

Occasional Papers of the Museum of Natural Science, Louisiana State University

Volume 1 | Number 91

Article 1

3-31-2021

Henry V. Howe and his collection of foraminifera at Louisiana State University

Lorene E. Smith

Louisiana State University, Baton Rouge, LA, lsmit18@lsu.edu

Baren K. Sen Gupta

Louisiana State University, Baton Rouge, LA, glbarun@lsu.edu

Follow this and additional works at: <https://digitalcommons.lsu.edu/opmns>



Part of the [Genetics and Genomics Commons](#), and the [Population Biology Commons](#)

Recommended Citation

Smith, Lorene E. and Gupta, Baren K. Sen (2021) "Henry V. Howe and his collection of foraminifera at Louisiana State University," *Occasional Papers of the Museum of Natural Science, Louisiana State University*: No. 91 , Article 1.

DOI: 10.31390/opmns.091

Available at: <https://digitalcommons.lsu.edu/opmns/vol1/iss91/1>



**Museum of
Natural Science**

OCCASIONAL PAPERS OF THE MUSEUM OF NATURAL SCIENCE

LOUISIANA STATE UNIVERSITY

BATON ROUGE, LA

HENRY V. HOWE AND HIS COLLECTION OF FORAMINIFERA AT LOUISIANA STATE UNIVERSITY

LORENE E. SMITH^{1*} and BARUN K. SEN GUPTA²

¹Museum of Natural Science, Louisiana State University, Baton Rouge, LA 70803 USA

²Department of Geology and Geophysics, Louisiana State University, Baton Rouge, LA 70803 USA

*Corresponding author: lsmit18@lsu.edu

ABSTRACT

Henry V. Howe, the founder of the current academic program in geology at Louisiana State University (LSU), and a renowned ostracod specialist, was also a distinguished foraminiferal paleontologist. His best work in that field, involving the discovery of many new species, was on the taxonomy of Eocene Foraminifera of Louisiana. The present H.V. Howe Type Collection of Microfossils began with Howe's gift of slides to LSU. This collection, enriched by contributions from later workers, now includes over 580 slides of foraminiferal primary type specimens, with holotypes and syntypes of 361 species and 15 taxa labeled as "varieties." Information regarding these specimens, including current nomenclature of the species, geologic age, stratigraphic level, and geographic location, is given in this report.

KEY WORDS: Foraminifera, Howe, Collections, History, Micropaleontology

INTRODUCTION

Henry Van Wagenen Howe (1896–1973), then 26 years old with a fresh Ph.D. from Stanford, was appointed an Assistant Professor of geology at Louisiana State University (LSU) in 1922. The terms of the appointment were unusual for someone at the beginning of an academic career. Howe came to a moribund department; the old program had come to an end three years previously with the passing of Frederick Emerson (1871–1919), its last professor (Howe and Moresi 1933). Howe (Fig. 1) was given a "mandate from the governor and the university president to build a creditable department of geology to aid the state in the development of its burgeoning petroleum industry" (Morgan 1974). He met the challenge by recruiting excellent faculty, encouraging field research on the geology of Louisiana parishes, and attracting many talented students. He was rewarded by the university with a series of promotions: Associate Professor in 1924, Full Professor and Department Head in 1925, Director, School of Geology in 1931, Dean of the College of Arts and Sciences in 1944, and Boyd Professor (the most distinguished rank for an LSU teacher) in 1965 (Braunstein 1957; Morgan 1974). At the same time, Howe created and fostered one of the best university research programs in micropaleontology, using stratigraphic records of Ostracoda and Foraminifera. He received many awards from learned societies, the most notable being the Sidney Powers Medal, the highest honor bestowed by the American Association of Petroleum Geologists (Fisk 1960; Morgan 1974). Howe retired from LSU in 1966 but continued to collaborate on publications and catalog his microfossil collections until his death in 1973 (Morgan 1974). In 1987, the two buildings on the LSU campus that currently house the departments of Geology-Geophysics and Geography-Anthropology were collectively named the Howe-Russell Geoscience Complex, honoring Howe and Richard J. Russell (1895–1971), his distinguished colleague (Morgan 1974, 1987).

Research on Foraminifera – Howe's research and training efforts in micropaleontology fit well with the petroleum geology emphasis of his department because the size, abundance, durability, and diversity of microfossils make them useful in paleoenvironmental and geochronological analyses, and thus in petroleum exploration. By the mid-1940s, Howe's work on ostracodes overshadowed that



Fig. 1: Henry V. Howe, circa 1941, photograph by Fonville Winans. (Source: Archives of the Section of Fossil Protists and Invertebrates, LSU Museum of Natural Science; published with permission of the Fonville Winans Estate.)

on foraminifers, and led to his worldwide reputation as an outstanding paleontologist, but in the 1920s and 1930s, he made significant contributions to the study of Gulf Coast Foraminifera. His primary interest at this time is reflected in his own publications and the thesis topics of his graduate students. For example, the very first graduate thesis completed in the new geology department was on Foraminifera from outcrops in Louisiana (Harris 1926).

The abundant and diverse Eocene Foraminifera (56–33.9 Ma, Cohen et al. 2013) in the Gulf Coastal Plain drew much attention from Howe in his early years at LSU. He was

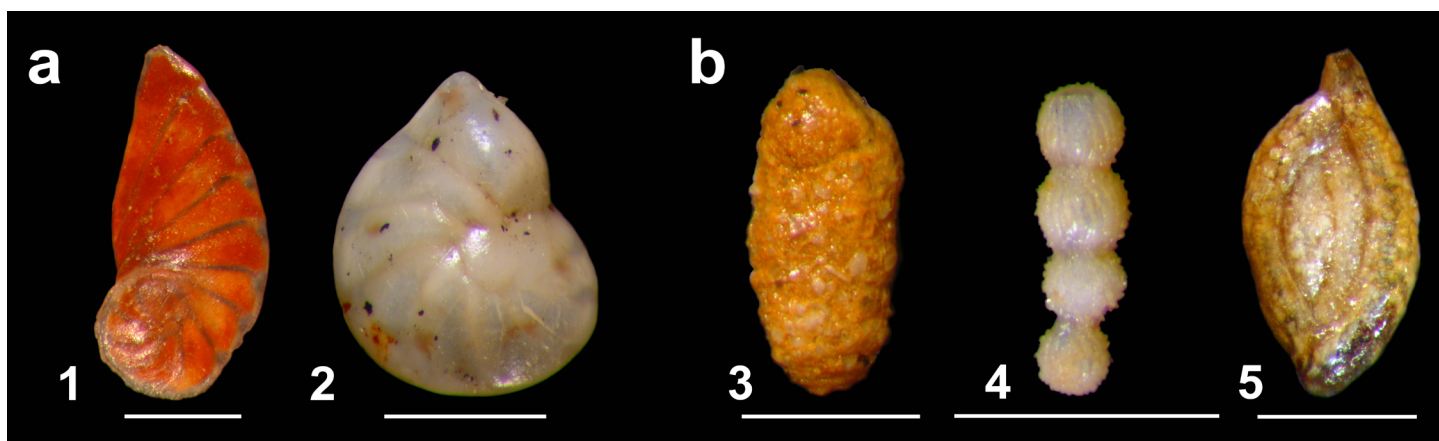


Fig. 2: Digital photomicrographs of some holotypes of Howe's species from (a) the upper Eocene Jackson Group (Howe and Wallace 1932) and (b) the middle Eocene Cook Mountain Formation (Howe 1939): 1, *Planularia ouachitaensis*; 2, *Darbyella danvillensis*; 3, *Textularia mauricensis*; 4, *Dentalina granulostrata*; 5, *Massilina columbiana*. Scale bars = 0.5 mm.

particularly impressed with the fossil content of the Jackson Formation (now Jackson Group), noting that “the bluffs on the western bank of the Ouachita River in Louisiana afforded by far the best known section of the formation” and that “[t]hese exposures are among the most prolific upper Eocene fossil collecting localities in the world” (Howe and Wallace 1932). He chose outcrops at Danville Landing for an intensive study of foraminiferal diversity and stratigraphic distribution. Howe and his coauthor, William E. Wallace, found a total of 115 foraminiferal species and “varieties” in this section (Lower and Upper Horizons); about a third of these taxa (40) were new to science (examples in Fig. 2). The abundance or rarity of some species in the stratigraphic section was used as a basis for separating the two Horizons. Among the new species, Howe and Wallace recognized two new genera, *Darbyella* and *Hopkinsina*.

Howe's second monograph on Foraminifera was based on 167 Eocene samples from the Cook Mountain Formation and two from the Sparta Formation (Howe 1939). This material was gathered from six contiguous parishes in northwestern Louisiana by Howe (one sample) and several collaborators (168 samples). The emphasis, again, was on discovery; Howe described and illustrated 82 new species (examples in Fig. 2), about 48% of the entire assemblage.

Through much of his career, Howe's taxonomic work on foraminifers was focused on Eocene species, but he also studied the Oligocene record, and established a new genus, *Bitubulogenerina* (Howe 1934). His publications on the Oligocene, however, are mainly species lists (e.g., Howe 1928a, 1942).

To honor his contributions to foraminiferal research, at least 19 species were named after Howe by various authors (Ellis and Messina 1940 et seq.; Hayward et al. 2020). The holotypes of four of these species are in the Henry V. Howe Type Collection of Microfossils.

THE COLLECTION

The LSU repository of microfossils began with Howe's numerous contributions, including specimens given to him by

prominent micropaleontologists of his day. It has since been expanded by donations from LSU faculty, research staff, and graduate students, and also from other paleontologists. The collection is housed in the LSU Geoscience Complex and curated by the Museum of Natural Science. It has served as an important taxonomic resource for microfossil researchers in the United States and abroad, especially for those interested in Paleogene Foraminifera or in the geologic history of the Gulf Coastal Plain and Gulf of Mexico. Shells of Foraminifera (mounted on cardboard slides) comprise approximately 49% of the collection.

History – Before he retired, Howe officially donated his collections to the university. On May 25, 1964, the Louisiana State University Board of Supervisors accepted the Henry V. Howe Type Collection of Microfossils, declaring it to be of “national and international value.” The Board expressed “its appreciation to Professor Howe for his generosity in making the University the repository for so famous a collection” (LSU Board of Supervisors 1964; Sen Gupta and Smith 2010). Harold V. (Andy) Andersen (1907–2000), Howe's student and later colleague, was Curator of Geology Museums, and oversaw the installation of fire-resistant safes to house the slides as stipulated by Howe (Andersen 1999). Also, under Andersen's direction, the Geology Department Museum Reference Collection of topotype foraminifers and ostracodes was created, picked from material collected by Howe and others. Some paratypes are included in this collection.

