dolomitized internal mold of test; 1x.



**PLATE 7**

- A) Eupatagus clevei (Cotteau, 1875); UF 12903; aboral view; 1x.
- B) Eupatagus clevei (Cotteau, 1875); UF 12903; adoral view; 1x.
- C) Eupatagus clevei (Cotteau, 1875); UF 12681; aboral view of dolomitized internal mold of test; 1x.
- D) Eupatagus clevei (Cotteau, 1875); UF 12681; adoral view of dolomitized internal mold of test; 1x.

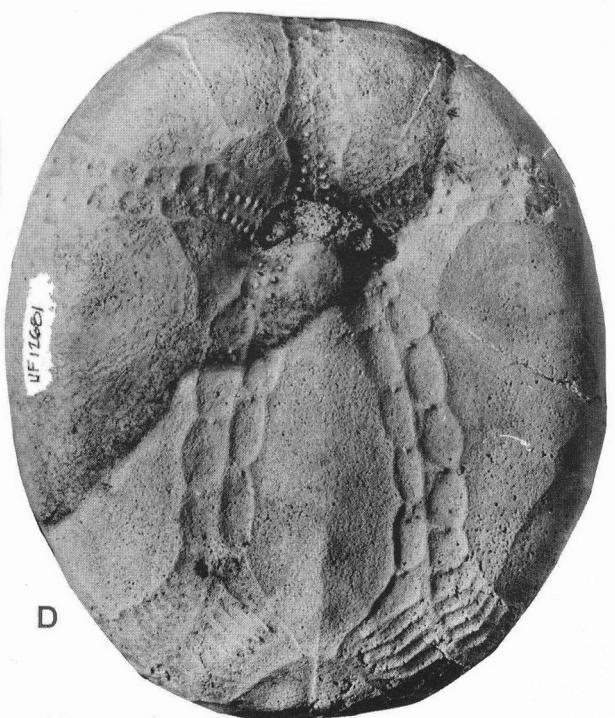
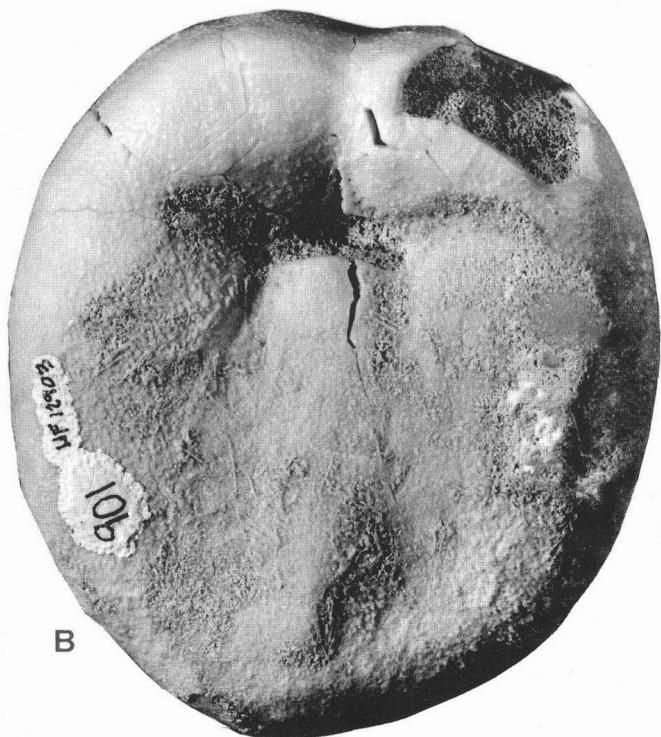
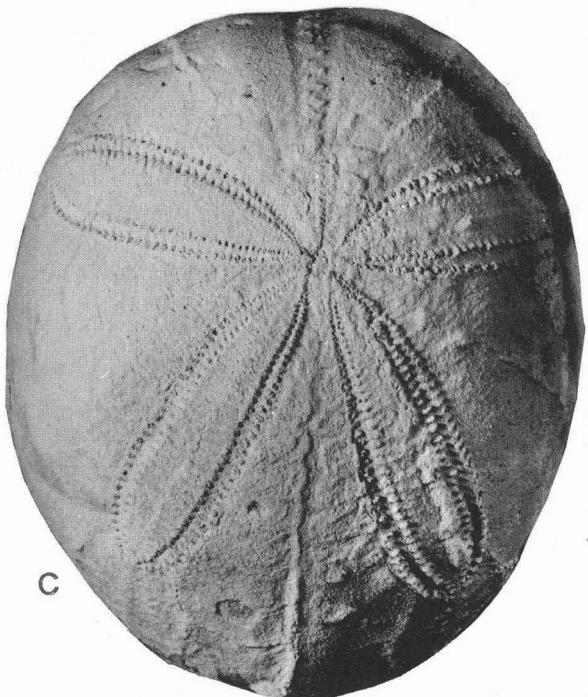
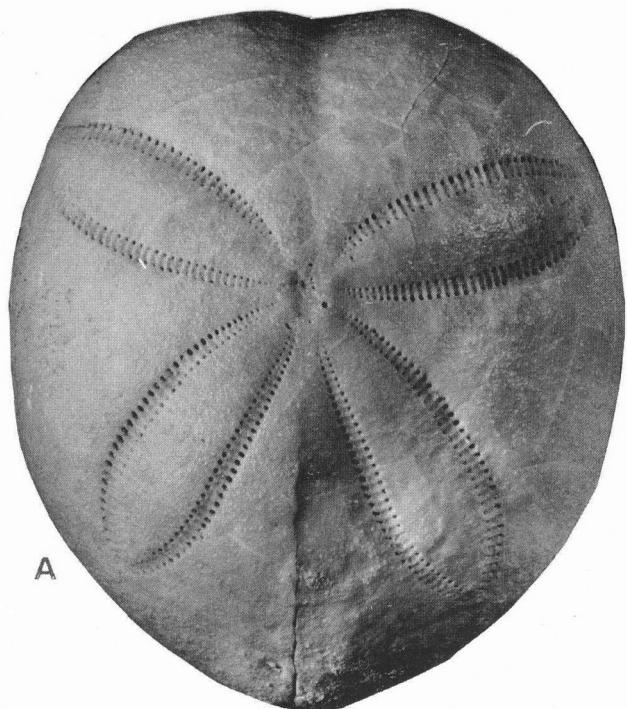


