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CATALOGUE OF  
TYPE SPECIMENS OF FORAMINIFERA  
IN  
THE WALKER MUSEUM OF PALEONTOLOGY

MATTHEW H. NITECKI

FIELDIANA: GEOLOGY

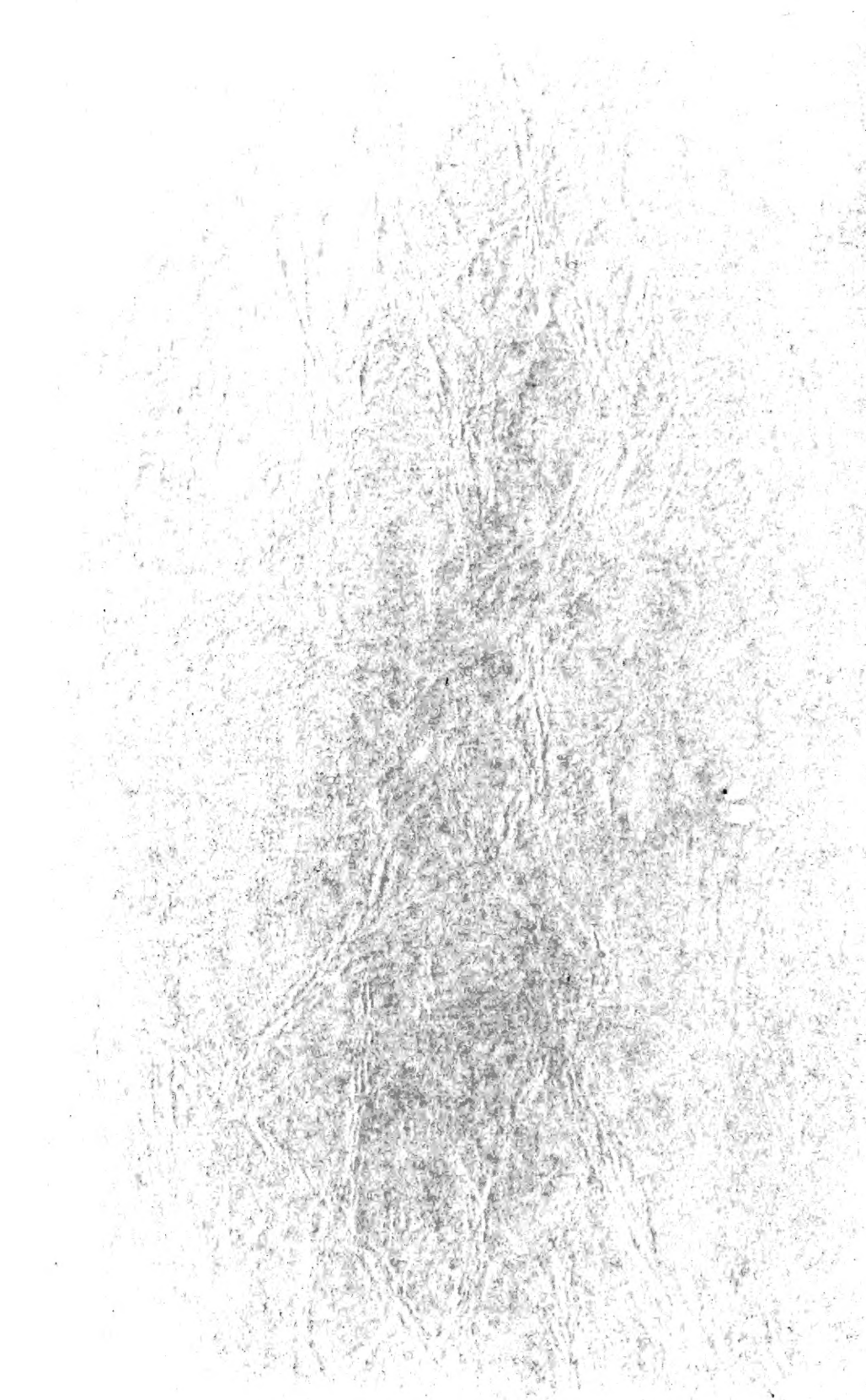
VOLUME 13, NUMBER 2

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CHICAGO NATURAL HISTORY MUSEUM

SEPTEMBER 28, 1961

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CATALOGUE OF  
TYPE SPECIMENS OF FORAMINIFERA  
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MATTHEW H. NITECKI

*Walker Museum of Paleontology  
University of Chicago*

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## CATALOGUE OF LOCALITIES

*Locality 1.*—Station 1. Excellent exposure of dark, fossiliferous clays 2.5 miles northwest of Ridgeway, around the bend of a small creek that flows northward into South Sulphur River, Hopkins County, Texas.

*Locality 2.*—Station 2B. Excellent exposure along small creek that flows under the bridge 2.3 miles by road north of Cumby, on the road to Commerce. Dark-gray, silty, very fossiliferous, and imperfectly bedded clay about 300 feet west of the bridge. Hopkins County, Texas.

*Locality 3.*—Station 2C. Excellent exposure along small creek that flows under the bridge 2.3 miles by road north of Cumby, on the road to Commerce. Gray, gritty clay just east of the bridge. Hopkins County, Texas.

*Locality 4.*—Station 2F. Excellent exposure along small creek that flows under the bridge 2.3 miles by road north of Cumby, on the road to Commerce. Fine-grained clay just above a thin layer of phosphatic nodules. Hopkins County, Texas.

*Locality 5.*—Station 3. Good exposure in deep roadside ditch on steep hill 0.2 of a mile east of road corner in north end of town of Commerce on highway to Paris. This gray to buff, silty clay contains many fragments of shells and an abundance of foraminiferal tests. Hunt County, Texas.

*Locality 6.*—Station 3A. Gully in field west of north-south stretch of road about 3 miles in a straight line northwest of Campbell or 4 miles by road from that town on highway to Neyland. Compact, buff-gray clay that reduces with difficulty in the washing process to a small residue of fine quartz particles, very few glauconitic grains, and several species of typical basal Midway Foraminifera. Hunt County, Texas.

*Locality 7.*—Station 16. Excellent exposure in a 35-foot bank at Burton's Bluff on Trinity River at the end of a trail through the woods 1.3 miles north of Trinity Valley Store on the Kerens-Athens road about 1 mile east of the river. This very dark-blue to almost black, silty clay contains numerous large concretions, thin seams

of selenite, and small gypsiferous nodules. Henderson County, Texas.

*Locality 8.*—Station 21. Rocky Ford Bluff on Trinity River about 7.5 miles northeast of Kerens. The high bank exposes excellently the dark-gray to black, slightly silty clay that contains a few well-preserved fossils and numerous rounded limonite concretions that range from an inch to eighteen inches in diameter. Navarro County, Texas.

*Locality 9.*—Station 23. Shallow ditch at road corner southeast of new Corsicana reservoir on the road to Mildred. The dark-blue to nearly black, siltless clay breaks with ball fracture and contains small limonite concretions, numerous small gastropods, otoliths, and a great abundance of Foraminifera. Navarro County, Texas.

*Locality 10.*—Station 24. Road cut near top of hill on Corsicana-Navarro road just south of the junction with the road to Mildred. Light-gray to blue-gray, laminated clay with a few blotches of silt. Stratigraphically about 20 feet above station 23. Navarro County, Texas.

*Locality 11.*—Station 29. Exposure in side of steep west-facing hill on Richland-Streetman road 1.5 miles southeast of Richland, where roads branch off both northeast and southwest with a short offset. This blue-gray, fine-grained, conchoidal, concretionary clay is cut by numerous joint lines that are impregnated with limonite. The samples wash down to a very small residue of tiny ferruginous particles, shell fragments, and an abundance of typical upper Midway Foraminifera. Navarro County, Texas.

*Locality 12.*—Station 33. Cistern excavation 0.8 of a mile southeast of Currie on the road to the Currie oil field. Gray, fine-textured, slightly silty clay containing large boulder-like concretions. Navarro County, Texas.

*Locality 13.*—Station 36. Exposure along an east-west road about three-quarters of a mile north of New Hope between two creeks. This dark-blue, concretionary clay is rich in specimens and species. Freestone County, Texas.

*Locality 14.*—Station 37. Deep stream gully one-half mile west of New Hope on south side of bridge. The material here exposed consists mostly of silty clays and silts containing large, rough-surfaced concretions and a few fossils. The sample reduced by washing to some quartz sand, considerable glauconite, and numerous foraminiferal tests of the upper Midway faunule. Freestone County, Texas.

*Locality 15.*—Station 40. Exposure along a small branch about three-quarters of a mile northwest of Tehuacana, and 0.2 of a mile north of the Tehuacana-Waco road on the first road turning north. The freshest clay exposed along this cut is yellowish-gray, and it weathers to a deeper yellow color above. It has fine texture and contains a few gypsum nodules and seams of white powdery gypsum. Shell fragments are frequent, and the Foraminifera are so large and abundant as to be visible to the naked eye. The contact with the Navarro lies down the creek about 300 feet west of the road and is marked by a thin bed of yellow sand. All samples of Midway clay along this exposure washed down to small residues composed of very small gypsum particles and flakes, shell fragments, and Foraminifera. The material chosen to represent this outcrop was taken from the bottom of a 15-foot bank at the head of the branch east of the road, for here the clay is the freshest and furnishes the best-preserved specimens of the Foraminifera. Limestone County, Texas.

*Locality 16.*—Station 43. Still higher in the section of Tehuacana Creek 200 feet east of the Mexia-Wortham road bridge. Dark fossiliferous clays. Limestone County, Texas.

*Locality 17.*—Station 45. Roadside exposure on steep north-facing hill one-half mile east of the Mexia-Wortham road and about one-half mile south of Tehuacana Creek. Compact, dark-gray, fine-grained, slightly silty clay. Limestone County, Texas.

*Locality 18.*—Station 46. Clay pit, Mexia Brick Works, about 1 mile west of the town of Mexia. The pit is about 25 feet deep and 300 feet in diameter. The bottom of the excavation furnishes very fresh, dark-blue, siltless clay that breaks with subconchoidal fracture and contains poorly preserved shell fragments. The material washes down easily to a small residue containing ferruginous flakes and an abundance of excellently preserved Foraminifera that belong strictly to the upper Midway faunule and indicate a low position in this zone above the Tehuacana limestone horizon. Limestone County, Texas.

*Locality 19.*—Station 57. Along a small creek about a quarter of a mile north of a school on the north side of the Tracy-Cameron highway and about 1.5 miles from Tracy by road. The outcropping clays here yield an abundance of upper Midway species of Foraminifera. Milam County, Texas.