Over the years, multiple organizational changes have taken place. Between 1969 and 1970, the School of Geology was renamed the School of Geoscience, and the Geology Department Museum became part of the Museum of Geoscience, a division separate from the Department of Geology. In 1981–82, the Museum of Geoscience moved under the administration of the LSU Museum Complex when the School of Geoscience was dissolved (Hanor 1996; LSU Department of Geology and Geophysics 2019). In 1992, the Museum of Geoscience was abolished, and its collections transferred to the LSU Museum of Natural Science.

Types – The “types” in the collection include critical reference specimens needed in species identifications: (1) holotype, single specimen chosen by the author(s) of the species name to represent the species as the name-bearing type, (2) syntypes, which, if no holotype was chosen, collectively demonstrate the properties of the name-bearing type, and (3) paratypes, representative specimens other than the holotype, also chosen by the original authors (ICZN 1999). The microfossil collections of the LSU Museum of Natural Science include over 580 slides of such primary type Foraminifera. There are 361 foraminiferal species and 15 taxa labeled as “varieties” represented by name-bearing types (holotypes, syntypes) within the Howe Collection. The term “cotype,” used by authors of a few species in the Howe Collection, is not recognized in the latest version of the International Code of Zoological Nomenclature, but all of these specimens happen to be syntypes, and are labeled as such in Table 1. An additional eight species are represented in the collection by paratypes (Table 1).

The bulk of the foraminiferal material in the type collection is from Tertiary rocks and sediments of the U.S. Gulf Coast and the Gulf of Mexico. [Following the U.S. Geological Survey (2007), we retain the term “Tertiary” for the part of the Cenozoic Era/Erathem that is older than the Quaternary.] Of the species listed in Table 1, nearly 58% (221) are represented by Eocene individuals, and 25% (96) by Oligocene and Miocene individuals. Another 6% (22) are reported to be from the Tertiary Period, but the epoch is unknown. The Holocene primary type material consists of 36 species. These species are mostly from marginal marine or brackish-water habitats, the most notable being (1) 21 species from mudlumps at the mouths of the Mississippi River (Andersen 1961) and (2) ten species from a coastal marsh (Warren 1957). [The term “Recent” (used by Andersen 1951, 1961) is now invalid (Pillars and Gibbard 2012), and replaced by “Holocene.”]

We must note that the primary type slides are not the only foraminiferal material in the collection. As of August 2020, it also includes 6,243 slides of topotypes, homeotypes, figured specimens, and identified specimens that represent over 3,000 different species, subspecies, and “varieties” of Foraminifera. A separate stratigraphic collection contains numerous faunal assemblage slides.

RECORDS OF FORAMINIFERAL PRIMARY TYPES

Details concerning the foraminiferal holotypes and syntypes in the Howe Collection are given below. Paratypes are not included if the holotype was never part of the Howe Collection (i.e., *Buccella inusitata*, *Cassidulina galvinensis*, *Eponides kleinpelli*, *Heronallenella boltovskoyi*, *Hyperammina kentuckyensis*, *Lepidocyclus californica*, and *Planulinoides srinivasani*). These details include the catalog number, locality, geologic age, stratigraphic horizon, current nomenclature, and literature reference. Some taxonomic and geologic comments are presented, and discrepancies recognized. All original illustrations of holotypes and paratypes were compared with actual specimens; some inconsistencies

are recorded. Locality information in quotation marks is taken directly from the published species description. Occasionally, this information is supplemented by unpublished data from theses, dissertations, field notes, and sample labels. The term “Howe Loc.” refers to a set of washed microfossil samples contributed by Howe and others. Catalog numbers of specimens in the H.V. Howe Type Collection are preceded by “HVH,” whereas the numbers in the reference collection are preceded by “LSUGDM.”

Species are listed alphabetically by their original names. Several standard sources, including the World Foraminifera Database (Hayward et al. 2020) and the Mikrotax database (Young et al. 2020), have been consulted concerning currently accepted names.

Three reported holotypes (*Ceratobulimina limbata* Hussey 1949; *Listerella minuta* Hussey 1949; and *Miliola terquemii* Andersen 1988) are not included in our species lists because the specimens are missing or destroyed, and no paratypes of the species are in the collections. Also not listed is *Nodoplanulis elongata* Hussey 1943, which was erroneously identified as a foraminifer (Loeblich and Tappan 1964).

TYPE SPECIMENS

Alabama crassioria Poag 1966, *Micropaleontology* 12: 430.

HOLOTYPE: HVH 7735, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation” taken in a blue-green, argillaceous, loose sand bed with *Ostrea blanda*, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 9, figs. 14–16.

PARATYPES: LSUGDM 982, Paynes Hammock Fm.; Loc. S19, sample 12, from 3.8 feet above the base of Paynes Hammock Formation, taken in an orange, coarse-grained sand bed; five specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Alfredosilvestris levinsoni Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 72–73.

HOLOTYPE: HVH 4324, Holocene; Location No. 37: “Lat. 28°58’16.4” N, Long. 89°08’34.3” W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 17, figs. 7a, 7b.

PARATYPES from same sample as holotype: HVH 4325,

Table 1. Foraminiferal species in the Howe Collection represented by primary types. H, holotype; s, syntype; s*, syntype, but originally labeled cotype; p, paratype. Where possible, geologic ages (epochs) represented by the recorded stratigraphic units (formations, members, etc.) were taken from the National Geologic Database of the U.S. Geological Survey (<https://ngmdb.usgs.gov/Geolex/search>).

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Alabamina crassicoria</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Alfredosilvestris levinsoni</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Ammobaculites crassus</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Ammobaculites huneri</i>	Howe 1939	H	Eocene	Louisiana
<i>Ammobaculites mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Ammobaculites nummus</i>	Garrett 1938	H, p	Oligocene	Texas
<i>Ammobaculites subcatenulatus</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Ammomarginulina brevilingulata</i>	Smith 1948	H	Miocene	Louisiana
<i>Ammomarginulina decorata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Ammotium fragile</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Ammotium multiloculatum</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Ammotium palustre</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Ammotium subdirectum</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Amphicoryna camachoi</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Amphicoryna roedereri</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Amphorina purii</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Andersenina rumana</i>	Neagu 1968	H, p	Cretaceous	Romania
<i>Angulogerina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Angulogerina inflata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Angulogerina mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Anomalina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Anomalina nodosa</i>	Hussey 1943	H	Eocene	Louisiana
<i>Arcanispira bacata</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Arcanispira depressa</i>	Poag 1966	H, p	Miocene	Florida
<i>Astacolus complanatus</i>	Hussey 1949	H	Eocene	Louisiana
<i>Asterigerina hadleyi</i>	Howe & Roberts 1939	H, p	Eocene	Louisiana
<i>Asterigerinata frondiculata</i>	Poag 1966	H, p	Oligocene	Mississippi