Table 1. Species list of described Florida Eocene echinoids with each taxon in systematic order by family (excludes described subspecies). Stratigraphic occurrence for each species is also listed. For some, a brief synonymy (an older name no longer in use) is provided.

#### Cidaridae

Phyllacanthus mortoni (Conrad, 1850).

Stratigraphic Occurrence: Lower & Upper members of Ocala Ls.

Synonymy: Cidaris mortoni (Conrad, 1850).

#### Phymosomatidae

Dixieus dixie (Cooke, 1941).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Echinoneidae

Amblypygus americanus Michelin, 1858.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Oligopygidiae

Oligopygus phelani Kier, 1967.

Stratigraphic Occurrence: Lower Member of Ocala Ls.

Oligopygus haldemani (Conrad, 1850).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Oligopygus wetherbyi de Loriol, 1887.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Fibulariidae

Fibularia vaughani (Twitchell, 1915).

Stratigraphic Occurrence: Lower & Upper members of Ocala Ls.

Synonymy: Echinocyamus vaughani Twitchell, 1915.

#### Neolaganidae

Neolaganum dalli (Twitchell, 1915).

Stratigraphic Occurrence: Avon Park Fm.

Synonymy: Peronella dalli (Twitchell, 1915), Laganum dalli Twitchell, 1915, and Peronella archerensis (Twitchell, 1915).

Neolaganum durhami Cooke, 1959.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Durhamella floridana (Twitchell, 1915).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Synonymy: Laganum floridanum Twitchell, 1915.

Durhamella ocalana (Cooke, 1942).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Synonymy: Laganum ocalanum Cooke, 1942.

Weisbordella cubae (Weisbord, 1934).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Weisbordella johnsoni (Twitchell, 1915).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Synonymy: Peronella crustuloides (Morton, 1833).

Wythella eldridgei (Twitchell, 1915).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Protoscutellidae

Protoscutella pentagonium Cooke, 1942.

Stratigraphic Occurrence: Uncertain-from well core probably at 200 meters depth.