*Locality 20.*—Station 63. Ditch along Elgin-Austin road 1.4 miles northeast of Littig close to the county line (Bastrop quadrangle).

The yellow, sandy, gypsiferous clay contains fragments of shells. Bastrop County, Texas.

*Locality 21.*—Station 64. Gully close to the short northwest-southeast road about 2.5 miles S. 25° E. of Littig (Bastrop quadrangle). Compact, siltless, dark-blue clay contains a layer rich in shell fragments. Bastrop County, Texas.

*Locality 22.*—Station 65. About 5.25 miles due south and very slightly west of Littig, where the 440-foot contour cuts a northeast-southwest road (Bastrop quadrangle), there is an outcrop of glauconitic sand containing corals. Bastrop County, Texas.

*Locality 23.*—Station 67. Excellent exposure in base of high bluff on west side of Colorado River between the Travis-Bastrop county line and the mouth of Dry Creek (Bastrop quadrangle). This dark-green to black, highly fossiliferous, clay marl below a thick covering of terrace and alluvium extends for about 150 feet along the river at moderately high water level. At the time the collection was made, only the upper five feet of the outcrop were exposed, and the samples studied have been restricted to this portion. The clay collected from the upper part of this exposure required long soaking in a strong solution of sodium carbonate and some rubbing in the washing process to eliminate the argillaceous content. The final clean residue presents an abundance of foraminiferal tests, shell fragments, and otoliths. Bastrop County, Texas.

*Locality 24.*—Station 69. Exposure in north bank of Cedar Creek 200 feet west of the bridge 0.4 of a mile southeast of the corner formerly occupied by Williams Store (Austin quadrangle). Compact, very fossiliferous clay at the base of the bank. Bastrop County, Texas.

*Locality 25.*—Station 85. Alamo Brick Company clay pit southeast of San Antonio (San Antonio topographic sheet) on the north side of the road leading southeast from the city and about one-quarter of a mile from the area broken up into city blocks; just beyond the brickyard the road forks, one branch leading to Gonzales, the other to Sutherland Springs. The compact clay from the bottom of this excellent exposure washes down to a small residue that carries charas, otoliths, small gastropods, and a large number of Foraminifera of the upper Midway faunal unit. Bexar County, Texas.

*Locality 26.*—Grayson Bluff, a high, southwest-facing bluff on Denton Creek, 3.5 miles northeast of Roanoke, 2 miles by road east of the Fort Worth-Denton highway. Denton County, Texas.

*Locality 27.*—Clay about 5 feet below the Midway greensand, bank of Walker Creek, 6 miles N. 15° E. of Cameron. Milam County, Texas.

*Locality 28.*—Calcium carbonate nodules, restricted zone, 52 feet below the top of the dolomite. The Federal Stone Company quarry, west of Chicago, Cook County, Illinois.

*Locality 29.*—A compact, gray and variegated shale, somewhat gypsiferous. Bridgeport Brick Company pit, north edge of Bridgeport. Wise County, Texas.

*Locality 30.*—Basal Woodbine clay, below sandy strata, in a roadside ditch on the west side of the road in the 800 block, south Lamar Street, just north of east Munson Avenue, in the southeast part of the city of Denison. Grayson County, Texas.

*Locality 31.*—In the right bank of Shoal Creek, at west end of 34th Street bridge in Austin. Travis County, Texas.

*Locality 32.*—Shale outcrops in gullied hillsides bordering the town of Charapotó on its north side. This town is located near the Pacific seacoast in central Ecuador at 0° 50' 14.7" S. Lat. and 80° 29' 31.2" W. Long. Province of Manabí, Ecuador.

*Locality 33.*—Calcareous sandstones outcropping in bluffs immediately south of the village of San Pedro, about 40 km. northeast of Santa Elena point in southwest Ecuador. Geographic coordinates are 01° 57' 03" S. Lat.; 79° 53' 37" W. Long.

*Locality 34.*—International Ecuadorean Petroleum Company sample no. 17117. At the confluence of the Estero Tumbavero tributary with the main stream of the Río Zapallo Grande, some 3 km. east-southeast from the village of Telembi on Río Cayapas in north-west Ecuador. The geographic coordinates are 00° 47' 43" N. Lat.; 78° 54' 21" W. Long.

*Locality 35.*—Station 84. Tank one-half mile north of Martinez close to the north-south road (Floresville quadrangle, Military Sheet 467-S-II and IV). Clay. Bexar County, Texas.

*Locality 36.*—Dougherty, Oklahoma; Lick Creek, Oklahoma.

*Locality 37.*—At 5740 feet in Sinclair-Kennedy well no. 1, sec. 4, T. 13 N., R. 1 W. Oklahoma.

*Locality 38.*—Dougherty; Tulip Creek; 2468 feet Dixie-Sale well no. 1, sec. 10, T. 4 N., R. 6 E.; 4165 feet in Sinclair-Nealy well no. 1, sec. 25, T. 7 N., R. 4 E. Oklahoma.

*Locality 39.*—Dougherty, Oklahoma.

*Locality 40.*—Depth 4047 feet in Independent-Leclair well, sec. 23, T. 7 N., R. 4 E. Dougherty, Oklahoma.

*Locality 41.*—At 3405 feet in Homaokla-Caldwell well no. 1, sec. 16, T. 5 N., R. 3 E. At 4055 feet in Phillips-Weldfeldt well, sec. 26, T. 8 N., R. 4 E. Oklahoma.

*Locality 42.*—Dougherty, Oklahoma; Tulip Creek, Oklahoma.

*Locality 43.*—Dougherty and Franks, Oklahoma.

*Locality 44.*—Lick Creek near Davis, sec. 24, T. 1 S., R. 1 E., and Tulip Creek on U. S. Highway 77, sec. 25, T. 2 S., R. 1 E. Oklahoma.

*Locality 45.*—Dougherty and at 4100 feet in Phillips-Weldfeldt well no. 1, sec. 26, T. 8 N., R. 4 E. Oklahoma.

*Locality 46.*—At 4072 feet in Westheimer and Daube-Fried well no. 3, sec. 24, T. 7 N., R. 4 E. Oklahoma. Dougherty and Franks, Oklahoma.

*Locality 47.*—Lick Creek, sec. 24, T. 1 S., R. 1 E., near Davis. Oklahoma.

*Locality 48.*—Franks and Cookson, Oklahoma.

*Locality 49.*—Tulip Creek on U. S. Highway 77, sec. 25, T. 2 S., R. 1 E. Oklahoma.

*Locality 50.*—Ramsey-Julius well no. 1, sec. 6, T. 4 N., R. 7 E. Oklahoma.

*Locality 51.*—Sec. 7, T. 1 N., R. 7 E. Franks, Oklahoma.

*Locality 52.*—At 3405 feet in Homaokla-Caldwell well no. 1, sec. 16, T. 5 N., R. 3 E. Oklahoma.

*Locality 53.*—At 4298 feet in Gypsy-Johnson well no. 1, sec. 7, T. 7 N., R. 4 E., and from 4055 feet in Phillips-Weldfeldt well no. 1, sec. 24, T. 8 N., R. 4 E. Oklahoma.

*Locality 54.*—Near Franks, Oklahoma.

## CATALOGUE OF TYPES

### **Allomorpha globulosa** Plummer, 1926

Holotype: U.C. 33074.

Reference: Plummer, H. J., 1926, pp. 130-131, pl. 8, fig. 4, *a, b*.

Stratigraphic position: Paleocene, Upper Midway formation.

Locality 21.

### **Allomorpha trigona** Reuss, 1850

Plesiotypes: 3 specimens, U.C. 33073.

Reference: Plummer, H. J., 1926, pp. 129-130, pl. 8, fig. 5, *a, b*.

Stratigraphic position: Paleocene, Upper Midway formation.

Locality 25.

### **Ammobaculites cuyleri** Tappan, 1940

Paratype: U.C. 45006.

Reference: Tappan, H., 1940, p. 96.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

### **Ammobaculites testacea** Tappan, 1940

Paratype: U.C. 45008.

Reference: Tappan, H., 1940, p. 96.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

### **Ammodiscus abbreviatus** Ireland, 1939

Cotypes: 2 specimens, U.C. 38334.

Reference: Ireland, H. A., 1939, p. 200, figs. B-32, 33.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 36.

### **Ammodiscus exsertus** Cushman, 1910

Plesiotypes: 7 specimens, U.C. 38331.

Reference: Ireland, H. A., 1939, figs. B-30, 31.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 38.

***Ammodiscus exsertus*** Cushman var. ***minutus*** Ireland, 1939

Cotypes: 3 specimens, U.C. 38332.

Reference: Ireland, H. A., 1939, p. 200, figs. B-20, 21.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 37.

***Ammodiscus incerta*** (d'Orbigny)

See *Ammodiscus incertus* (d'Orbigny).

***Ammodiscus incertus*** (d'Orbigny)

Plesiotypes: 4 specimens, U.C. 33001; 4 specimens, U.C. 38333.

References: Plummer, H. J., 1926, pp. 63-65, pl. 13, fig. 1, *a-d* (U.C. 33001); Ireland, H. A., 1939, figs. B-18, 19 (U.C. 38333).

Stratigraphic positions: Paleocene, Upper Midway formation (U.C. 33001); Silurian, Alexandrian. Hunton formation, Chimney Hill Limestone (U.C. 38333). Localities 12 (U.C. 33001) and 39 (U.C. 38333).

Remarks: Referred by Ellis and Messina to *Ammodiscus incerta* (d'Orbigny).

***Anomalina acuta*** Plummer, 1926

See *Anomalina ammonoides* var. *acuta* Plummer, 1926.

***Anomalina ammonoides*** var. ***acuta*** Plummer, 1926

Cotypes: 3 specimens, U.C. 33091.

Reference: Plummer, H. J., 1926, pp. 149-150, pl. 10, fig. 2, *a-c*.

Stratigraphic position: Paleocene, lower part of the Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Anomalina acuta* Plummer, 1926.

***Anomalina midwayensis*** (Plummer)

See *Truncatulina midwayensis* Plummer, 1926.

**Anomalina midwayensis** (Plummer) var. **trochoidea** (Plummer)

See *Truncatulina midwayensis* Plummer var. *trochoidea* Plummer, 1926.

**Anomalina navarroensis** Plummer, 1926

Paratypes: 2 specimens, U.C. 36423.

Reference: Plummer, H. J., 1926, pp. 38, 150, pl. 2, fig. 6.

Stratigraphic position: Cretaceous. Navarro formation. Locality 27.