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Astrononion velaticameratus</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Baggatella inconspicua</i>	Howe 1939	H	Eocene	Louisiana
<i>Baggina xenoula</i>	Hadley 1935	H	Epoch unknown, Tertiary Period	Mississippi
<i>Biapertorbis anderseni</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Bifarina tombigbeensis</i>	Hadley 1935	H, p	Epoch unknown, Tertiary Period	Alabama
<i>Bifarina turriiformis</i>	Hussey 1943	H	Eocene	Louisiana
<i>Bifarina vicksburgensis</i> var. <i>monsouri</i>	Garrett 1939	H	Epoch unknown, Tertiary Period	Texas
<i>Biloculinella toddae</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Bisaccium imbricatum</i>	Andersen 1951	H, p	Holocene	Louisiana
<i>Bitubulogenerina chickasawhayica</i>	Hadley 1935	H	Oligocene	Mississippi
<i>Bitubulogenerina ellisi</i>	Howe 1939	H	Eocene	Louisiana
<i>Bitubulogenerina hiwanneensis</i>	Howe 1934	H	Oligocene	Mississippi
<i>Bitubulogenerina mauricensis</i>	Howe 1934	H	Eocene	Louisiana
<i>Bitubulogenerina montgomeryensis</i>	Howe 1934	H	Eocene	Louisiana
<i>Bitubulogenerina vicksburgensis</i>	Howe 1934	H	Oligocene	Mississippi
<i>Bolivina broussardi</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Bolivina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Bolivina gladius</i>	Garrett 1942	H	Miocene	Texas
<i>Bolivina gracilis</i> var. <i>danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Bolivina huneri</i>	Howe 1939	H	Eocene	Louisiana
<i>Bolivina louisiana</i>	Howe 1939	H	Eocene	Louisiana
<i>Bolivina mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Bolivina ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Bolivina perca</i>	Garrett 1938	H, p	Epoch unknown, Tertiary Period	Texas
<i>Bolivina striata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Bolivina stuckeyi</i>	Howe 1939	H	Eocene	Louisiana
<i>Bolivina taylori</i>	Howe 1939	H	Eocene	Louisiana
<i>Bolivina thomsoni</i>	Howe 1939	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Bolivina westi</i>	Garrett 1942	H	Miocene	Texas
<i>Bolivinita concavomoenia</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Brizalina solicarina</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Buccella binodojuga</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Buccella inusitata</i>	Andersen 1952	p	Holocene	Washington
<i>Bulimina mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Bulimina (?) petalifera</i>	Howe 1939	H	Eocene	Louisiana
<i>Bulimina robertsi</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Bulimina rotunda</i>	Hussey 1949	H	Eocene	Louisiana
<i>Bulimina winniana</i>	Howe 1939	H	Eocene	Louisiana
<i>Buliminella basistriata</i> var. <i>nuda</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Buliminella faciata</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Buliminella morgani</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Cancris claibornensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Cancris danvillensis</i>	Howe & Wallace 1932	H, p	Eocene	Louisiana
<i>Cassidulina brocha</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Cassidulina galvinensis</i>	Cushman & Frizzell 1940	p	Oligocene	Washington
<i>Cassidulina parva</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cassidulina rotulita</i>	Poag 1966	H	Oligocene	Mississippi
<i>Cassidulina winniana</i>	Howe 1939	H	Eocene	Louisiana
<i>Cassidulina woodsi</i>	Smith 1948	H	Miocene	Louisiana
<i>Chrysalidinella popei</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Cibicides danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Cibicides discorbisiformis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cibicides glabratus</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cibicides hazzardi</i>	Ellis 1939	H, p	Oligocene	Mississippi
<i>Cibicides hilgardi</i>	Garrett 1941	s	Eocene	Alabama, Mississippi
<i>Cibicides hypoconoides</i>	Hussey 1943	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Cibicides jeffersonensis</i>	Garrett 1939	H	Epoch unknown, Tertiary Period	Texas
<i>Cibicides lawi</i>	Howe 1939	H, p	Eocene	Louisiana
<i>Cibicides mammiformis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cibicides mauricensis</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Cibicides mcguirti</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cibicides molacus</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Cibicides moreyi</i>	Garrett 1939	H	Epoch unknown, Tertiary Period	Texas
<i>Cibicides ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Cibicides steini</i>	Garrett 1942	H	Miocene	Texas
<i>Cibicides submammiformis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cibicides umbilicatus</i>	Hussey 1949	H	Eocene	Louisiana
<i>Cibicides westi</i>	Howe 1939	H	Eocene	Louisiana
<i>Cibicides williamsoni</i>	Garrett 1941	H, p	Paleocene	Alabama
<i>Cribrorigenerina parkerae</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Cribroturretoides miocenica</i>	Smith 1948	H, p	Miocene	Louisiana
<i>Cyclammina caneriverensis</i>	Hussey 1943	H, p	Eocene	Louisiana
<i>Cyclammina evolvinatus</i>	Smith 1948	H	Miocene	Louisiana
<i>Cyclammina hemiammonitiformis</i>	Smith 1948	H	Miocene	Louisiana
<i>Darbyella danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Dentalina acinacoides</i>	Hussey 1949	H	Eocene	Louisiana
<i>Dentalina globata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Dentalina granulostrata</i>	Howe 1939	H	Eocene	Louisiana
<i>Dentalina hexacostata</i>	Howe 1939	H	Eocene	Louisiana
<i>Dentalina mauricensis</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Dentalina mexicana</i> var. <i>danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Dentalina natchitochensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Dentalina paradoxa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Dentalina winniana</i>	Howe 1939	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Dimorphina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Discorbis bolivarensis</i>	Garrett 1942	H, p	Miocene	Texas
<i>Discorbis crosbiei</i>	Butler 1962	H, p	Miocene	Louisiana (offshore)
<i>Discorbis gravelli</i>	Garrett 1939	H, p	Epoch unknown, Tertiary Period	Texas
<i>Discorbis huneri</i>	Howe 1939	H	Eocene	Louisiana
<i>Discorbis mauricensis</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>"Discorbis" mitra</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Discorbis nomada</i>	Garrett 1939	H	Epoch unknown, Tertiary Period	Texas
<i>Discorbis parva</i>	Hussey 1949	H	Eocene	Louisiana
<i>Discorbis petalana</i>	Hussey 1949	H	Eocene	Louisiana
<i>Discorbis rukasi</i>	Howe 1939	H, p	Eocene	Louisiana
<i>Discorbis washburni</i>	Garrett 1941	H, p	Paleocene	Alabama
<i>Dyocibicides danvillensis</i>	Howe & Wallace 1932	s*	Eocene	Louisiana
<i>Ellipsolagena (?) mauricensis</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Elphidium latispatium</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Elphidium rota</i>	Ellis 1939	H, p	Oligocene	Mississippi
<i>Entosolenia boutoncapitata</i>	Smith 1948	H	Miocene	Louisiana
<i>Entosolenia vasiformis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Eoeponidella obescubacula</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Eoeponidella parvipatera</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Epistomina chromata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Eponidella cushmani</i>	Stephenson 1935	H, p	Miocene	Louisiana
<i>Eponides ellisorae</i>	Garrett 1939	H, p	Epoch unknown, Tertiary Period	Texas
<i>Eponides kleinpelli</i>	Cushman & Frizzell 1940	p	Oligocene	Washington
<i>Eponides lowei</i>	Garrett 1941	H	Eocene	Mississippi
<i>Eponides mammalonicus</i>	Smith 1948	H	Miocene	Louisiana
<i>Eponides ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Eponides simplex</i>	Hussey 1949	H	Eocene	Louisiana
<i>Fissurina falcaticosta</i>	Poag 1966	H, p	Oligocene	Alabama
<i>Fissurina insigera</i>	Poag 1966	H	Oligocene	Mississippi
<i>Fissurina trigelasina</i>	Poag 1966	H, p	Oligocene	Alabama
<i>Fronicularia elegantissima</i>	Hussey 1949	H	Eocene	Louisiana
<i>Fursenkoina capreolata</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Gaudryina geometrica</i>	Howe 1939	H	Eocene	Louisiana
<i>Gaudryina koimetercola</i>	Hadley 1935	H	Oligocene	Mississippi
<i>Glandulina simplex</i>	Hussey 1949	H	Eocene	Louisiana
<i>Globigerina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Globigerina ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Globorotalia inconspicua</i>	Howe 1939	H	Eocene	Louisiana
<i>Globorotalia inflata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Globorotalia perforataminuta</i>	Hussey 1949	H	Eocene	Louisiana
<i>Goesella gibbosa</i>	Hussey 1943	H, p	Eocene	Louisiana
<i>Guembelina garretti</i>	Howe 1939	H	Eocene	Louisiana
<i>Guembelina mauricana</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Guembelina multicellaris</i>	Hussey 1949	H	Eocene	Louisiana
<i>Guembelitra columbiana</i>	Howe 1939	H	Eocene	Louisiana
<i>Guttulina magna</i>	Hussey 1949	H	Eocene	Louisiana
<i>Guttulina obscura</i>	Hussey 1949	H	Eocene	Louisiana
<i>Gyroidina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Gyroidina limbata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Gyroidina lottensis</i>	Garrett 1941	H, p	Paleocene	Alabama
<i>Gyroidina scalata</i>	Garrett 1938	H, p	Oligocene	Louisiana
<i>Gyroidina vicksburgensis</i> var. <i>hannai</i>	Garrett 1939	H	Epoch unknown, Tertiary Period	Texas
<i>Hantkenina danvillensis</i>	Howe & Wallace 1934	H	Eocene	Louisiana
<i>Hantkenina inflata</i>	Howe 1928	H	Eocene	Alabama