Periarchus floridanus Fischer, 1951.

Stratigraphic Occurrence: Lower Member of Ocala Ls.

Synonymy: Periarchus lyelli floridanus Fischer, 1951.

Mortonella quinquefaria (Say, 1825).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Echinolampadidae

Echinolampus tanyptalis Harper and Shaak. 1974.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Cassidulidae

Rhyncholampus conradi (Conrad, 1850).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Synonymy: Cassidulus conradi (Conrad, 1850).

Rhyncholampus ericsoni (Fischer, 1951).

Stratigraphic Occurrence: Lower Member of Ocala Ls.

Synonymy: Cassidulus ericsoni Fischer, 1951.

Rhyncholampus georgiensis (Twitchell, 1915).

Stratigraphic Occurrence: Lower Member of Ocala Ls.

Synonymy: Cassidulus georgiensis Twitchell, 1915.

Rhyncholampus trojanus (Cooke, 1942).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Synonymy: Eurhodia trojana (Cooke, 1942) and Cassidulus trojanus Cooke, 1942.

#### Pliolampadidae

Eurhodia patelliformis (Bouvé, 1851).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Hemasteridae

Ditremaster beckeri (Cooke, 1942).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

#### Schizasteridae

Schizaster armiger (Clark, 1915).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Synonymy: Paraster armiger (Clark, 1915).

Schizaster ocalanus Cooke, 1942.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Agassizia clevei Cotteau, 1875.

Stratigraphic Occurrence: Lower Member of Ocala Ls.

Synonymy: Agassizia floridana de Loriol, 1887.

#### Brissidae

Brissopsis steinhatchee Cooke, 1942.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Eupatagus antillarum (Cotteau, 1875).

Stratigraphic Occurrence: Lower Member of Ocala Ls.

Synonymy: Eupatagus mooreanus Pilsby, 1914.

Eupatagus clevei (Cotteau, 1875).

Stratigraphic Occurrence: Lower & Upper members of Ocala Ls.

Synonymy: Eupatagus ingens Zachos, 1968.

Eupatagus ocalanus Cooke, 1942.

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Macropnuestes mortoni (Conrad, 1850).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

Plagiobrissus curvus (Cooke, 1942).

Stratigraphic Occurrence: Lower & Upper members of Ocala Ls.

Plagiobrissus dixie (Cooke, 1942).

Stratigraphic Occurrence: Upper Member of Ocala Ls.

## SUGGESTED ADDITIONAL READINGS

- Carter, B.D. 1990. Late Eocene echinoid biofacies of Florida. *Palaios*, 5:176-183.
- Clark, W.R. and M.W. Twitchell. 1915. The Mesozoic and Cenozoic Echinodermata of the United States. U.S. Geological Survey Monograph 54, 341 p.
- Cooke, C.W. 1941. Cenozoic regular echinoids of eastern United States. *Journal of Paleontology*, 15(1):1-20.
- Cooke, C.W. 1942. Cenozoic irregular echinoids of eastern United States. *Journal of Paleontology*, 16(1):1-62.
- Cooke, C.W. 1959. Cenozoic echinoids of eastern United States. U.S. Geological Survey Professional Paper 321, 106 p.
- Fischer, A.G. 1951. The echinoid fauna of the Inglis member, Moodys Branch Formation. *Florida Geological Survey Bulletin* 34(2):47-101.
- Jones, D.S. 1997. The marine invertebrate fossil record of Florida. In: A.F. Randazzo. and D.S. Jones, (eds.), *The Geology of Florida*. University Press of Florida, Gainesville, pp. 89-177.
- Kier, P.M. 1962. Revision of the cassiduloid echinoids. *Smithsonian Miscellaneous Collections*, 144(3):1-262.
- Kier, P.M. 1967. Revision of the oligopygoid echinoids. *Smithsonian Miscellaneous Collections*, 152(2):1-147.
- Oyen, C.W. and R.W. Portell. 2001. Diversity patterns and biostratigraphy of Cenozoic echinoderms from Florida. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 166:193-218.
- Zachos, L.G. and G.D. Shaak. 1978. Stratigraphic significance of the Tertiary echinoid Eupatagus ingens Zachos. *Journal of Paleontology*, 52:921-927.