**Anomalina plummerae** Tappan, 1940

Paratypes: 5 specimens, U.C. 45083.

Reference: Tappan, H., 1940, p. 124.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Anomalina trochoidea** (Plummer)

See *Truncatulina midwayensis* Plummer var. *trochoidea* Plummer, 1926.

**Arenosiphon gigantea** Grubbs, 1939

Holotype: U.C. 46000. Paratypes: 3 specimens, U.C. 46001.

Reference: Grubbs, D. M., 1939, p. 544, pl. 61, figs. 1-3.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Asterigerina primaria** Plummer, 1926

Cotypes: 4 specimens, U.C. 33101.

Reference: Plummer, H. J., 1926, pp. 157-159, pl. 12, fig. 8, *a-c*.

Stratigraphic position: Paleocene, transition zone between the true basal beds and true upper beds of the Midway formation. Locality 23.

**Bathysiphon curvus** Moreman, 1930

Plesiotypes: 2 specimens, U.C. 38287.

Reference: Ireland, H. A., 1939, fig. A-7.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 40.

**Bathysiphon curvus** Moreman var. **gracilis** Ireland, 1939

Cotypes: 2 specimens, U.C. 38297.

Reference: Ireland, H. A., 1939, p. 192, figs. A-13, 14.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 41.

**Bathysiphon deminutionis** Moreman, 1930

See *Bathysiphon dimunitionis* Moreman, 1930.

**Bathysiphon dimunitionis** Moreman, 1930

Plesiotypes: 2 specimens, U.C. 38299.

Reference: Ireland, H. A., 1939, fig. A-1.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 42.

Remarks: Should be *Bathysiphon deminutionis* Moreman, 1930.

**Bathysiphon parallelus** Dunn, 1942

Plesiotypes: 3 specimens, U.C. 38296.

Reference: Ireland, H. A., 1939 (nomen nudum), figs. A-5, 6.

Stratigraphic position: Silurian. Hunton formation, Chimney Hill limestone (Alexandrian) and Haragan limestone (Helderbergian). Locality 39.

**Bathysiphon rugosus** Ireland, 1939

Cotypes: 2 specimens, U.C. 38298.

Reference: Ireland, H. A., 1939, p. 192, figs. A-2, 3.

Stratigraphic position: Silurian, Niagaran. Hunton formation, Henryhouse shale. Locality 39.

**Bifarina eleganta** (Plummer)

See *Siphogenerina eleganta* Plummer, 1926.

**Bifarina tenuilissa** Tappan, 1940

Paratype: U.C. 45070.

Reference: Tappan, H., 1940, p. 118.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Bifurcammina bifurca** Ireland, 1939

Holotype: U.C. 38350.

Reference: Ireland, H. A., 1939, p. 201, figs. B-38, 39.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

**Bifurcammina conjuncta** Ireland, 1939

Holotype: U.C. 28347.

Reference: Ireland, H. A., 1939, p. 202, fig. B-36.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

**Bifurcammina parallela** Ireland, 1939

Cotypes: 2 specimens, U.C. 38349.

Reference: Ireland, H. A., 1939, p. 202, fig. B-37.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

**Bolivina applinae** Plummer, 1926

See *Bolivina applini* Plummer, 1926.

**Bolivina applini** Plummer, 1926

Cotypes: 2 specimens, U.C. 33006. Paratype: U.C. 36440.

Reference: Plummer, H. J., 1926, p. 69, pl. 4, fig. 1.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Galloway (1929, p. 35) corrected the spelling to *Bolivina applinae* Plummer. Referred by Ellis and Messina to *Bolivina applinae* Plummer, *Loxostoma applinae* (Plummer), *Loxostomum applinae* (Plummer), *Rectobolivina applinae* (Plummer).

**Bulimina aculeata** d'Orbigny, 1826

Plesiotype: U.C. 33011.

Reference: Plummer, H. J., 1926, pp. 73-74, pl. 4, fig. 3.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Bulimina prestli* Reuss var. *aculeata* d'Orbigny, 1826.

**Bulimina nannina** Tappan, 1940

Paratypes: 5 specimens, U.C. 45067.

Reference: Tappan, H., 1940, p. 116.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Bulimina presli** Reuss var. **aculeata** d'Orbigny, 1826

See *Bulimina aculeata* d'Orbigny, 1826.

**Bulimina quadrata** Plummer, 1926

See *Bulimina (Ellipsobulimina) quadrata* Plummer, 1926.

**Bulimina (Ellipsobulimina) quadrata** Plummer, 1926

Cotypes: U.C. 33009 and U.C. 33010.

Reference: Plummer, H. J., 1926, pp. 72-73, pl. 4, figs. 4, 5.

Stratigraphic position: Paleocene, Upper Midway formation. Locality 18.

Remarks: U.C. 33009 is a microspheric form; U.C. 33010 is a megalospheric form. Berry and Kelly (1929, p. 5) and subsequent workers have omitted the subgeneric name of *Ellipsobulimina* and have designated this species as *Bulimina quadrata* Plummer, 1926.

**Bullopore chapmani** (Plummer)

See *Vitriwebbina chapmani* Plummer, 1926.

**Ceratamina cornucopia** Ireland, 1939

Holotype: U.C. 38283.

Reference: Ireland, H. A., 1939, p. 196, figs. A-31, 32.

Stratigraphic position: Devonian, Helderberg. Hunton formation, Haragan shale. Locality 43.

**Ceratobulimina perplexa** (Plummer)

See *Rotalia perplexa* Plummer, 1926.

**Chilostomelloides eocenica** Cushman, 1926

Plesiotype: U.C. 33072.

Reference: Plummer, H. J., 1926, p. 129, pl. 8, fig. 8, *a*, *b*.

Stratigraphic position: Paleocene, Upper Midway formation.  
Locality 25.

**Cibicides alleni** (Plummer)

See *Truncatulina alleni* Plummer, 1926.

**Cibicides vulgaris** (Plummer)

See *Truncatulina vulgaris* Plummer, 1926.

**Clavulina angularis** d'Orbigny, 1826

Plesiotypes: 5 specimens, U.C. 33008.

Reference: Plummer, H. J., 1926, pp. 70-71, pl. 3, figs. 4, a, b,  
5, a-c.

Stratigraphic position: Paleocene, lower part of Upper Midway  
formation. Locality 9.

Remarks: 2 specimens illustrated by Plummer (fig. 4) are micro-  
spheric forms; 3 specimens (fig. 5) are megalospheric forms.  
Referred by Ellis and Messina to *Valvulina angularis* (d'Or-  
bigny), *Valvulina triangularis* d'Orbigny var. *angularis*  
(d'Orbigny), *Valvulina triangularis* d'Orbigny var. *Clavulina*  
*angularis* (d'Orbigny).

**Coleites reticulosus** (Plummer)

See *Pulvinulina reticulosa* Plummer, 1926.

**Colonammina conea** Moreman, 1930

Plesiotype: U.C. 38326.

Reference: Ireland, H. A., 1939, figs. B-12, 13.

Stratigraphic position: Silurian, Alexandrian. Hunton formation,  
Chimney Hill limestone. Locality 39.

**Colonammina verruca** Moreman, 1930

Plesiotype: U.C. 38325.

Reference: Ireland, H. A., 1939, figs. B-9, 10.

Stratigraphic position: Silurian, Alexandrian. Hunton formation,  
Chimney Hill limestone. Locality 44.

**Cornuspira carinata** (Costa)

Plesiotypes: 2 specimens, U.C. 33104.

Reference: Plummer, H. J., 1926, pp. 160–161, pl. 12, fig. 9.

Stratigraphic position: Paleocene, upper part of Upper Midway formation. Locality 8.

Remarks: One specimen with early portion of coil missing. Second specimen with a fragment of a coil.

**Cristellaria degolyeri** Plummer, 1926

Cotypes: 4 specimens, U.C. 33036.

Reference: Plummer, H. J., 1926, pp. 97–98, pl. 7, fig. 7, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Lenticulina degolyeri* (Plummer).

**Cristellaria earlandi** Plummer, 1926

Holotype: U.C. 33044.

Reference: Plummer, H. J., 1926, pp. 103–104, pl. 7, fig. 10.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Marginulina earlandi* (Plummer) and *Vaginulinopsis earlandi* (Plummer).

**Cristellaria gibba** d'Orbigny, 1839

Plesiotypes: 2 specimens, U.C. 33033.

Reference: Plummer, H. J., 1926, pp. 94–95.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Cristellaria rotulata* (Lamarck) var. *gibba* d'Orbigny, *Lenticulina gibba* (d'Orbigny), *Lenticulina (Robulus?) gibba* (d'Orbigny), and *Robulus gibbus* (d'Orbigny).

**Cristellaria longiforma** Plummer, 1926

Cotypes: 3 specimens, U.C. 33043. Paratypes: 2 specimens, U.C. 36446.

Reference: Plummer, H. J., 1926, pp. 102–103, pl. 13, fig. 4, *a, b*.

Stratigraphic position: Paleocene, Upper Midway formation. Locality 14.

Remarks: Referred by Ellis and Messina to *Hemicristellaria longiforma* (Plummer), *Lenticulina longiforma* (Plummer), and *Vaginulinopsis longiforma* (Plummer).

**Cristellaria midwayensis** Plummer, 1926

Cotypes: 3 specimens, U.C. 33034. Paratype: U.C. 36432.

Reference: Plummer, H. J., 1926, pp. 95–96, pl. 13, fig. 5, a–c.

Stratigraphic position: Paleocene, Midway formation, transition zone between basal and upper beds. Locality 23.

Remarks: Referred by Ellis and Messina to *Lenticulina midwayana* (Plummer) and *Robulus midwayensis* (Plummer).

**Cristellaria midwayensis** Plummer var. **carinata** Plummer, 1926

Cotypes: 2 specimens, U.C. 33035. Paratype: U.C. 36434.

Reference: Plummer, H. J., 1926, p. 97, text fig. 5, p. 41.

Stratigraphic position: Paleocene, basal beds of Midway formation. Localities 5 and 15.

Remarks: Referred by Ellis and Messina to *Robulus midwayensis* (Plummer) var. *carinatus* (Plummer).

**Cristellaria orbicularis** (d'Orbigny)

Plesiotype: U.C. 33031.

Reference: Plummer, H. J., 1926, pp. 92–93, pl. 7, fig. 1, a, b.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Cristellaria pseudo-costata** Plummer, 1926

Cotypes: 2 specimens, U.C. 33038.

Reference: Plummer, H. J., 1926, pp. 98–100, pl. 7, fig. 9, a, b.