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Hantkenina mccordi</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Hanzawaia prona</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Haplophragmoides complanata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Haplophragmoides houghi</i>	Smith 1948	H	Miocene	Louisiana
<i>Haplophragmoides manilaensis</i>	Andersen 1953	H, p	Holocene	Louisiana
<i>Haplophragmoides mauricensis</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Haplophragmoides proboscidiformis</i>	Smith 1948	H	Miocene	Louisiana
<i>Haplophragmoides pseudolatidorsatum</i>	Smith 1948	H	Miocene	Louisiana
<i>Haplophragmoides wilberti</i>	Andersen 1953	H, p	Holocene	Louisiana
<i>Haplophragmoides wilsoni</i>	Smith 1948	H	Miocene	Louisiana
<i>Hauerina papillosa</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Hemicristellaria brantlyi</i>	Garrett 1941	s	Paleocene	Alabama
<i>Hemicristellaria hatchetigbeensis</i>	Garrett 1941	s	Eocene	Alabama, Mississippi
<i>Hemicristellaria hatchetigbeensis</i> var. <i>harrisi</i>	Garrett 1941	H, p	Eocene	Mississippi
<i>Heronallenella boltovskoyi</i>	Gupta & Sen Gupta 1993	p	Pliocene, Pleistocene, Holocene	Arabian Sea, Indian Ocean
<i>Hopkinsina danvillensis</i>	Howe & Wallace 1932	H, p	Eocene	Louisiana
<i>Hyperammina kentuckyensis</i>	Conkin 1954	p	Mississippian	Kentucky
<i>Karreriella mauricensis</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Karreriella ovata</i>	Hussey 1943	H	Eocene	Louisiana
<i>Lagena abnormacostata</i>	Smith 1948	H	Miocene	Louisiana
<i>Lagena fenestrissima</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Lagena halstedii</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Lagena inusitata</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Lagena laevis</i> var. <i>circumaciculata</i>	Smith 1948	H	Miocene	Louisiana
<i>Lagena mauricensis</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Lagena mexicana</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Lagena ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Lagena pleniluna</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Lagena reticulocervix</i>	Poag 1966	H	Oligocene	Mississippi
<i>Lagena salinensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Lagenammina tortuotrigonalis</i>	Smith 1948	H	Miocene	Louisiana
<i>Lamarckina claibornensis</i> var. <i>gemmulata</i>	Hussey 1949	H	Eocene	Louisiana
<i>"Laryngosigma" strigosa</i>	Poag 1966	H, p	Oligocene	Mississippi, Alabama
<i>Lenticulina camiarta</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Lenticulina hansenii</i>	Garrett 1942	s	Miocene	Texas
<i>Lenticulina jeffersonensis</i>	Garrett 1939	s	Epoch unknown, Tertiary Period	Texas
<i>Lepidocyclina (Lepidocyclina) californica</i>	Schenck & Childs 1942	p	Miocene	California
<i>Lingulina seminuda</i> var. <i>denudata</i>	Smith 1948	H	Miocene	Louisiana
<i>Loxostoma huneri</i>	Howe 1939	H	Eocene	Louisiana
<i>Loxostomum gelbi</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Marginulina anconoides</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina ascensionensis</i>	Howe & McDonald 1938	H, p	Miocene	Louisiana
<i>Marginulina bulbosa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina darbyella</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina howei</i>	Garrett & Ellis 1937	H, p	Epoch unknown, Tertiary Period	Louisiana
<i>Marginulina huneri</i>	Howe 1939	H	Eocene	Louisiana
<i>Marginulina idiomorpha</i>	Garrett & Ellis 1937	H, p	Epoch unknown, Tertiary Period	Texas
<i>Marginulina inconspicua</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina inornata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina insignifica</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina mexicana</i> var. <i>vaginata</i>	Garrett & Ellis 1937	H, p	Epoch unknown, Tertiary Period	Texas
<i>Marginulina nonconforma</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina producta</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina sorrentoensis</i>	Howe & McDonald 1938	H	Oligocene?	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Marginulina striatoglabrata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina subglobosa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Marginulina texana</i>	Garrett & Ellis 1937	H, p	Epoch unknown, Tertiary Period	Texas
<i>Marginulina triangularis</i> var. <i>danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Marginulina variata</i>	Hussey 1943	s*	Eocene	Louisiana
<i>Marginulina winniana</i>	Howe 1939	H	Eocene	Louisiana
<i>Marssonella altisuturalis</i>	Poag 1966	H, p	Oligocene	Alabama
<i>Massilina columbiana</i>	Howe 1939	H	Eocene	Louisiana
<i>Massilina goniopleura</i>	Hadley 1935	H	Eocene	Mississippi
<i>Massilina mauricensis</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Massilina stuckeyi</i>	Andersen 1961	p	Holocene	Louisiana
<i>Miliola alphillipsi</i>	Andersen 1988	H	Oligocene	Mississippi
<i>Miliola rolandi</i>	Andersen 1984	H, p	Oligocene	Mississippi
<i>Miliolinella microstoma</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Miliolinella warreni</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Neaguities inusitatus</i>	Andersen 1984	H	Oligocene	Mississippi
<i>Neobulimina angularima</i>	Poag 1966	H, p	Oligocene	Alabama
<i>Neoconorbina rostrata</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Nodosarella elongata</i>	Hussey 1949	H, p	Eocene	Louisiana
<i>Nodosaria angularis</i>	Leutze 1972	H, p	Miocene	Louisiana
<i>Nodosaria blanpiedi</i>	Ellis 1939	H, p	Oligocene	Mississippi
<i>Nodosaria bulba</i>	Howe 1939	H	Eocene	Louisiana
<i>Nodosaria delicata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Nodosaria milamensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Nodosaria primitiva</i>	Hussey 1943	H	Eocene	Louisiana
<i>Nodosaria pyriformis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Nodosaria selenoides</i>	Hussey 1949	H	Eocene	Louisiana
<i>Nodosaria simplex</i> var. <i>gracibasica</i>	Smith 1948	H	Miocene	Louisiana
<i>Nonion applini</i>	Howe & Wallace 1932	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Nonion danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Nonion lunatum</i>	Garrett 1938	H, p	Oligocene	Louisiana
<i>Nonion mauricensis</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Nonion preadvenum</i>	Howe 1939	H	Eocene	Louisiana
<i>Nonion struma</i>	Ellis 1939	H, p	Oligocene	Mississippi
<i>Nonionella danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Nonionella mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Nonionella winniana</i>	Howe 1939	H	Eocene	Louisiana
<i>Operculinoides natchitochensis</i>	Howe 1939	H, p	Eocene	Louisiana
<i>Oridorsalis westi</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Paleopolymorphina eocaenica</i>	Hussey 1949	H	Eocene	Louisiana
<i>Palmula decorata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Palmula huneri</i>	Howe 1939	H	Eocene	Louisiana
<i>Planularia catahoulaensis</i>	Howe & Wallace 1932	s*	Eocene	Louisiana
<i>Planularia danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Planularia ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Planularia parva</i>	Hussey 1949	H	Eocene	Louisiana
<i>Planularia winniana</i>	Howe & Ellis 1939	H	Eocene	Louisiana
<i>Planulina kniffeni</i>	Howe 1939	H	Eocene	Louisiana
<i>Planulina palmerae</i>	Garrett 1942	H, p	Miocene	Texas
<i>Planulinoides srinivasani</i>	Gupta & Sen Gupta 1993	p	Pleistocene	Indian Ocean
<i>Plectina regularis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Plectina robusta</i>	Hussey 1949	H, p	Eocene	Louisiana
<i>Polymorphina advena</i> var. <i>nuda</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Polymorphina fiski</i>	Howe 1939	H	Eocene	Louisiana
<i>Polymorphina franquesi</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Protelphidium profundifossatum</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Proteonina harangensis</i>	Smith 1948	H	Miocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Pseudobulimina glaessneri</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Pseudoclavulina columbiana</i>	Howe 1939	H	Eocene	Louisiana
<i>Pseudoclavulina elongata</i>	Hussey 1943	H, p	Eocene	Louisiana
<i>Pseudoeponides anderseni</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Pseudoglandulina mauricensis</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Pseudoguembelina kempensis</i>	Esker 1968	H, p	Cretaceous	Texas
<i>Pulvinulinella bella</i>	Hussey 1949	H	Eocene	Louisiana
<i>Pulvinulinella danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Pulvinulinella harrisi</i>	Hadley 1935	H	Eocene	Mississippi
<i>Pulvinulinella huneri</i>	Howe 1939	H, p	Eocene	Louisiana
<i>Pyrgo inornata</i> var. <i>danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Pyrgo magnacaudata</i>	Smith 1948	H	Miocene	Louisiana
<i>Pyrgo phlegeri</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Quasicibicides anderseni</i>	Rosen 1985	H, p	Cretaceous	Georgia
<i>Quinqueloculina acuta</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina amygdulata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina bienvillensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Quinqueloculina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Quinqueloculina fragilissima</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina garrettii</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Quinqueloculina gibbosa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina harrisi</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Quinqueloculina mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Quinqueloculina parvatriangularis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina salinensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Quinqueloculina striaturata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina subgibbosa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Quinqueloculina tipswordi</i>	Andersen 1961	H, p	Holocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Recurvoides gillieparkeri</i>	Smith 1948	H	Miocene	Louisiana
<i>Reophax beaurecarsoni</i>	Smith 1948	H	Miocene	Louisiana
<i>Reophax davepopei</i>	Smith 1948	H, p	Miocene	Louisiana
<i>Reussella costata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Reussella goochi</i>	Howe 1939	H	Eocene	Louisiana
<i>Robertina howei</i>	Hussey 1949	H	Eocene	Louisiana
<i>Robertina mcguirti</i>	Howe 1939	H	Eocene	Louisiana
<i>Robulus chambersi</i>	Garrett 1939	s	Epoch unknown, Tertiary Period	Texas
<i>Robulus (?) danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Robulus lacerta</i>	Garrett 1939	H, p	Epoch unknown, Tertiary Period	Texas
<i>Robulus limbatus</i>	Hussey 1949	H	Eocene	Louisiana
<i>Robulus lowmani</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Robulus macomberi</i>	Butler 1962	H, p	Miocene	Louisiana (offshore)
<i>Robulus translucidus</i>	Hussey 1949	H	Eocene	Louisiana
<i>Robulus trochoides</i>	Hussey 1949	H	Eocene	Louisiana
<i>Robulus umbonatus</i>	Hussey 1949	H	Eocene	Louisiana
<i>Rosalina scopulata</i>	Poag 1966	H	Oligocene	Mississippi
<i>Saracenaria danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Saracenaria lamptoni</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Saracenaria limbata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Saracenaria mexicana</i>	Andersen 1961	H, p	Holocene	Louisiana
<i>Saracenaria moresiana</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Saracenaria parva</i>	Hussey 1949	H	Eocene	Louisiana
<i>Saracenaria perforata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Sigmavirgulina spissitruncula</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Sigmoilina inconspicua</i>	Howe 1939	H	Eocene	Louisiana
<i>Sigmomorphina mindenensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Siphogenerina fredsmithi</i>	Garrett 1939	H	Epoch unknown, Tertiary Period	Texas

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Siphogenerina spinulosa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Siphonina carinata</i>	Hussey 1943	H	Eocene	Louisiana
<i>Siphonina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Siphonina ficticuspis</i>	Poag 1966	H, p	Oligocene	Mississippi
<i>Siphonina goochi</i>	Howe 1939	H, p	Eocene	Louisiana
<i>Siphonina umbonata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Siphoninella chambersi</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Siphoninella parva</i>	Hussey 1949	H	Eocene	Louisiana
<i>Spiroloculina bidentata</i>	Hadley 1935	H	Eocene	Mississippi
<i>Spiroloculina lamposa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Spiroloculina ocularis</i>	Smith 1948	H	Miocene	Louisiana
<i>Spiroplectammina grossefinale</i>	Smith 1948	H	Miocene	Louisiana
<i>Spiroplectammina howei</i>	Stuckey 1946	H, p	Oligocene	Mississippi
<i>Spiroplectammina natchitochensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Spiroplectammina waughi</i>	Smith 1948	H	Miocene	Louisiana
<i>Sulcophax palustris</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Texina ferayi</i>	Andersen 1984	H, p	Eocene	Texas
<i>Textularia broussardi</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Textularia danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Textularia mauricensis</i>	Howe 1939	H, p	Eocene	Louisiana
<i>Textularia mornhinvegi</i>	Garrett 1939	s	Epoch unknown, Tertiary Period	Texas
<i>Textularia ouachitaensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Textularia palustris</i>	Warren 1957	H, p	Holocene	Louisiana
<i>Textularia seligi</i>	Stuckey 1946	H, p	Oligocene	Texas
<i>Textulariella polygona</i>	Hussey 1949	H	Eocene	Louisiana
<i>Triloculina garretti</i>	Howe 1939	H	Eocene	Louisiana
<i>Triloculina mindenensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Triloculina natchitochensis</i>	Howe 1939	H	Eocene	Louisiana

Species, original name	Author(s), date	Type	Age (geologic epoch)	Area
<i>Tritubulogenerina mauricensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Trochammina claibornensis</i>	Howe 1939	H	Eocene	Louisiana
<i>Trochammina lafourchensis</i>	Smith 1948	H	Miocene	Louisiana
<i>Trochamminoides discotrochus</i>	Smith 1948	H	Miocene	Louisiana
<i>Trochamminoides novalateralis</i>	Smith 1948	H	Miocene	Louisiana
<i>Trochamminoides thompsoni</i>	Smith 1948	H	Miocene	Louisiana
<i>Tubulogenerina jacksonensis</i>	Howe 1934	H, p	Eocene	Louisiana, Florida
<i>Uvigerina danvillensis</i>	Howe & Wallace 1932	H	Eocene	Louisiana
<i>Uvigerina howei</i>	Garrett 1939	H, p	Epoch unknown, Tertiary Period	Texas
<i>Uvigerina israelskyi</i>	Garrett 1939	H, p	Epoch unknown, Tertiary Period	Texas
<i>Uvigerina russelli</i>	Howe 1939	H	Eocene	Louisiana
<i>Uvigerina stephensoni</i>	Garrett 1938	H, p	Oligocene	Texas, Louisiana
<i>Uvigerina subfusiformis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Uvigerinella subquadrata</i>	Hussey 1949	H	Eocene	Louisiana
<i>Vaginulina pseudosenticosa</i>	Smith 1948	H	Miocene	Louisiana
<i>Valvulineria gracilis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Verneuilina hannai</i>	Smith 1948	H	Miocene	Louisiana
<i>Virgulina danvillensis</i>	Howe & Wallace 1932	H, p	Eocene	Louisiana
<i>Virgulina mcguirti</i>	Howe & Roberts 1939	H	Eocene	Louisiana
<i>Virgulina regularis</i>	Hussey 1949	H	Eocene	Louisiana
<i>Virgulina spinulosa</i>	Hussey 1949	H	Eocene	Louisiana
<i>Vulvulina ignava</i>	Garrett 1939	s	Epoch unknown, Tertiary Period	Texas
<i>Vulvulina pennatula</i> var. <i>cuneata</i>	Smith 1948	H	Miocene	Louisiana

one specimen, figured: pl. 17, fig. 8. LSUGDM 203, seven specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

The terms “megalospheric” and “microspheric” have been reversed in the text and figure captions for this species. Thus, in the description of the genus and the type species (Andersen 1961; Loeblich and Tappan 1964), the statements regarding the two forms are incorrect.