Stratigraphic position: Paleocene, very narrow zone of basal Midway formation. Locality 5.

Remarks: This is *Robulus pseudo-costatus* (Plummer).

**Cristellaria pseudo-mamilligera** Plummer, 1926

Cotypes: 2 specimens, U.C. 33037.

Reference: Plummer, H. J., 1926, p. 98, pl. 7, fig. 11, a, b.

Stratigraphic position: Paleocene, basal beds of Midway formation. Locality 40.

Remarks: This is *Robulus pseudo-mamilligerus* (Plummer).

**Cristellaria rotulata** (Lamarck)

Plesiotypes: 2 specimens, U.C. 33030.

Reference: Plummer, H. J., 1926, pp. 91–92, pl. 7, fig. 8, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Cristellaria rotulata** (Lamarck) var. **gibba** d'Orbigny, 1839

See *Cristellaria gibba* d'Orbigny, 1839.

**Cristellaria scitula** Berthelin, 1880

Plesiotype: U.C. 33039.

Reference: Plummer, H. J., 1926, p. 100, pl. 7, fig. 5.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Hemicristellaria scitula* (Berthelin).

**Cristellaria subaculeata** Cushman var. **tuberculata** Plummer, 1926

Holotype: U.C. 33042. Paratypes: 4 specimens, U.C. 36447.

Reference: Plummer, H. J., 1926, pp. 101–102, pl. 7, fig. 2.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Hemicristellaria subaculeata* (Cushman) var. *tuberculata* (Plummer). Specimen figured in pl. 14, fig. 1, *a–c*, not in Walker Museum.

**Cristellaria sublatifrons** Plummer, 1926

Holotype: U.C. 33040.

Reference: Plummer, H. J., 1926, pp. 100–101, pl. 7, fig. 6, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Cristellaria trigonata** Plummer, 1926

Holotype: U.C. 33041.

Reference: Plummer, H. J., 1926, p. 101, pl. 7, fig. 3, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Saracenaria trigonata* (Plummer).

**Cristellaria tumida** (Reuss)

See *Marginulina tumida* Reuss, 1851.

**Cristellaria (Marginulina) tumida** (Reuss)

See *Marginulina tumida* Reuss, 1851.

**Cristellaria turbinata** Plummer, 1926

Cotypes: 3 specimens, U.C. 33032. Paratypes: 3 specimens, U.C. 36445.

Reference: Plummer, H. J., 1926, pp. 93–94, pl. 7, fig. 4, *a, b* (Locality 18); pl. 13, fig. 2 (Locality 7).

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Localities: 18 and 7.

Remarks: Referred by Ellis and Messina to *Robulus turbinatus* (Plummer).

**Dentalina(?) gardnerae** (Plummer)

See *Marginulina gardnerae* Plummer, 1926.

**Dentalina granti** (Plummer)

See *Nodosaria granti* Plummer, 1926.

**Dentalina pseudo-obliquestriata** (Plummer)

See *Nodosaria pseudo-obliquestriata* Plummer, 1926.

**Dentalinopsis subquadrata** Tappan, 1940

Paratype: U.C. 45073.

Reference: Tappan, H., 1940, p. 119.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Discorbis allomorphinoides** (Reuss)

Plesiotypes: 2 specimens, U.C. 33082.

Reference: Plummer, H. J., 1926, pp. 139–140, pl. 9, fig. 2, *a, b*.

Stratigraphic position: Paleocene, upper part of Upper Midway formation. Locality 13.

**Discorbis infrequens** Plummer, 1926

Cotypes: 3 specimens, U.C. 33080.

Reference: Plummer, H. J., 1926, p. 138, pl. 9, fig. 1, *a-c*.

Stratigraphic position: Paleocene, Upper Midway formation.

Locality 11.

**Discorbis newmanae** Plummer, 1926

Cotypes: 3 specimens, U.C. 33081.

Reference: Plummer, H. J., 1926, pp. 138-139, pl. 9, fig. 4, *a-c*.

Stratigraphic position: Paleocene, basal Midway formation. Locality 20.

**Earlandia perparva** Plummer, 1930

Paratypes: 5 specimens, U.C. 36561.

Reference: Plummer, H. J., 1930, pp. 13-14.

Stratigraphic position: Pennsylvanian, Graford formation, Brownwood shale, lower portion below Willow Point limestone. Locality 29.

**Ellipsonodosaria(?) granti** (Plummer)

See *Nodosaria granti* Plummer, 1926.

**Ellipsopleurostomella attenuata** Plummer, 1926

Cotypes: 3 specimens, U.C. 33075.

Reference: Plummer, H. J., 1926, pp. 131-133, pl. 8, fig. 6, *a-d*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Nodosarella attenuata* (Plummer).

**Endothyra watersi** Plummer, 1930

Paratype: U.C. 36563.

Reference: Plummer, H. J., 1930, p. 15.

Stratigraphic position: Pennsylvanian, Graford formation, Brownwood shale, lower portion, below Willow Point limestone. Locality 29.

**Endothyra whitesidei** Galloway and Ryniker, 1930

Plesiotype: U.C. 36564.

Reference: Plummer, H. J., 1930, p. 16.

Stratigraphic position: Pennsylvanian, Graford formation, Brownwood shale, lower portion, below Willow Point limestone.  
Locality 29.

**Endothyranella armstrongi** Plummer, 1930

Paratypes: 3 specimens, U.C. 36565.

Reference: Plummer, H. J., 1930, pp. 18-19.

Stratigraphic position: Pennsylvanian, Graford formation, Brownwood shale, lower portion, below Willow Point limestone.  
Locality 29.

**Eponides exigua** (Brady)

See *Pulvinulina exigua* H. B. Brady, 1884.

**Eponides exigua** (Brady) var. **limbata** (Plummer)

See *Pulvinulina exigua* H. B. Brady var. *limbata* Plummer, 1926.

**Eponides exigua** (Brady) var. **obtusa** (Burrows and Holland)

See *Pulvinulina exigua* H. B. Brady var. *obtusa* Burrows and Holland, 1897.

**Eponides tenera** (Brady)

See *Truncatulina tenera* Brady, 1884.

**Flabellamina brachyocula** Tappan, 1941

Paratypes: 2 specimens, U.C. 48142.

Reference: Tappan, H., 1941, p. 360.

Stratigraphic position: Upper Cretaceous, Woodbine sand. Locality 30.

**Flabellamina denisonensis** Tappan, 1941

Paratypes: 5 specimens, U.C. 48143.

Reference: Tappan, H., 1941, pp. 360-361.

Stratigraphic position: Upper Cretaceous, Woodbine sand. Locality 30.

**Flabellina delicatissima** (Plummer)

See *Fronicularia delicatissima* Plummer, 1926.

**Flabellina oldhami** (Plummer)

See *Fron dicularia oldhami* Plummer, 1926.

**Fron dicularia archiaciana** d'Orbigny var. **strigillata** Bagg, 1898

Plesiotypes: 2 specimens, U.C. 33055.

Reference: Plummer, H. J., 1926, pp. 114–115, pl. 5, fig. 2, *a*, *b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Fron dicularia budensis** (Hantken)

Plesiotypes: 2 specimens, U.C. 33057.

Reference: Plummer, H. J., 1926, pp. 116–117, pl. 5, fig. 5, *a*, *b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Fron dicularia delicatissima** Plummer, 1926

Holotype: U.C. 33059. Paratype: U.C. 36443.

Reference: Plummer, H. J., 1926, pp. 120–121, pl. 5, fig. 4.

Stratigraphic position: Paleocene, Upper Midway formation. Locality 16.

Remarks: Referred by Ellis and Messina to *Flabellina delicatissima* (Plummer) and *Palmula delicatissima* (Plummer).

**Fron dicularia goldfussi** Reuss, 1860

Plesiotypes: 2 specimens, U.C. 33056.

Reference: Plummer, H. J., 1926, pp. 115–116, pl. 5, fig. 3.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Nodosarina (Fron dicularia) goldfussi* (Reuss).

**Fron dicularia oldhami** Plummer, 1926

Cotypes: 2 specimens, U.C. 33357.

Reference: Plummer, H. J., 1926, pp. 117–118, text fig. 12, p. 118.

Stratigraphic position: Paleocene, basal Midway formation. Locality 6.

Remarks: Referred by Ellis and Messina to *Flabellina oldhami* (Plummer).

**Frondicularia rugosa** (d'Orbigny)

Plesiotypes: 1 specimen (Locality 15), pl. 5, fig. 1; 4 specimens (Locality 6), text fig. 13; U.C. 33358.

Reference: Plummer, H. J., 1926, pp. 118–120, pl. 5, fig. 1, text fig. 13, p. 119.

Stratigraphic position: Paleocene, basal beds of Midway formation. Localities 15 and 6.

**Gaudryina cushmani** Tappan, 1940

Paratype: U.C. 45014.

Reference: Tappan, H., 1940, p. 99.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Gaudryinella delrioensis** Plummer, 1931

Paratypes: 11 specimens, U.C. 36958.

Reference: Plummer, H. J., 1931, pp. 341–342.

Stratigraphic position: Lower Cretaceous, Del Rio formation. Locality 31.

**Glandulina laevigata** (d'Orbigny) var. **occidentalis** (Cushman)

See *Nodosaria (Glandulina) laevigata* d'Orbigny var. *occidentalis* Cushman, 1923.

**Glandulina occidentalis** (Cushman)

See *Nodosaria (Glandulina) laevigata* d'Orbigny var. *occidentalis* Cushman, 1923.

**Globigerina compressa** Plummer, 1926

Cotypes: 3 specimens, U.C. 33078.

Reference: Plummer, H. J., 1926, pp. 135–136, pl. 8, fig. 11, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Localities 9 and 10.

**Globigerina graysonensis** Tappan, 1940

Paratypes: 10 specimens, U.C. 45079.

Reference: Tappan, H., 1940, p. 122.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Globigerina planispira** Tappan, 1940

Paratypes: 2 specimens, U.C. 45080.

Reference: Tappan, H., 1940, p. 122.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Globigerina pseudo-bulloides** Plummer, 1926

Cotypes: 3 specimens, U.C. 33076.

Reference: Plummer, H. J., 1926, pp. 133-134, pl. 8, fig. 9, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Globigerina triloculinoides** Plummer, 1926

Cotypes: 3 specimens, U.C. 33077.

Reference: Plummer, H. J., 1926, pp. 134-135, pl. 8, fig. 10, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Glomospira siluriana** Ireland, 1939

Cotypes: 2 specimens, U.C. 38342.