Ammobaculites crassus Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 32.

HOLOTYPE: HVH 6422, Holocene; Buras-Scofield Bayou Region, “center of lagoon mouth at northwest end of Bay Pomme d’Or,” south of Buras, Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2008, Warren Sample 3, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 3, fig. 5.

PARATYPES from same sample as holotype: HVH 6422a, one specimen, figured: pl. 3, figs. 6, 7. LSUGDM 409, one specimen. LSUGDM 410, one specimen. LSUGDM 471, 39 specimens, not figured.

COMMENTS: Warren (1956, p. 133) provides additional information for Sample 3: depth 3.5 feet; salinity 28.6 ppt; pH 8.4; temperature 73°F; bottom: soft mud; lat. 29°20'10" N, long. 89°33'04" W. Warren (1956) figures HVH 6422 (pl. 1, fig. 29), LSUGDM 409 (pl. 1, figs. 27, 28), and LSUGDM 410 (pl. 1, fig. 30) under the name *Ammobaculites* sp. A.

Ammobaculites huneri Howe 1939, *La. Geol. Surv., Geol. Bull.* 14: 30.

HOLOTYPE: HVH 9, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 80,” (JH-96): “Glaucinitic, very fossiliferous marl containing zone of argillaceous limestone concretions up to 10 inches in diameter. Taken three feet below Sample No. 79 (JH-95 B). Elevation—182 feet.” Sample No. 80 was taken about 22 feet “below top of slope in well-exposed cut on the southeast side of intersection of State Highway 6 and Couley-St. Maurice road in the SE¼ NW¼ SE¼ NE¼ sec. 20, T. 10 N., R. 5 W.,” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 1, fig. 15.

COMMENTS: Sample JH-96 is described in Huner (1939, p. 90) as from a “[z]one of hard very fossiliferous limestone concretions with greensand.

Operculinoides sabinensis,” bed 11 of the section “in road cut along U.S. Highway 84 in the northwest corner of the SE¼ NE¼ sec 20, T. 10 N., R. 5 W., Winn Parish.” In Winn Parish, U.S. Highway 84 was formerly Louisiana Highway 6.

Ammobaculites mauricensis Howe 1939, *La. Geol. Surv., Geol. Bull.* 14: 30.

HOLOTYPE: HVH 8, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 39,” (Rob-5): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness. The lowest of these fossiliferous beds was at water level at the time collected.” Sample No. 39 is “from beneath the lowest iron ore ledge and collected at water level. Elevation—77± feet.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 5). Figured: pl. 1, figs. 13, 14.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

The specimen looks somewhat different from the figure (pl. 1, fig. 14) at the right edge.

Ammobaculites nummus Garrett 1938, *J. Paleontol.* 12: 314.

HOLOTYPE: HVH 1919, Oligocene, Hackberry assemblage, sticky shale overlying Vicksburg; “Magnolia Petroleum Company, no. 1, H.B. Funchess, Jr., Jefferson County, Tex. [Texas], from core at 7,752–7,754 feet.” Figured: pl. 40, figs. 1a, 1b.

PARATYPE: HVH 1920, same sample as holotype, one specimen, figured: pl. 40, fig. 2.

Ammobaculites subcatenulatus Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 32.

HOLOTYPE: HVH 6423, Holocene; Buras-Scofield Bayou Region, “center of pass between Bayou Auguste and English Bay,” south of Buras, Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2008, Warren Sample 6, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 3, fig. 11.

PARATYPES from same sample as holotype: HVH 6423a, one specimen, figured: pl. 3, figs. 12, 13. LSUGDM 472, 51 specimens, not figured.

COMMENTS: Warren (1956, p. 134) provides additional information for Sample 6: depth 1.5 feet; salinity 30.3 ppt; pH 8.4; temperature 76°F; bottom: soft mud; lat. 29°18'41" N, long. 89°33'37" W. Warren (1956) figures HVH 6423 (pl. 1, fig. 22) and HVH 6423a (pl. 1, figs. 23, 24) under the name *Ammobaculites* sp. B.

Ammomarginulina brevilingulata Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 50–51.

HOLOTYPE: HVH 3983, Miocene; "Harang wedge in cuttings at 8372–8402 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 7, 8.

COMMENTS: Smith (1948) lists this specimen as a monotype. The well location is shown in Figure 3 of Smith (1948, p. 35).

Ammomarginulina decorata Hussey 1949, *J. Paleontol.* 23: 118.

HOLOTYPE: HVH 2502, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 166," core at depth "1531," "gray silty shale with some greensand." Figured: pl. 25, figs. 1, 2.

Ammotium fragile Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 32–33.

HOLOTYPE: HVH 6424, Holocene; Buras-Scofield Bayou Region, "center of pass between Bayou Auguste and English Bay," south of Buras, Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2008, Warren Sample 6, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 3, fig. 14.

PARATYPES from same sample as holotype: HVH 6424a, one specimen, figured: pl. 3, fig. 15. LSUGDM 473, 31 specimens, not figured.

COMMENTS: Warren (1956, p. 134) provides additional information for Sample 6: depth 1.5 feet; salinity 30.3 ppt; pH 8.4; temperature 76°F; bottom: soft mud; lat. 29°18'41" N, long. 89°33'37" W. Warren (1956) figures HVH 6424 (pl. 1, fig. 10) and HVH 6424a (pl. 1, fig. 11) under the name *Ammotium* sp. A.

Ammotium multiloculatum Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 33.

HOLOTYPE: HVH 6425, Holocene; Buras-Scofield Bayou Region, "center of lagoon mouth at the northwest end of Bay Pomme d'Or," south of Buras, Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2008, Warren Sample 3, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 4, fig. 1.

PARATYPES from same sample as holotype: HVH 6425a,

one specimen, figured: pl. 4, fig. 2. LSUGDM 474, 23 specimens, not figured.

COMMENTS: Warren (1956, p. 133) provides additional information for Sample 3: depth 3.5 feet; salinity 28.6 ppt; pH 8.4; temperature 73°F; bottom: soft mud; lat. 29°20'10" N, long. 89°33'04" W. Warren (1956) figures HVH 6425 (pl. 1, fig. 13) and HVH 6425a (pl. 1, fig. 12) under the name *Ammotium* sp. B.

Ammotium palustre Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 33.

HOLOTYPE: HVH 6426, Holocene; Buras-Scofield Bayou Region, "wet marsh on northeast side of Crosscut Canal at Bay Pomme d'Or," Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2009, Warren Sample 5, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 3, fig. 8.

PARATYPES from same sample as holotype: HVH 6426a, one specimen, figured: pl. 3, figs. 9, 10. LSUGDM 413, one specimen. LSUGDM 475, 45 specimens, not figured.

COMMENTS: Warren (1956, p. 134) gives the latitude and longitude of the polyhaline marsh Sample 5 as 29° 19' 45" N, 89° 33' 42" W. Warren (1956) also figures HVH 6426 (pl. 1, fig. 16, 17) and LSUGDM 413 (pl. 1, fig. 18) under the name *Ammotium* sp. C.

Hayward et al. (2020) lists *Ammotium palustre* Warren among the synonyms of *Ammotium morenoi* (Acosta 1940).

Ammotium subdirectum Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 33.

HOLOTYPE: HVH 6427, Holocene; Buras-Scofield Bayou Region, "wet marsh on the northeast side of Crosscut Canal at Bay Pomme d'Or," Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2009, Warren Sample 5, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 4, fig. 8.

PARATYPES from same sample as holotype: HVH 6427a, one specimen, figured: pl. 4, figs. 6, 7. LSUGDM 416, one specimen. LSUGDM 476, 64 specimens, not figured.

COMMENTS: Warren (1956, p. 134) gives the latitude and longitude of the polyhaline marsh Sample 5 as 29° 19' 45" N, 89° 33' 42" W. Warren (1956) also figures HVH 6427 (pl. 1, figs. 20, 21) and LSUGDM 416 (pl. 1, fig. 19) under the name *Ammotium* sp. D.

Amphicoryna camacho Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 67–68.

HOLOTYPE: HVH 4321, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River,

Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 16, fig. 5.

PARATYPES from same sample as holotype: HVH 4322, one specimen, figured: pl. 16, fig. 4. LSUGDM 196, 11 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Amphicoryna roedereri Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 68–69.

HOLOTYPE: HVH 4319, Holocene; Location No. 37: “Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 16, fig. 3.

PARATYPES from same sample as holotype: HVH 4320, one specimen, figured: pl. 16, fig. 2. LSUGDM 197, eight specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Amphorina purii Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 79–80.

HOLOTYPE: HVH 4354, Holocene; Location No. 37: “Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 16, fig. 6.

PARATYPE: LSUGDM 217, same sample as holotype, one specimen, not figured.

COMMENTS: LSUGDM 217 is broken.

Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the

mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Accepted as *Procerolagena purii* (Andersen 1961) by Hayward et al. (2020).

Andersenium rumana Neagu 1968, *Contrib. Cush. Found. Foram. Res.* 19: 120–121.

HOLOTYPE: HVH 8099, Lower Cretaceous, Barremian; “outcrops near Ostrov, on the shores of Lake Gîrlîța,” “Southern Dobrogea, Rumania” [Romania]. Collected by Theodor Neagu. Figured: pl. 11, figs. 1–3.

PARATYPES: HVH 8100, same locality as holotype, 14 specimens, figured: pl. 11, figs. 4, 7–9; pl. 12, figs. 1–9.

COMMENTS: The holotype and paratype slides are labeled: “Shores of Lake Gîrlîța, 8 km ENE of Ostrov, southern Dobrogea region of Rumania.” See Text Figure 1 of Neagu (1968, p. 121) for a map of the locality and section. Neagu (1968, p. 120) states that the material examined was reef marl from “a level containing many pachiodonts.”

Angulogerina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 56.

HOLOTYPE: HVH 685, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 12, fig. 2.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravelle (table opposite p. 30); see “Danville Landing” in the U.S. Geological Survey (2020) Geologic Names Committee Archives.