Reference: Ireland, H. A., 1939, p. 201, figs. B-27, 28.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

**Gümbelina washitensis** Tappan, 1940

Paratypes: 13 specimens, U.C. 45064.

Reference: Tappan, H., 1940, p. 115.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Gümbelitra harrisi** Tappan, 1940

Paratypes: 17 specimens, U.C. 45065.

Reference: Tappan, H., 1940, p. 115.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Gümbelitriella graysonensis** Tappan, 1940

Paratypes: 4 specimens, U.C. 45066.

Reference: Tappan, H., 1940, p. 116.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Gyroidina loetterlei** Tappan, 1940

Paratypes: 5 specimens, U.C. 45077.

Reference: Tappan, H., 1940, pp. 120-121.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Gyroidina subangulata** (Plummer)

See *Rotalia soldanii* (d'Orbigny) var. *subangulata* Plummer, 1926.

**Haplophragmoides canariensis** (d'Orbigny)

Plesiotype: U.C. 33002.

Reference: Plummer, H. J., 1926, pp. 65-66.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Hemicristellaria longiforma** (Plummer)

See *Cristellaria longiforma* Plummer, 1926.

**Hemicristellaria scitula** (Berthelin)

See *Cristellaria scitula* Berthelin, 1880.

**Hemicristellaria subaculeata** (Cushman) var. **tuberculata**  
(Plummer)

See *Cristellaria subaculeata* Cushman var. *tuberculata* Plummer, 1926.

**Lagena apiculata** (Reuss)

Plesiotype: U.C. 33012.

Reference: Plummer, H. J., 1926, p. 75, pl. 4, fig. 6.

Stratigraphic position: Paleocene, Upper Midway formation.  
Locality 19.

**Lagena leptata** Tappan, 1940

Paratype: U.C. 45051.

Reference: Tappan, H., 1940, p. 112.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Lagena striatifera** Tappan, 1940

Paratypes: 3 specimens, U.C. 45052.

Reference: Tappan, H., 1940, p. 112.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Lagenammina cornuta** Grubbs, 1939

Holotype: U.C. 46004 (pl. 61, fig. 6). Paratypes: 3 specimens, U.C. 46005 (pl. 61, fig. 5).

Reference: Grubbs, D. M., 1939, pp. 544-545, pl. 61, figs. 5, 6.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Lagenammina distorta** Ireland, 1939

Cotypes: 3 specimens, U.C. 38294.

Reference: Ireland, H. A., 1939, p. 196, figs. A-20, 21.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 36.

Remarks: 2 specimens are badly broken.

**Lagenammina pyriformis** Tappan, 1940

Paratypes: 4 specimens, U.C. 45000.

Reference: Tappan, H., 1940, p. 94.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Lagenammina sphaerica** Moreman, 1930

Plesiotypes: 2 specimens, U.C. 38295.

Reference: Ireland, H. A., 1939, p. 193, fig. A-23.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

**Lagenammina stilla** Dunn, 1932

Plesiotypes: 2 specimens, U.C. 38292.

Reference: Ireland, H. A., 1939, fig. A-22.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

Remarks: This is *Lagenammia stilla* Moreman, 1930.

**Lagenammia stilla** Moreman, 1930

See *Lagenammia stilla* Dunn, 1932.

**Lenticulina degolyeri** (Plummer)

See *Cristellaria degolyeri* Plummer, 1926.

**Lenticulina gibba** (d'Orbigny)

See *Cristellaria gibba* d'Orbigny, 1839.

**Lenticulina (Robulus?) gibba** (d'Orbigny)

See *Cristellaria gibba* d'Orbigny, 1839.

**Lenticulina longiforma** (Plummer)

See *Cristellaria longiforma* Plummer, 1926.

**Lenticulina midwayana** (Plummer)

See *Cristellaria midwayensis* Plummer, 1926.

**Lingulina lamellata** Tappan, 1940

Paratype: U.C. 45036.

Reference: Tappan, H., 1940, pp. 106-107.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Lingulina serrata** Tappan, 1940

Paratypes: 2 specimens, U.C. 45038.

Reference: Tappan, H., 1940, p. 107.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Lituotuba exserta** Moreman, 1930

Plesiotypes: 5 specimens, U.C. 38345.

Reference: Ireland, H. A., 1939, fig. B-29.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 45.

Remarks: Referred by Ellis and Messina to *Rectocornuspira exserta* (Moreman).

**Lituotuba inflata** Ireland, 1939

Holotype: U.C. 38343.

Reference: Ireland, H. A., 1939, p. 201, figs. B-34, 35.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 46.

**Loxostoma applinae** (Plummer)

See *Bolivina applini* Plummer, 1926.

**Loxostomum applinae** (Plummer)

See *Bolivina applini* Plummer, 1926.

**Marginulina costata** (Batsch)

Plesiotypes: 2 specimens, U.C. 33049.

Reference: Plummer, H. J., 1926, pp. 107-109, pl. 5, fig. 8, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Marginulina earlandi** (Plummer)

See *Cristellaria earlandi* Plummer, 1926.

**Marginulina gardnerae** Plummer, 1926

Cotypes: 2 specimens, U.C. 33047.

Reference: Plummer, H. J., 1926, p. 106, pl. 5, fig. 11, *a-c*.

Stratigraphic position: Paleocene, basal Midway formation. Locality 1.

Remarks: Referred by Ellis and Messina to *Dentalina(?) gardnerae* (Plummer).

**Marginulina glabra** d'Orbigny, 1826

Plesiotypes: 4 specimens, U.C. 33045.

Reference: Plummer, H. J., 1926, pp. 104-105, pl. 6, fig. 3, *a-d*.

Stratigraphic position: Paleocene, Upper Midway formation. Locality 16.

Remarks: Referred by Ellis and Messina to *Nodosarina* (*Marginulina*) *glabra* (d'Orbigny), *Nodosarina* (*Marginulina*) *raphanus* (Linnaeus) var. *glabra* (d'Orbigny), *Vaginulina glabra* (d'Orbigny).

**Marginulina glabra** d'Orbigny var. **regularis** d'Orbigny

See *Marginulina regularis* d'Orbigny, 1846.

**Marginulina regularis** d'Orbigny, 1846

Plesiotypes: 2 specimens, U.C. 33048.

Reference: Plummer, H. J., 1926, p. 107, pl. 5, fig. 7.

Stratigraphic position: Paleocene, Upper Midway formation.

Locality 16.

Remarks: Referred by Ellis and Messina to *Marginulina glabra* d'Orbigny var. *regularis* d'Orbigny, *Nodosarina* (*Nodosaria*) *radicula* (Linnaeus) var. (*Marginulina*) *regularis* (d'Orbigny).

**Marginulina tumida** Reuss, 1851

Plesiotype: U.C. 33046.

Reference: Plummer, H. J., 1926, pp. 105–106, pl. 5, fig. 6.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Cristellaria tumida* (Reuss) and *Cristellaria* (*Marginulina*) *tumida* (Reuss).

**Massilina planoconvexa** Tappan, 1940

Paratypes: 4 specimens, U.C. 45016.

Reference: Tappan, H., 1940, p. 100.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Miliola (Quinqueloculina) ferussacii** (d'Orbigny)

See *Quinqueloculina ferussacii* d'Orbigny, 1826.

**Miliola seminulum** (Linnaeus) var. **ferussacii** (d'Orbigny)

See *Quinqueloculina ferussacii* d'Orbigny, 1826.

**Miliola (Quinqueloculina) seminulum** (Linnaeus) var. **ferussacii** (d'Orbigny)

See *Quinqueloculina ferussacii* d'Orbigny, 1826.

**Miliolina ferussacii** (d'Orbigny)

See *Quinqueloculina ferussacii* d'Orbigny, 1826.

**Neobulimina minima** Tappan, 1940

Paratypes: 7 specimens, U.C. 45068.

Reference: Tappan, H., 1940, p. 117.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Nodogenerina sagrinensis** (Bagg)

See *Nodosaria sagrinensis* Bagg, 1912.

**Nodosarella attenuata** (Plummer)

See *Ellipsopleurostomella attenuata* Plummer, 1926.

**Nodosaria affinis** d'Orbigny, 1846

Plesiotypes: 4 specimens, U.C. 33029.

Reference: Plummer, H. J., 1926, pp. 89-91, pl. 14, fig. 2, *a-d*.

Stratigraphic position: Paleocene, transition zone between true basal beds and true upper beds of Midway formation. Locality 23.

Remarks: Referred by Ellis and Messina to *Nodosarina* (*Nodosaria*) *affinis* (d'Orbigny).

**Nodosaria bifurcata** Tappan, 1940

Paratype: U.C. 45026.

Reference: Tappan, H., 1940, p. 103.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

Remarks: Homonym of *Nodosaria* (*Dentalina*) *bifurcata* d'Orbigny, 1846. New name: *Nodosaria graysonensis* Tappan, 1944.

**Nodosaria (Dentalina) bifurcata** d'Orbigny, 1846

See *Nodosaria bifurcata* Tappan, 1940.

**Nodosaria chapmani** Tappan, 1940

Paratypes: 2 specimens, U.C. 45027.

Reference: Tappan, H., 1940, pp. 103–104.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Nodosaria (Glandulina) comata** (Batsch)

Plesiotypes: 2 specimens, U.C. 33014.

Reference: Plummer, H. J., 1926, p. 76, pl. 4, fig. 7.

Stratigraphic position: Paleocene, basal beds of Midway formation. Locality 15.

**Nodosaria gracilis** Neugeboren var. **longiscata** d'Orbigny

See *Nodosaria longiscata* d'Orbigny, 1846.

**Nodosaria granti** Plummer, 1926

Cotypes: 5 specimens, U.C. 33022. Paratypes: 3 specimens, U.C. 36431.

Reference: Plummer, H. J., 1926, pp. 83–84, pl. 5, fig. 9, *a–d*.

Stratigraphic position: Paleocene, basal Midway formation. Locality 1.

Remarks: Referred by Ellis and Messina to *Dentalina granti* (Plummer) and *Ellipsonodosaria(?) granti* (Plummer).

**Nodosaria graysonensis** Tappan, 1944

Reference: Tappan, H., 1944, p. 560.

Remarks: Synonym of *Nodosaria bifurcata* Tappan, 1940.

**Nodosaria (Glandulina) laevigata** d'Orbigny var. **occidentalis**

Cushman, 1923

Plesiotype: U.C. 33013.

Reference: Plummer, H. J., 1926, pp. 75–76, pl. 4, fig. 8.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Glandulina laevigata* (d'Orbigny) var. *occidentalis* (Cushman) and *Glandulina occidentalis* (Cushman).