The genus *Angulogerina* Cushman 1927 is considered a junior synonym of *Trifarina* Cushman 1923 (Hayward et al. 2020); *Angulogerina danvillensis* = *Trifarina danvillensis* (Howe and Wallace 1932).

Angulogerina inflata Hussey 1949, *J. Paleontol.* 23: 133.

HOLOTYPE: HVH 2574, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 136,” core at depth “1499,” “light gray-brown silty shale, lignitic.” Figured: pl. 27, fig. 2.

COMMENTS: The genus *Angulogerina* Cushman 1927 is considered a junior synonym of *Trifarina* Cushman 1923 (Hayward et al. 2020); *Angulogerina inflata* = *Trifarina inflata* (Hussey 1949).

Angulogerina mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 71–72.

HOLOTYPE: HVH 111, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 36,” (Rob-2): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 36 is “from beneath the next to the highest iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 8, figs. 27, 28.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

The genus *Angulogerina* Cushman 1927 is considered a junior synonym of *Trifarina* Cushman 1923 (Hayward et al. 2020); *Angulogerina mauricensis* = *Trifarina mauricensis* (Howe 1939).

Anomalina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 76.

HOLOTYPE: HVH 611, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 14, figs. 2a–2c.

COMMENTS: On p. 76, Howe and Wallace (1932) only mention plate 14, figures 2a and 2b; however, the slide label confirms that figure 2c is also the holotype. In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Anomalina nodosa Hussey 1943, *J. Paleontol.* 17: 166–167.

HOLOTYPE: HVH 2596, Eocene, Cane River Fm.; “from sample 151,” “Louisiana Oil and Ref. Co., Tremont No. 1, 115 feet south and 150 feet east of northwest cor. NW¼ NE¼ sec. 30, T. 10 N., R. 2 E., La Salle Parish,” Louisiana; “core samples ranging in depth from 1500 feet to 1566 feet.” Figured: pl. 26, figs. 9, 10.

COMMENTS: Hussey (1949, p. 115) describes sample 151 from core at depth 1511 feet as “light gray shale and glauconite.”

Arcanispira bacata Poag 1966, *Micropaleontology* 12: 413–414.

HOLOTYPE: HVH 7692, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 13, 4.5 ft. above base of Paynes Hammock Formation” taken in a gray-buff, calcareous, hard sand bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 6, figs. 4–6.

PARATYPES from same sample as holotype: HVH 7693, one specimen, figured: pl. 6, fig. 7. LSUGDM 974, six specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Accepted as *Reichelinaella bacata* (Poag 1966) by Hayward et al. (2020).

Arcanispira depressa Poag 1966, *Contrib. Cush. Found. Foram. Res.* 17: 140–141.

HOLOTYPE: HVH 8392, Miocene, Chipola Formation; “type locality of the Chipola Formation” “from the bank of Ten Mile Creek [Tenmile Creek], under the bridge on the Marianna-Clarkville [Clarksville] road (State Highway 73), 2376 feet S. of N.W. cor. Sec. 12, T. 1 N., R. 10 W., 22 miles south of Marianna, Calhoun County, Florida.” Collected by Alan H. Cheetham and H.V. Andersen. Figured: pl. 11, figs. 1–3.

PARATYPES from same sample as holotype: HVH 8393, one specimen, figured: pl. 11, fig. 4. LSUGDM 984, nine specimens, not figured.

COMMENTS: Accepted as *Reichelinaella depressa* (Poag 1966) by Hayward et al. (2020).

Astacolus complanatus Hussey 1949, *J. Paleontol.* 23: 125.

HOLOTYPE: HVH 2545, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115’ South and 150’ East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 162,” core at depth “1526’,” “gray silty shale with some greensand.” Figured: pl. 26, fig. 17.

Asterigerina hadleyi Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 79–80.

HOLOTYPE: HVH 2029, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 37,” (Rob-3): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 37 is “from beneath the middle iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 10, figs. 13, 14.

PARATYPE: HVH 2029a, same sample as holotype, one specimen, not figured.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Asterigerinata frondiculata Poag 1966, *Micropaleontology* 12: 412–413.

HOLOTYPE: HVH 7689, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 13, 4.5 ft. above base of Paynes Hammock Formation” taken in a gray-buff, calcareous, hard sand bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 5, figs. 31–33.

PARATYPES: LSUGDM 973, from same sample as holotype, seven specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Astrononion velaticameratus Poag 1966, *Micropaleontology* 12: 428.

HOLOTYPE: HVH 7729, [Oligocene], Paynes Hammock Fm.; “Loc. CX, sample 9, 0.2 feet above base of Paynes Hammock Formation” taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaniptedi*, in a section “approximately 200 yards south of the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 8, figs. 39, 40.

PARATYPES: LSUGDM 981, from same sample as holotype, two specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Baggatella inconspicua Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 79.

HOLOTYPE: HVH 132, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 55,” (JH-50): “Greenish-gray calcareous, glauconitic clay overlain on the surface by many fossiliferous clay ironstone concretions. Taken from drill hole two feet deep in ditch on west side of State Highway 480, about half a mile south of Calvin, in the NE¼ NW¼ NE¼ sec. 9, T. 11 N., R. 4 W. Elevation—163 feet.” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 9, figs. 15, 16.

Baggina xenoula Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 192–193 (6–7).

HOLOTYPE: HVH 773, Tertiary; “from the west bank of Bucatunna Creek, NW¼ sect. 17, T. 8 [N.], R. 5 W., Wayne County, Mississippi.” Specimen is from material in the collection of Henry V. Howe; the collector’s name is not given. Figured: pl. 14 (pl. 1), figs. 5a, 5c.

COMMENTS: The holotype’s catalog card states that the published locality is incorrect; according to the card, the correct locality is “Rocky Branch [tributary] of Bucatunna Creek, 200’ NE of SW cor. of Sec. 8, T. 8 N., R. 5 W., Wayne County, Miss.,” Paynes Hammock Fm., Roy Hazzard’s Locality B-3. The source of this information is unknown. Both the published and “corrected” localities match material in the museum’s microfossil samples collection:

Howe Loc. 121 is a Byram marl, Oligocene sample collected by Henry Howe in 1934 in the company of B.W. Blanpied, from the north line of sec. 17, T. 8 N., R. 5 W., on Bucatunna Creek, south of the mouth of Rocky Branch; Howe’s sample label describes it as “a shell marl below the Chickasawhay limestone.”

Howe Loc. 100 (CRB-3) is a sample collected by Howe in 1934 in the company of B.W. Blanpied at Roy Hazzard’s Locality B-3, approximately located 200 feet northeast of the SW corner of section 8, T. 8 N., R. 5 W., in the bed of Rocky Branch. According to Howe’s label, “this sample CRB-3, elevation 184’, is a bluish marl 100 feet west of fence.” The guidebook of the Shreveport Geological Society (1934, p. 49) lists the Rocky Branch Locality CRB-3 as upper Chickasawhay [=Paynes Hammock Formation].

Biapertorbis anderseni Poag 1966, *Micropaleontology* 12: 409.

HOLOTYPE: HVH 7671, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 13, 4.5 ft. above base of Paynes

Hammock Formation" taken in a gray-buff, calcareous, hard sand bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 4, figs. 18–20.

PARATYPES: LSUGDM 966, from same sample as holotype, nine specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Bifarina tombigbeensis Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 194 (8).

HOLOTYPE: HVH 775, Tertiary; "Wood's Bluff, Alabama." Specimen is from material in the collection of Henry V. Howe; the collector's name is not given. Figured: pl. 14 (pl. 1), fig. 7b.

PARATYPE: HVH 775a, same sample as holotype, one specimen, figured: pl. 14 (pl. 1), fig. 7a.

COMMENTS: Hadley (1935) does not designate paratypes in his publication. The specimen illustrated in figure 7a was originally mounted on the same slide as the holotype. As part of the type series, this figured specimen is, by ICZN definition, a paratype.

The material used by Hadley may have been from Howe Loc. 44A, a sample collected by Henry Howe in December 1923 from the Bashi marl at Woods Bluff, on the Tombigbee River, Clarke County, Alabama, from a fossiliferous exposure near water level when the river was low.

Bifarina turriiformis Hussey 1943, *J. Paleontol.* 17: 166.

HOLOTYPE: HVH 2606, Eocene, Cane River Fm.; "from sample 137," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW¼ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; "core samples ranging in depth from 1468 feet to 1555 feet." Figured: pl. 26, fig. 2.

COMMENTS: Hussey's (1949, p. 115) locality differs slightly from his 1943 paper: "312' 5" East" vs. "312 feet east." Sample 137, core at depth 1503–1509 feet, is described by Hussey (1949, p. 115) as "light gray silty shale and greensand."

Bifarina vicksburgensis (Cushman) var. ***monsouri*** Garrett 1939, *J. Paleontol.* 13: 577.

HOLOTYPE: HVH 1947, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," "from core at 5,647–5,651 feet." Figured: pl. 65, fig. 14.

Biloculinella toddae Andersen 1961, *La. Geol. Surv., Geol. Bull.* 35 (Pt. 2): 41–42.

HOLOTYPE: HVH 4283, Holocene; Location No. 37:

"Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 9, figs. 6a, 6b.

PARATYPES: LSUGDM 149, same sample as holotype, 24 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Accepted as *Nummulopyrgo toddae* (Andersen 1961) by Hayward et al. (2020).

Bisaccium imbricatum Andersen 1951, *J. Paleontol.* 25: 32–34.

HOLOTYPE: HVH 4201, Holocene; "beach sand collected on the east side of South West Pass" of the Mississippi River, "approximately one mile south of Burrwood, [Plaquemines Parish,] Louisiana." [Accepted spelling is Southwest Pass.] Collected by Harold N. Fisk in 1948. Figured: text-figs. 2a, 2b.

PARATYPES from same sample as holotype: HVH 4202, one specimen, figured: text-figs. 2c, 2d. HVH 4203, three specimens, chitinous residue of paratype, figured: text-fig. 2e. HVH 4204, one specimen, not figured. LSUGDM 691, 40 specimens, not figured.

COMMENTS: Andersen (1961, p. 197, Loc. 5) gives the coordinates of the sample as Lat. 28°56'52" N, Long. 89°24'40" W. Andersen (1951, p. 34) emphasizes the fragility of the test. The holotype slide and paratype slide 4202 each have a warning against moving the specimen.

Bitubulogenerina chickasawhayica Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 190–191 (4–5).

HOLOTYPE: HVH 772, [Oligocene], Lower Chickasawhay; "Approximate location is NW corner of SWNE of section 24, 9 N, 7 W, 4/10 of a mile SE of road intersection with highway No. 45," Wayne County, Mississippi. Collected by Henry V. Howe. Figured: pl. 14 (pl. 1), fig. 3.

COMMENTS: The holotype is from the Limestone Creek Church locality (Loc. CC) of the Shreveport Geological Society's (1934, p. 40) guidebook. In 1934 at this location, Henry V. Howe collected two samples from the Lower Chickasawhay Member (elevations 279 feet and 269 feet); Hadley does not specify the elevation of the holotype's sample. Although Hadley

(1935) reports the age as Miocene, the U.S. Geological Survey (2019) considers the "Lower Chicksawhay" to be Oligocene.

Bitubulogenerina ellisi Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 69.

HOLOTYPE: HVH 117, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 86," (JH-111): "Very fossiliferous, slightly glauconitic marl 12 feet thick. Taken five feet below top of slope leading down to creek branch, and in upper two feet of marl, in ditch on south side of improved road in the NE¼ SW¼ SW¼ sec. 28, T. 13 N., R. 3 W. ... Elevation—179 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., in 1936. Figured: pl. 8, fig. 36, 37.

COMMENTS: Huner's (1939, p. 95) section description places his sample JH-111 in the Milams Member of the Cook Mountain Formation. The improved road is the lower Dodson road according to Howe Loc. 273A (JH-111).

Bitubulogenerina hiwanneensis Howe 1934, *J. Paleontol.* 8: 421.

HOLOTYPE: HVH 753, Oligocene, Red Bluff Fm. "Hiwannee, [Wayne County,] Mississippi." Collector not listed. Figured: pl. 51, figs. 2a, 2b.

COMMENTS: Henry V. Howe and Karl E. Young, together and separately, collected microfossil material from the Red Bluff Fm. at the Hiwannee locality in the late 1920s and early 1930s.

Bitubulogenerina mauricensis Howe 1934, *J. Paleontol.* 8: 421.

HOLOTYPE: HVH 751, Eocene, Claiborne; "St. Maurice, [Winn Parish,] Louisiana." Collector not listed. Figured: pl. 51, figs. 6a, 6b.

COMMENTS: The earliest microfossil collecting dates at the St. Maurice locality in the LSUMNS include material collected by Henry Howe about 1926 from the middle of the exposure under the railroad bridge over Saline Bayou, and the samples collected in 1932 by Marion Roberts and Howe from below each of five ironstone ledges beneath the bridge.

Bitubulogenerina montgomeryensis Howe 1934, *J. Paleontol.* 8: 421.

HOLOTYPE: HVH 752, Eocene, basal Jackson; "Montgomery, [Grant Parish,] Louisiana." Collector not listed. Figured: pl. 51, fig. 9a, 9b.

Bitubulogenerina vicksburgensis Howe 1934, *J. Paleontol.* 8: 420–421.

HOLOTYPE: HVH 750, Oligocene; "from the top of the limestone bed which causes the waterfalls of Mint Spring Bayou, Vicksburg, [Warren County,] Mississippi." Collector not listed. Figured: pl. 51, figs. 7a, 7b.

COMMENTS: The bed sampled is the Glendon limestone.

Bolivina broussardi Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 65–66.

HOLOTYPE: HVH 127, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 9, figs. 7, 8.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Bolivina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 56–57.

HOLOTYPE: HVH 704, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 11, figs. 8a, 8b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Bolivina gladius Garrett 1942, *J. Paleontol.* 16: 462.

HOLOTYPE: HVH 2406, Miocene; "Stanolind Oil and Gas Company wells in the High Island field, Galveston County, Texas. This field is located near the eastern end of Bolivar Peninsula, in the most eastern extremity of Galveston County, and lies almost in the Gulf of Mexico"; specimen "from no. A-15 Smith, core at 6,169–6,175 feet." Figured: pl. 70, figs. 8a, 8b.

Bolivina gracilis Cushman and Applin var. ***danvillensis*** Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 57–58.

HOLOTYPE: HVH 651, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 11, fig. 7.

COMMENTS: Howe and Wallace (1932, p. 57) state that this species occurs “frequently at both horizons,” but they do not specify the type horizon. The holotype slide has the label “upper bed.” In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Bolivina gracilis Cushman and Applin var. *danvillensis* Howe and Wallace 1932 is a junior homonym of *Bolivina danvillensis* Howe and Wallace 1932. Cushman (1946, p. 26) proposed the new name *Bolivina gracilis* var. *incisurata* Cushman 1946.

Bolivina huneri Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 66.

HOLOTYPE: HVH 125, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 86,” (JH-111): “Very fossiliferous, slightly glauconitic marl 12 feet thick. Taken five feet below top of slope leading down to creek branch, and in upper two feet of marl, in ditch on south side of improved road in the NE¼ SW¼ SW¼ sec. 28, T. 13 N., R. 3 W. ... Elevation—179 feet.” Winn Parish, Louisiana. Collected by John Huner, Jr., in 1936. Figured: pl. 9, figs. 3, 4.

COMMENTS: Huner’s (1939, p. 95) section description places his sample JH-111 in the Milams Member of the Cook Mountain Formation. The improved road is the lower Dodson road according to Howe Loc. 273A (JH-111).

Bolivina louisiana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 66.

HOLOTYPE: HVH 135, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 38,” (Rob-4): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 38 is “from beneath the next to the lowest iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4).

Figured: pl. 9, fig. 20, 21.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Bolivina mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 66–67.

HOLOTYPE: HVH 126, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 36,” (Rob-2): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 36 is “from beneath the next to the highest iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 9, figs. 5, 6.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Bolivina ouachitaensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 59.

HOLOTYPE: HVH 726, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 3, “[f]ossiliferous blue clay, weathering dark brown to yellow. The shells are scattered through the whole mass and occasionally occur in thin beds with light brown sand”; “lower bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 11, figs. 9a, 9b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Lower Danville of Howe and Wallace” (bed 3) as 25 to 50 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table

opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Bolivina perca Garrett 1938, *J. Paleontol.* 12: 315.

HOLOTYPE: HVH 1926, middle Tertiary, *Marginulina idiomorpha* zone; "Magnolia Petroleum Company, no. 1, H.B. Funchess, Jr., Jefferson County, Tex. [Texas], from core at 6,420–6,422 feet." Figured: pl. 40, figs. 8a–8c.

PARATYPES from same sample as holotype: HVH 1927, one specimen, figured: pl. 40, fig. 9. HVH 1928, one specimen, figured: pl. 40, fig. 10.

Bolivina striata Hussey 1949, *J. Paleontol.* 23: 134.

HOLOTYPE: HVH 2569, Eocene, Cane River Fm.; "from Sample No. Ru-503-B-186," "type locality of Cane River formation, ½ mile [north] of Natchitoches," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 27, figs. 18, 19.

COMMENTS: The new name *Bolivina rukasi* Hussey 1950, replaces *Bolivina striata* Hussey 1949, a homonym of *Bolivina* (*Bifarina*) *hungarica* var. *striata* (Vadász 1911); see Thalmann (1950b, p. 42) and Ellis and Messina (1940 et seq.).

Bolivina stuckeyi Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 67.

HOLOTYPE: HVH 134, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 9, figs. 18, 19.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Bolivina taylori Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 67.

HOLOTYPE: HVH 128, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 39," (Rob-5): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6

W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness. The lowest of these fossiliferous beds was at water level at the time collected." Sample No. 39 is "from beneath the lowest iron ore ledge and collected at water level. Elevation—77± feet." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 5). Figured: pl. 9, figs. 9, 10.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Bolivina thomsoni Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 68.

HOLOTYPE: HVH 133, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 61," (JH-62): "Calcareous fossiliferous clay containing lenses and stringers of glauconite. Taken in ditch 18 inches above base of slope leading down to Couley Creek along dirt road in the SE¼ NE¼ NE¼ NE¼ sec. 22, T. 10 N., R. 5 W. Elevation—125 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., on July 13, 1936. Figured: pl. 9, fig. 17.

COMMENTS: According to Howe Loc. 272, Huner collected his sample JH-62 along Emergency Conservation Work (E.C.W.) Road 21 on a slope leading down to Couley Creek, in a ditch on the northeast side of the road, SE¼, NE¼, NE¼ sec 22, T. 10 N., R. 5 W.

Bolivina westi Garrett 1942, *J. Paleontol.* 16: 462.

HOLOTYPE: HVH 2407, Miocene; "Stanolind Oil and Gas Company wells in the High Island field, Galveston County, Texas. This field is located near the eastern end of Bolivar Peninsula, in the most eastern extremity of Galveston County, and lies almost in the Gulf of Mexico"; specimen "from no. A-15 Smith, core at 5,632–5,638 feet." Figured: pl. 70, figs. 6a, 6b.

Bolivinita concavomoenia Poag 1966, *Micropaleontology* 12: 406.

HOLOTYPE: HVH 7655, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation" taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaspiedi*, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on

the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 3, figs. 38, 39.

PARATYPES: LSUGDM 963, from same sample as holotype, two specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Brizalina solicarina Poag 1966, *Micropaleontology* 12: 407.

HOLOTYPE: HVH 7659, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 11, 3.5 ft. above base of Paynes Hammock Formation" taken in a dark blue sand and clay bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 3, figs. 46, 47.

PARATYPE: LSUGDM 964, Loc. CX, sample 11, from 2.6 feet above the base of the Paynes Hammock Formation, taken in an olive-green, arenaceous clay bed, in a section about 200 yards south of the bridge on Waynesboro-Laurel road (U.S. Hwy 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi. Collected by C. Wylie Poag; one specimen, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Brizalina Costa 1856 is considered a synonym of *Bolivina* d'Orbigny 1839 (Hayward et al. 2020); *Brizalina solicarina* = *Bolivina solicarina* (Poag 1966).

Buccella binodojuga Poag 1966, *Micropaleontology* 12: 409.

HOLOTYPE: HVH 7673, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation" taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaniptedi*, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 4, figs. 24–26.

PARATYPES: LSUGDM 967, Loc. S19, sample 14, from 7 feet above the base of the Paynes Hammock Formation, taken in a blue-green, calcareous, sand bed; seven specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Bulimina mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.*

14: 62–63.

HOLOTYPE: HVH 113, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 8, figs. 29, 30.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Bulimina (?) petalifera Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 63.

HOLOTYPE: HVH 136, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 36," (Rob-2): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 36 is "from beneath the next to the highest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 9, figs. 22, 23.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Bulimina robertsi Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 63.

HOLOTYPE: HVH 115, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 36," (Rob-2): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6

W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 36 is "from beneath the next to the highest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 8, figs. 32, 33.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Bulimina rotunda Hussey 1949, *J. Paleontol.* 23: 131.