**Nodosaria longiscata** d'Orbigny, 1846

Plesiotypes: 2 specimens, U.C. 33021.

Reference: Plummer, H. J., 1926, pp. 82–83, pl. 4, fig. 17, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Nodosaria gracilis* Neugeboren var. *longiscata* d'Orbigny, *Nodosaria* (*Dentalina*) *longiscata* d'Orbigny, *Nodosarina* (*Nodosaria*) *longiscata* (d'Orbigny).

***Nodosaria* (*Dentalina*) *longiscata* d'Orbigny**

See *Nodosaria longiscata* d'Orbigny, 1846.

***Nodosaria mucronata* (Neugeboren)**

Plesiotype: U.C. 33018.

Reference: Plummer, H. J., 1926, pp. 80–81, pl. 4, fig. 13.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

***Nodosaria oligotoma* Reuss, 1872**

Plesiotype: U.C. 33026.

Reference: Plummer, H. J., 1926, p. 87, pl. 4, fig. 14.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

***Nodosaria pauperata* (d'Orbigny)**

Plesiotype: U.C. 33017.

Reference: Plummer, H. J., 1926, pp. 79–80, pl. 4, fig. 11.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

***Nodosaria pomuligera* (Stache)**

Plesiotypes: U.C. 33019 (Locality 23 or 24); 2 specimens, U.C. 33020 (Locality 4).

Reference: Plummer, H. J., 1926, p. 81, pl. 4, fig. 15, *a*, *b* (Locality 4); pl. 14, fig. 3 (Locality 23 or 24).

Stratigraphic position: Paleocene; transition from true basal to Upper Midway formation (Localities 4 and 23); Upper Midway formation (Locality 24). Localities 4 and 23 or 24.

***Nodosaria pseudo-obliquestriata* Plummer, 1926**

Holotype: U.C. 33027.

Reference: Plummer, H. J., 1926, pp. 87–88, pl. 4, fig. 18.

Stratigraphic position: Paleocene, basal beds of Midway formation. Locality 5.

Remarks: Referred by Ellis and Messina to *Dentalina pseudo-obliquistriata* (Plummer).

**Nodosaria radricula** (Linnaeus)

Plesiotypes: 4 specimens, U.C. 33015.

Reference: Plummer, H. J., 1926, pp. 76–77, pl. 4, fig. 9, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Nodosaria sagrinensis** Bagg, 1912

Plesiotypes: 3 specimens, U.C. 33025.

Reference: Plummer, H. J., 1926, pp. 85–86, pl. 4, fig. 16.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Nodogenerina sagrinensis* (Bagg).

**Nodosaria soluta** (Reuss)

Plesiotype: U.C. 33016.

Reference: Plummer, H. J., 1926, pp. 78–79, pl. 4, fig. 10.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Nodosaria spinescens** (Reuss)

Plesiotype: U.C. 33023.

Reference: Plummer, H. J., 1926, p. 84, pl. 4, fig. 12.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Nodosaria spinulosa** (Montagu)

Plesiotypes: 3 specimens, U.C. 33024.

Reference: Plummer, H. J., 1926, pp. 84–85, pl. 4, fig. 19, *a–c*.

Stratigraphic position: Paleocene, basal beds of Midway formation (Locality 15) and lower part of Upper Midway formation (Locality 18). Localities 15 and 18.

**Nodosaria vertebralis** (Batsch)

Plesiotype: U.C. 33028.

Reference: Plummer, H. J., 1926, pp. 88-89, pl. 5, fig. 10.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Nodosarina (Nodosaria) affinis** (d'Orbigny)

See *Nodosaria affinis* d'Orbigny, 1846.

**Nodosarina (Marginulina) glabra** (d'Orbigny)

See *Marginulina glabra* d'Orbigny, 1826.

**Nodosarina (Frondicularia) goldfussi** (Reuss)

See *Frondicularia goldfussi* Reuss, 1860.

**Nodosarina (Nodosaria) longiscata** (d'Orbigny)

See *Nodosaria longiscata* d'Orbigny, 1846.

**Nodosarina (Nodosaria) radícula** (Linnaeus) var. **(Marginulina) regularis** (d'Orbigny)

See *Marginulina regularis* d'Orbigny, 1846.

**Nodosarina (Marginulina) raphanus** (Linnaeus) var. **glabra** (d'Orbigny)

See *Marginulina glabra* d'Orbigny, 1826.

**Nodosinella perelegans** Plummer, 1930

Paratypes: 14 specimens, U.C. 36562.

Reference: Plummer, H. J., 1930, p. 14.

Stratigraphic position: Pennsylvanian, Graford formation, Brownwood shale, lower portion, below Willow Point limestone. Locality 29.

**Nonionella welleri** (Plummer)

See *Truncatulina welleri* Plummer, 1926.

**Nonionina turgida** (Williamson)

Plesiotypes: U.C. 33102 (symmetrical form, fig. 7, *a*, *b*; Locality 21); 3 specimens, U.C. 33103 (unsymmetrical form, fig. 6, *a-c*; Locality 9).

Reference: Plummer, H. J., 1926, pp. 159-160, pl. 12, figs. 6, *a-c*, 7, *a, b*.

Stratigraphic position: Paleocene, Upper Midway formation. Localities 9 and 21.

**Paleopolymorphina ozawai** Tappan, 1940

Paratypes: 2 specimens, U.C. 45054.

Reference: Tappan, H., 1940, p. 113.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Palmerinella thalmanni** Stainforth and Stevenson, 1946

Paratypes: 45 specimens, U.C. 51982.

Reference: Stainforth, R. M., and Stevenson, F. V., 1946, pp. 563-564.

Stratigraphic position: Basal Miocene. Locality 32.

**Palmula delicatissima** (Plummer)

See *Fronicularia delicatissima* Plummer, 1926.

**Placopsilina (?) lineata** Grubbs, 1939

Holotype: U.C. 46010. Paratypes: 4 specimens, U.C. 46011.

Reference: Grubbs, D. M., 1939, p. 545, pl. 61, figs. 11, 12.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Placopsilina longa** Tappan, 1940

Paratypes: 2 specimens, U.C. 45017.

Reference: Tappan, H., 1940, pp. 100-101.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Planulina wheeleri** Stainforth and Stevenson, 1946

Paratypes: 3 specimens, U.C. 51983.

Reference: Stainforth, R. M., and Stevenson, F. V., 1946, pp. 562-563.

Stratigraphic position: Upper Oligocene, San Pedro sandstone. Locality 33.

**Pleurostomella alternans** Schwager, 1866

Plesiotype: U.C. 33007.

Reference: Plummer, H. J., 1926, pp. 69–70, pl. 4, fig. 2, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Pleurostomella brevis* (Schwager) var. *alternans* Schwager.

**Pleurostomella brevis** (Schwager) var. **alternans** Schwager

See *Pleurostomella alternans* Schwager, 1866.

**Polymorphina communis** d'Orbigny, 1826

Plesiotype: U.C. 33062.

Reference: Plummer, H. J., 1926, pp. 123–124, pl. 6, fig. 12, *a, b*.

Stratigraphic position: Paleocene, basal part of Midway formation. Locality 3.

Remarks: This should be referred to *Polymorphina communis* (d'Orbigny).

**Polymorphina communis** (d'Orbigny)

See *Polymorphina communis* d'Orbigny, 1826.

**Polymorphina cushmani** Plummer, 1926

Cotypes: 3 specimens, U.C. 33065 (Locality 23); 2 specimens, U.C. 33066 (Locality 22).

Reference: Plummer, H. J., 1926, p. 125, pl. 6, fig. 9; pl. 15, fig. 1, *a-c*.

Stratigraphic position: Paleocene, transition zone between lower and upper beds of Midway formation. Localities 22 (pl. 6, fig. 9) and 23 (pl. 15, fig. 1, *a-c*).

**Polymorphina gibba** d'Orbigny, 1826

Plesiotypes: 2 specimens, U.C. 33061.

Reference: Plummer, H. J., 1926, pp. 122–123, pl. 6, fig. 8, *a, b*.

Stratigraphic position: Paleocene, basal beds of Midway formation. Locality 5.

Remarks: Should be referred to *Polymorphina gibba* (d'Orbigny).

**Polymorphina gibba** (d'Orbigny)

See *Polymorphina gibba* d'Orbigny, 1826.

**Polymorphina lactea** (Walker and Jacob)

Plesiotype: U.C. 33060.

Reference: Plummer, H. J., 1926, pp. 121-122, pl. 6, fig. 7, *a-c*.

Stratigraphic position: Paleocene, basal Midway formation. Locality 2.

**Polymorphina minuta** Roemer var. *ovata* d'Orbigny

See *Polymorphina ovata* d'Orbigny, 1846.

**Polymorphina minuta** Roemer forma *ovata* d'Orbigny

See *Polymorphina ovata* d'Orbigny, 1846.

**Polymorphina ovata** d'Orbigny, 1846

Plesiotype: U.C. 33063.

Reference: Plummer, H. J., 1926, p. 124, pl. 6, fig. 10.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Polymorphina minuta* Roemer forma *ovata* d'Orbigny and *Polymorphina minuta* Roemer var. *ovata* d'Orbigny.

**Polymorphina spathulata** Terquem, 1882

Plesiotypes: 3 specimens, U.C. 33064.

Reference: Plummer, H. J., 1926, pp. 124-125, pl. 6, fig. 11, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Pseudopolymorphina spatulata* (Terquem).

**Psammophax bipartita** Ireland, 1939

Holotype: U.C. 38290.

Reference: Ireland, H. A. 1939, p. 194, figs. A-24, 25.

Stratigraphic position: Devonian, Helderberg. Hunton formation, Haragan shale. Locality 43.

Remarks: Specimen broken.

**Psammosphaera angularis** Ireland, 1939

Cotypes: 2 specimens, U.C. 38281.

Reference: Ireland, H. A., 1939, pp. 192-194, figs. A-8, 9.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 47.

**Psammosphaera cava** Moreman, 1930

Plesiotypes: 6 specimens, U.C. 38276.

Reference: Ireland, H. A., 1939, figs. A-15, 16.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Localities 36 and 43.

**Psammosphaera gracilis** Ireland, 1939

Cotypes: 2 specimens, U.C. 38280.

Reference: Ireland, H. A., 1939, p. 194, figs. A-10, 11.

Stratigraphic position: Silurian, Niagaran. Hunton formation. Henryhouse shale; Hunton formation, St. Clair limestone. Locality 48.

**Psammosphaera magna** Dunn, 1942

Plesiotype: U.C. 38277.

Reference: Ireland, H. A., 1939 (nomen nudum), fig. A-4.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 39.

**Pseudoglandulina scotti** Tappan, 1940

Paratype: U.C. 45031.

Reference: Tappan, H., 1940, p. 105.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Pseudopolymorphina roanokensis** Tappan, 1940

Paratype: U.C. 45055.

Reference: Tappan, H., 1940, p. 113.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Pseudopolymorphina spatulata** (Terquem)

See *Polymorphina spathulata* Terquem, 1882.

**Pullenia quinqueloba** (Reuss)

Plesiotypes: 2 specimens, U.C. 33079.

Reference: Plummer, H. J., 1926, pp. 136–137, pl. 8, fig. 12, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Pulvinulina exigua** H. B. Brady, 1884

Plesiotypes: 3 specimens, U.C. 33092.

Reference: Plummer, H. J., 1926, pp. 150–151, pl. 11, fig. 3, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Eponides exigua* (Brady) and *Pulvinulinella exigua* (Brady).

**Pulvinulina exigua** H. B. Brady var. **limbata** Plummer, 1926

Cotypes: 3 specimens, U.C. 33094. Paratypes: 2 specimens, U.C. 36435.

Reference: Plummer, H. J., 1926, p. 152, pl. 11, fig. 4, *a-c*.

Stratigraphic position: Paleocene, basal beds of Midway formation. Locality 5.

Remarks: Should be referred to *Eponides exigua* (Brady) var. *limbata* (Plummer), *Pulvinulinella exigua* (Brady) var. *limbata* (Plummer), *Pulvinulinella limbata* (Plummer).

**Pulvinulina exigua** H. B. Brady var. **obtusa** Burrows and Holland, 1897

Plesiotypes: 2 specimens, U.C. 33093.

Reference: Plummer, H. J., 1926, pp. 151–152, pl. 11, fig. 2, *a-c*.

Stratigraphic position: Paleocene, basal Midway formation. Locality 20.

Remarks: This is *Eponides exigua* (Brady) var. *obtusa* (Burrows and Holland), *Pulvinulinella exigua* (Brady) var. *obtusa* (Burrows and Holland), *Pulvinulinella obtusa* (Burrows and Holland).

**Pulvinulina partschiana** (d'Orbigny)

Plesiotypes: 3 specimens, U.C. 33097.

Reference: Plummer, H. J., 1926, pp. 153–154, pl. 11, fig. 5, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Pulvinulina reticulosa** Plummer, 1926

Cotypes: 2 specimens, U.C. 33096.

Reference: Plummer, H. J., 1926, pp. 152-153, pl. 12, fig. 5, *a*, *b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Coleites reticulosus* (Plummer).

**Pulvinulinella exigua** (Brady)

See *Pulvinulina exigua* H. B. Brady, 1884.

**Pulvinulinella exigua** (Brady) var. **limbata** (Plummer)

See *Pulvinulina exigua* H. B. Brady var. *limbata* Plummer, 1926.

**Pulvinulinella exigua** (Brady) var. **obtusa** (Burrows and Holland)

See *Pulvinulina exigua* H. B. Brady var. *obtusa* Burrows and Holland, 1897.

**Pulvinulinella limbata** (Plummer)

See *Pulvinulina exigua* H. B. Brady var. *limbata* Plummer, 1926.

**Pulvinulinella obtusa** (Burrows and Holland)

See *Pulvinulina exigua* H. B. Brady var. *obtusa* Burrows and Holland, 1897.

**Pyrulina longa** Tappan, 1940

Paratypes: 2 specimens, U.C. 45058.

Reference: Tappan H., 1940, p. 114.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Quinqueloculina ferussacii** d'Orbigny, 1826

Plesio-type: U.C. 33105.

Reference: Plummer, H. J., 1926, p. 161, pl. 12, fig. 10.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Miliola* (*Quinqueloculina*) *ferussacii* (d'Orbigny), *Miliola seminulum* (Linnaeus)

var. *ferussacii* (d'Orbigny), *Miliola* (*Quinqueloculina*) *seminulum* (Linnaeus) var. *ferussacii* (d'Orbigny), and *Miliolina ferussacii* (d'Orbigny).

**Ramulina laevis** Jones, 1875

See *Ramulina laevis* Rupert Jones, 1875.

**Ramulina laevis** Rupert Jones, 1875

Plesiotypes: 2 specimens, U.C. 33069.

Reference: Plummer, H. J., 1926, pp. 126–127.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Should be *Ramulina laevis* Jones, 1875.

**Ramulina** sp.

Plesiotype: U.C. 33068.

Reference: Plummer, H. J., 1926, p. 127, pl. 8, fig. 7.

Stratigraphic position: Paleocene, upper part of Upper Midway formation. Locality 13.

**Rectobolivina applinae** (Plummer)

See *Bolivina applini* Plummer, 1926.

**Rectocornuspira exserta** (Moreman)

See *Lituotuba exserta* Moreman, 1930.

**Reophax deckeri** Tappan, 1940

Paratypes: 2 specimens, U.C. 45001.

Reference: Tappan, H., 1940, p. 94.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Reophax minuta** Tappan, 1940

Paratype: U.C. 45002.

Reference: Tappan, H., 1940, pp. 94–95.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Reophax woodbinensis** Tappan, 1941

Paratypes: 2 specimens, U.C. 48141.

Reference: Tappan, H., 1941, pp. 359–360.

Stratigraphic position: Upper Cretaceous, Woodbine sand. Locality 30.

**Robulus gibbus** (d'Orbigny)

See *Cristellaria gibba* d'Orbigny, 1839.

**Robulus midwayensis** (Plummer)

See *Cristellaria midwayensis* Plummer, 1926.

**Robulus midwayensis** (Plummer) var. **carinatus** (Plummer)

See *Cristellaria midwayensis* Plummer var. *carinata* Plummer, 1926.

**Robulus pseudo-costatus** (Plummer)

See *Cristellaria pseudo-costata* Plummer, 1926.

**Robulus pseudo-mamilligerus** (Plummer)

See *Cristellaria pseudo-mamilligera* Plummer, 1926.

**Robulus turbinatus** (Plummer)

See *Cristellaria turbinata* Plummer, 1926.

**Rotalia aequilateralis** Plummer, 1926

Cotypes: 3 specimens, U.C. 33099.

Reference: Plummer, H. J., 1926, pp. 155–156, pl. 12, fig. 3, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Rotalia perplexa** Plummer, 1926

Cotypes: 3 specimens, U.C. 33100.

Reference: Plummer, H. J., 1926, pp. 156–157, pl. 12, fig. 2, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Ceratobulimina perplexa* (Plummer).

**Rotalia soldanii** (d'Orbigny) var. **subangulata** Plummer, 1926

Cotypes: 3 specimens, U.C. 33098.

Reference: Plummer, H. J., 1926, pp. 154-155, pl. 12, fig. 1, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Should be *Rotalia soldanii* (d'Orbigny) var. *subangulata* Plummer, 1926. Referred by Ellis and Messina to *Gyroidina subangulata* (Plummer).

**Saccamina moremani** Ireland, 1939

Holotype: U.C. 38286.

Reference: Ireland, H. A., 1939, p. 196, fig. A-12.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 49.

**Saracenaria cushmani** Tappan, 1940

Paratype: U.C. 45034.

Reference: Tappan, H., 1940, p. 106.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Saracenaria trigonata** (Plummer)

See *Cristellaria trigonata* Plummer, 1926.

**Siphogenerina eleganta** Plummer, 1926

Cotypes: 4 specimens, U.C. 33067. Paratype: U.C. 36450.

Reference: Plummer, H. J., 1926, p. 126, pl. 8, fig. 1, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

Remarks: Referred by Ellis and Messina to *Bifarina eleganta* (Plummer) or *Siphogenerinoides eleganta* (Plummer).

**Siphogenerinoides eleganta** (Plummer)

See *Siphogenerina eleganta* Plummer, 1926.

**Siphonina prima** Plummer, 1926

Cotypes: 2 specimens, U.C. 33090.

Reference: Plummer, H. J., 1926, pp. 148-149, pl. 12, fig. 4, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Sorosphaera irregularis** Grubbs, 1939

Holotype: U.C. 46002. Paratype: U.C. 46003.

Reference: Grubbs, D. M., 1939, p. 544, pl. 61, fig. 4.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Sorosphaera multicella** Dunn, 1942

Plesiotype: U.C. 38284.

Reference: Ireland, H. A., (nomen nudum), 1939, fig. A-30.

Stratigraphic position: Silurian. Locality 50.

**Spirolectamma ammovitrea** Tappan, 1940

Paratype: U.C. 45009.

Reference: Tappan, H., 1940, p. 97.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Technitella archaeonitida** Stainforth and Stevenson, 1946

Paratypes: 3 specimens, U.C. 51984.

Reference: Stainforth, R. M., and Stevenson, F. V., 1946, pp. 561-562.

Stratigraphic position: Lower Oligocene, Playa Rica formation. Locality 34.

**Textularia agglutinans** d'Orbigny, 1839

Plesiotype: U.C. 33003.

Reference: Plummer, H. J., 1926, p. 66.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Textularia carinata** d'Orbigny var. **expansa** Plummer, 1926

Cotypes: 2 specimens, U.C. 33005.

Reference: Plummer, H. J., 1926, pp. 67-69, pl. 3, fig. 3.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Textularia eocaena** (Gümbel)

Plesiotype: U.C. 33004.

Reference: Plummer, H. J., 1926, p. 67, pl. 3, fig. 2, *a*, *b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Tholosina sedentata** Ireland, 1939

Holotype: U.C. 38330.

Reference: Ireland, H. A., 1939, pp. 198, 200, figs. B-16, 17.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 52.

Remarks: Badly broken specimen.

**Thurammina cylindrica** Grubbs, 1939

Holotype: U.C. 46007. Paratype: 2 specimens, U.C. 46008.

Reference: Grubbs, D. M., 1939, p. 545, pl. 61, fig. 13.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Thurammina delicata** Ireland, 1939

Cotypes: 2 specimens, U.C. 38304.

Reference: Ireland, H. A., 1939, p. 196, figs. A-28, 29.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 45.

**Thurammina globosa** Ireland, 1939

Cotypes: 3 specimens, U.C. 38315.

Reference: Ireland, H. A., 1939, pp. 196-197, figs. B-5, 6.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 44.

**Thurammina globula** Grubbs, 1939

Holotype: U.C. 46009.

Reference: Grubbs, D. M., 1939, p. 545, pl. 61, figs. 9, 10.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Thurammina polygona** Ireland, 1939

Cotypes: 2 specimens, U.C. 38321.

Reference: Ireland, H. A., 1939, p. 197, figs. B-1, 2.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 49.

Remarks: One specimen broken.

**Thurammia sphaerica** Ireland, 1939

Cotypes: 5 specimens, U.C. 38319.

Reference: Ireland, H. A., 1939, p. 197, figs. A-33, 34.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 44.

**Thurammia subpapillata** Ireland, 1939

Cotypes: 2 specimens, U.C. 38302.

Reference: Ireland, H. A., 1939, p. 197, fig. A-36.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 36.

**Thurammia tubulata** Moreman, 1930

Plesiotypes: 2 specimens, U.C. 38300.

Reference: Ireland, H. A., 1939, fig. B-4.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 53.

**Thurammia unitubula** Grubbs, 1939

Holotype: U.C. 46006.

Reference: Grubbs, D. M., 1939, p. 545, pl. 61, fig. 7.

Stratigraphic position: Silurian, Niagaran, possibly Racine. Locality 28.

**Triloculina enoplostoma** Reuss var. *laevigata* Bornemann

See *Triloculina laevigata* Bornemann, 1855.

**Triloculina laevigata** Bornemann, 1855

Plesiotype: U.C. 33106.

Reference: Plummer, H. J., 1926, pp. 161-162, pl. 12, fig. 11.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Triloculina enoplostoma* Reuss var. *laevigata* Bornemann.

**Truncatulina alleni** Plummer, 1926

Cotypes: 3 specimens, U.C. 33086. Paratype: U.C. 36448.

Reference: Plummer, H. J., 1926, pp. 144-145, pl. 10, fig. 4, *a-c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Cibicides alleni* (Plummer).

**Truncatulina culter** (Parker and Jones)

Plesiotypes: 3 specimens, U.C. 33089.

Reference: Plummer, H. J., 1926, pp. 147-148, pl. 10, fig. 1, *a-c*; pl. 15, fig. 2, *a, b*.

Stratigraphic position: Paleocene, lower part of upper unit of Midway formation. Localities 9 and 35.

**Truncatulina elevata** Plummer, 1926

Cotypes: 3 specimens, U.C. 33095. Paratypes: 2 specimens, U.C. 36430.

Reference: Plummer, H. J., 1926, pp. 142-143, pl. 11, fig. 1, *a-c*.

Stratigraphic position: Paleocene, basal beds of Midway formation. Locality 15.

**Truncatulina midwayensis** Plummer, 1926

Cotypes: 3 specimens, U.C. 30083. Paratypes: 3 specimens, U.C. 36428; 2 specimens, U.C. 36449.

Reference: Plummer, H. J., 1926, pp. 141-142, pl. 9, fig. 7, *a-c*; pl. 15, fig. 3, *a, b*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Anomalina midwayensis* (Plummer).

**Truncatulina midwayensis** Plummer var. **trochoidea** Plummer, 1926

Cotypes: 3 specimens, U.C. 33084.

Reference: Plummer, H. J., 1926, p. 142, pl. 9, fig. 8, *a-c*.

Stratigraphic position: Paleocene, basal Midway formation. Locality 15.

Remarks: Should be referred to *Anomalina midwayensis* (Plummer) var. *trochoidea* (Plummer) or *Anomalina trochoidea* (Plummer).

**Truncatulina tenera** Brady, 1884

Plesiotypes: 3 specimens, U.C. 33088.

Reference: Plummer, H. J., 1926, pp. 146–147, pl. 9, fig. 5, *a–c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Eponides tenera* (Brady).

**Truncatulina vulgaris** Plummer, 1926

Cotypes: 3 specimens, U.C. 33087. Paratypes: 2 specimens, U.C. 36439.

Reference: Plummer, H. J., 1926, pp. 145–146, pl. 10, fig. 3, *a–c*.

Stratigraphic position: Paleocene, Upper Midway formation. Locality 10.

Remarks: Referred by Ellis and Messina to *Cibicides vulgaris* (Plummer).

**Truncatulina welleri** Plummer, 1926

Cotypes: 4 specimens, U.C. 33085.

Reference: Plummer, H. J., 1926, p. 143, pl. 9, fig. 6, *a–c*.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

Remarks: Referred by Ellis and Messina to *Nonionella welleri* (Plummer).

**Vaginulina complanata** (Reuss) var. **perstriata** Tappan, 1940

Paratypes: 2 specimens, U.C. 45040.

Reference: Tappan, H., 1940, p. 108.

Stratigraphic position: Lower Cretaceous, Washita group, Grayson formation. Locality 26.

**Vaginulina cretacea** Plummer, 1926

See *Vaginulina gracilis* Plummer var. *cretacea* Plummer, 1926.

**Vaginulina glabra** (d'Orbigny)

See *Marginulina glabra* d'Orbigny, 1826.

**Vaginulina gracilis** Plummer, 1926

Cotypes: 4 specimens, U.C. 33052. Paratype: U.C. 36437.

Reference: Plummer, H. J., 1926, pp. 111–112, pl. 6, fig. 5, *a*, *b* (fig. 5, *a*, megalospheric form; fig. 5, *b*, microspheric form).

Stratigraphic position: Paleocene, basal Midway formation, zone between Paleocene and Eocene contact and Tehuacana limestone horizon. Locality 5.

**Vaginulina gracilis** Plummer var. **cretacea** Plummer, 1926

Paratype: U.C. 36425.

Reference: Plummer, H. J., 1926, p. 172, pl. 2, fig. 8.

Stratigraphic position: Cretaceous, Navarro formation. Locality 27.

Remarks: Referred by Ellis and Messina to *Vaginulina cretacea* (Plummer).

**Vaginulina legumen** (Linnaeus)

Plesiotype: U.C. 33050.

Reference: Plummer, H. J., 1926, pp. 109–110, pl. 6, fig. 2.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Vaginulina legumen** (Linnaeus) var. **elegans** d'Orbigny, 1826

Plesiotypes: 2 specimens, U.C. 33051.

Reference: Plummer, H. J., 1926, pp. 110–111, pl. 6, fig. 1.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 18.

**Vaginulina plumoides** Plummer, 1926

Holotype: U.C. 33054.

Reference: Plummer, H. J., 1926, pp. 113–114, pl. 6, fig. 6.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 9.

**Vaginulina robusta** Plummer, 1926

Cotypes: 5 specimens, U.C. 33053. Paratypes: 2 specimens, U.C. 36438.

Reference: Plummer, H. J., 1926, pp. 112-113, pl. 6, fig. 4, *a*, *b* (fig. 4, *a*, microspheric form; 4, *b*, megalospheric form); pl. 13, fig. 3.

Stratigraphic position: Paleocene, Upper Midway formation.  
Localities 18 (pl. 6, fig. 4, *a*, *b*) and 7 (pl. 13, fig. 3).

**Vaginulinopsis earlandi** (Plummer)

See *Cristellaria earlandi* Plummer, 1926.

**Vaginulinopsis longiforma** (Plummer)

See *Cristellaria longiforma* Plummer, 1926.

**Valvulina angularis** (d'Orbigny)

See *Clavulina angularis* d'Orbigny, 1826.

**Valvulina triangularis** d'Orbigny var. **angularis** (d'Orbigny)

See *Clavulina angularis* d'Orbigny, 1826.

**Valvulina triangularis** d'Orbigny var. **Clavulina angularis** (d'Orbigny)

See *Clavulina angularis* d'Orbigny, 1826.

**Vitriwebbina chapmani** Plummer, 1926

Holotype: U.C. 33071.

Reference: Plummer, H. J., 1926, p. 128, pl. 8, fig. 2, *a*, *b*.

Stratigraphic position: Paleocene, Upper Midway formation.  
Locality 25.

Remarks: Referred by Ellis and Messina to *Bullopore chapmani* (Plummer).

**Vitriwebbina laevis** (Sollas)

Plesiotype: U.C. 33070.

Reference: Plummer, H. J., 1926, p. 128, pl. 8, fig. 3.

Stratigraphic position: Paleocene, lower part of Upper Midway formation. Locality 17.

**Webbinella bipartita** Ireland, 1939

Holotype: U.C. 38329.

Reference: Ireland, H. A., 1939, p. 198, figs. B-14, 15.

Stratigraphic position: Devonian, Helderberg. Hunton formation, Haragan limestone. Locality 51.

**Webbinella coronata** Ireland, 1939

Holotype: U.C. 38327.

Reference: Ireland, H. A., 1939, p. 198, fig. B-11.

Stratigraphic position: Silurian, Alexandrian. Hunton formation, Chimney Hill limestone. Locality 54.

Remarks: Specimen broken.

## REFERENCES

- BERRY, W., and KELLY, L.  
1929. The Foraminifera of the Ripley formation on Coon Creek, Tennessee. Proc. U. S. Nat. Mus., **76**, no. 2816, p. 5.
- ELLIS, B. F., and MESSINA, A. R.  
1940-60. Catalogue of Foraminifera. Amer. Mus. Nat. Hist., special publication.
- GALLOWAY, J. J., and MORREY, M.  
1929. A Lower Tertiary foraminiferal fauna from Manta, Ecuador. Bull. Amer. Pal., **15**, no. 55, p. 35.
- GRUBBS, D. M.  
1939. Fauna of the Niagaran nodules of the Chicago area. Jour. Pal., **13**: 543-560.
- IRELAND, H. A.  
1939. Devonian and Silurian Foraminifera from Oklahoma. Jour. Pal., **13**: 190-202.
- PLUMMER, H. J.  
1926. Foraminifera of the Midway formation in Texas. Texas Univ. Bull. (Bur. Econ. Geol.), no. 2644, pp. 1-206.  
1930. Calcareous Foraminifera in the Brownwood shale near Bridgeport, Texas. Texas Univ. Bull. (Bur. Econ. Geol.), no. 3019, pp. 5-21.  
1931. *Gaudryinella*, a new foraminiferal genus. Amer. Midl. Nat., **12**: 341-342.
- STAINFORTH, R. M., and STEVENSON, F. V.  
1946. Three new Foraminifera from the Tertiary of Ecuador. Jour. Pal., **20**: 560-565.
- TAPPAN, H.  
1940. Foraminifera from the Grayson formation of northern Texas. Jour. Pal., **14**: 93-126.  
1941. New arenaceous Foraminifera from the Woodbine Sand of northern Texas. Jour. Pal., **15**: 359-361.  
1944. New names for two foraminiferal homonyms. Jour. Pal., **18**: 560.











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