HOLOTYPE: HVH 2565, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 137," core at depth "1503'–1509'," "light gray silty shale and greensand." Figured: pl. 27, fig. 24.

Bulimina winniana Howe 1939, *La. Geol. Surv., Geol. Bull.* 14: 64.

HOLOTYPE: HVH 114, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 8, fig. 31.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Buliminella basistriata Cushman and Jarvis var. *nuda* Howe and Wallace 1932, *La. Dept. Conserv. Geol. Bull.* 2: 60.

HOLOTYPE: HVH 695, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 11, fig. 4.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Buliminella faciata Poag 1966, *Micropaleontology* 12: 406.

HOLOTYPE: HVH 7653, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation" taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaniptedi*, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 3, figs. 33, 34.

PARATYPES: LSUGDM 961, from same sample as holotype, three specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Buliminella morgani Andersen 1961, *La. Geol. Surv., Geol. Bull.* 35 (Pt. 2): 87.

HOLOTYPE: HVH 4392, Holocene; Location No. 35: "Lat. 28°58'29.5" N, Long. 89°08'45" W; South Pass mudlump No. 1, surface sample." "[B]luish-black clay" "collected on the eastern edge of SP-1," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 16, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 19, fig. 10.

PARATYPES: LSUGDM 232, same sample as holotype, 41 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality mudlump SP-1 as "1200 feet southeast of a sand spit, Lower Mississippi River Delta." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Accepted as *Eubuliminella morgani* (Andersen 1961) by Hayward et al. (2020).

Cancris claibornensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 78–79.

HOLOTYPE: HVH 2032, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 49,” (JH-36): “Light-gray glauconitic, calcareous clay. Taken 42 feet below top of cut. ... Elevation—164 feet.” “Taken in a run-off ditch ... on the northwest side of State Highway 6, in the northwest corner of the SE¼ SE¼ NE¼ sec. 16, T. 10 N., R. 5 W.,” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 10, figs. 20, 21.

COMMENTS: The highway in Winn Parish referred to by Howe (1939, p. 11) as State Highway 6 is today U.S. Highway 84. According to the label of Howe Loc. 278, sample JH-36 was collected at elevation 165 feet.

Cancris danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 67–68.

HOLOTYPE: HVH 602, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 13, fig. 5.

PARATYPE: HVH 602B, same sample as holotype; one specimen, figured: pl. 13, figs. 4a, 4b (smaller 602B).

COMMENTS: Specimen 602A, the larger, “adult” of Howe and Wallace (1932, p. 106, pl. 13, fig. 5) and 602B, the smaller specimen (pl. 13, figs. 4a, 4b), were originally mounted on the same cotype slide. Cotype HVH 602A = holotype HVH 602.

In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Cassidulina brocha Poag 1966, *Micropaleontology* 12: 426.

HOLOTYPE: HVH 7727, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation” taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaniptedi*, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 8, figs. 33–35.

PARATYPES: LSUGDM 980, from same sample as holotype, ten specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower

Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Accepted as *Globocassidulina brocha* (Poag 1966) by Hayward et al. (2020).

Cassidulina parva Hussey 1949, *J. Paleontol.* 23: 140.

HOLOTYPE: HVH 2593, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 118,” core at depth “1482’,” “gray-brown shale and greensand.” Figured: pl. 28, figs. 4, 5.

COMMENTS: The new name *Cassidulina inconspicua* Hussey 1949, replaces *Cassidulina parva* Hussey 1949, a homonym of *Cassidulina subglobosa* var. *parva* Asano and Nakamura 1937; see Thalmann (1949, p. 101).

Cassidulina rotulita Poag 1966, *Micropaleontology* 12: 426, 428.

HOLOTYPE: HVH 7728, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 12, 3.8 ft. above base of Paynes Hammock Formation” taken in an orange, coarse-grained sand bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 8, figs. 36–38.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Cassidulina winniana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 82–83.

HOLOTYPE: HVH 2040, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 41,” (JH-20): “Calcareous, glauconitic, fossiliferous clay, exposed about three feet below top of cut. ... Elevation—215 feet.” Taken “from cut well exposed on the east side of State Highway 5, just north of Dodson, 0.1 mile north of south line of sec. 22, T. 13 N., R. 3 W.,” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 11, figs. 7, 8.

COMMENTS: The highway referred to as State Highway 5 by Howe (1939, p. 10) is U.S. Highway 167. Huner (1939, p. 106) describes his section in a “road cut along U.S. Highway 167 just north of Dodson”; his sample JH-20 is listed as from the Little Natches Member of the Cook Mountain Formation.

The holotype is very small and has some damage. Although sometimes confused with *Cassigerinella eocaenica*, Huber et al. (2006, p. 484, 486) show that the holotype of *C. winniana* Howe 1939 is a benthic foraminifer referable to genus *Cassidulina*.

Cassidulina woodsi Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 64.

HOLOTYPE: HVH 4002A, Miocene; "Harang wedge in cuttings at 8341–8371 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, figs. 13–15.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35). The catalog number HVH 4002 was inadvertently assigned to two different specimens in the collection when two authors were granted blocks of numbers that overlapped. A suffix has been added to the originally published number 4002 to give this specimen a unique identifier: HVH 4002A.

Chrysalidinella popei Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 96.

HOLOTYPE: HVH 4421, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 19, figs. 9a, 9b.

PARATYPES: LSUGDM 256, same sample as holotype, four specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Cibicides danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 77–78.

HOLOTYPE: HVH 608, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 14, figs. 5a–5c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Cibicides discorbisiformis Hussey 1949, *J. Paleontol.* 23: 142.

HOLOTYPE: HVH 2601, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 169," core at depth "1534½'," "mostly greensand, 'salt and pepper' sand." Figured: pl. 27, figs. 22, 23.

Cibicides glabratus Hussey 1949, *J. Paleontol.* 23: 142.

HOLOTYPE: HVH 2597, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 174," core at depth "1544'," "'salt and pepper' sand and silty shale." Figured: pl. 29, figs. 10, 11.

Cibicides hazzardi Ellis 1939, *J. Paleontol.* 13: 424.

HOLOTYPE: HVH 1895, [Oligocene, Paynes Hammock Fm.], "upper Chickasawhay"; "from the south bank of Chickasawhay River above the highway bridge 2½ miles south of Waynesboro," Wayne County, Mississippi, "from material immediately above the bed containing *Ostrea blaspiedi*." Locality CW of the Shreveport Geological Society's (1934, p. 48) guidebook; collected by Henry V. Howe in June 1934. Figured: pl. 48, figs. 8a–8c.

PARATYPE: HVH 1896, same sample as holotype, one specimen, figured: pl. 48, fig. 9.

COMMENTS: "Paynes Hammock" is the name later applied to the "upper Chicksawhay" of the 1934 Shreveport Geological Society's guidebook (MacNeil 1944). Ellis (1939, p. 423) states that geologists' opinions differed over whether the Chickasawhay beds were either Miocene or Oligocene. The U.S. Geological Survey (2019) considers the Paynes Hammock Formation to be upper Oligocene.

The Shreveport Geological Society's (1934, p. 48 and map) guidebook places the collecting locality at the NE corner of NW¼, NW¼ section 25, T. 8 N., R. 7 W. Although the bridge has been moved slightly upstream since 1934, the Waynesboro, MS, USGS topographic quadrangle map (U.S. Geological Survey 1982), shows that the bend in the river where samples were collected is in SW section 24. Howe's sample (Howe Loc. 85; Loc. CW-2 of the 1934 guidebook) was collected from "elevation 127–128 feet and is a sandy claystone with echinoid fragments and spines"; it was taken 0.2 mile west (upstream) of the south end of the bridge in 1934.

Cibicides hilgardi Garrett 1941, *J. Paleontol.* 15: 155–156.

SYNTYPES: HVH 1974, Eocene, Tallahatta Fm.; "Sample no. 108-D.—Taken at Hatchetigbee Bluff" on Tombigbee River, Washington County, Alabama,

“from the same bed as sample no. 106-C, but lying 100 yards down-stream”; “[g]reensand marl at base of the Tallahatta formation.” Collected by Julius B. Garrett with C.F. Washburn; one specimen, figured: pl. 26, figs. 13a–13c.

HVH 1975, Eocene, Tallahatta Fm.; “from core at 2708–2735 feet from South Mississippi Petroleum Company no. 1 Pearlie Morris, Lamar County,” Mississippi. “Light greenish gray, glauconitic marl, basal Tallahatta in age.” One specimen, figured: pl. 26, figs. 14a, 14b.

Cibicides hypoconoides Hussey 1943, *J. Paleontol.* 17: 167.

HOLOTYPE: HVH 2598, Eocene, Cane River Fm.; “from sample Ru. 518-J,” “Natchitoches Parish, Louisiana,” “NW¼, NE¼, NE¼ Sec. 6, T. ? N., R. 6 W., in center of negro settlement, 40-foot hole extending from 12 feet above *D. advena* zone to 8 feet below it.” Sample 207 of Hussey (1943) collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 26, figs. 6–8.

COMMENTS: *D. advena* zone = *Discocyclus advena* zone. Hussey (1943) published a question mark for the township number. Grover Murray, in a 1959 personal communication with Ellis and Messina (1952 et seq., entry for *Brachycythere bernardi* Murray and Hussey), describes Rukas locality 518 as a “hand dug well at Chestnut, in the NW¼, NE¼ sec. 6, T. 12 N., R. 6 W., Natchitoches Parish.”

Cibicides jeffersonensis Garrett 1939, *J. Paleontol.* 13: 579.

HOLOTYPE: HVH 1960, middle Tertiary, *Discorbis* zone; “Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas,” “from core at 5,727–5,732 feet.” Figured: pl. 66, figs. 10a–c.

Cibicides lawi Howe 1939, *La. Geol. Surv., Geol. Bull.* 14: 87.

HOLOTYPE: HVH 2058, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 89,” (JH-117): “Glauconitic marl occurring between two zones of argillaceous fossiliferous limestone concretions approximately three feet apart. Taken in ditch on north side of State Highway 547, 1.6 miles by road north and east of Gansville. This location is just over the line in Jackson Parish,” Louisiana. “Elevation—117 feet.” Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 13, figs. 12–14.

PARATYPE: HVH 2058a, same sample as holotype, one specimen, not figured.

Cibicides mammiformis Hussey 1949, *J. Paleontol.* 23: 142.

HOLOTYPE: HVH 2599, Eocene, Cane River Fm.; “from Sample No. Ru. 226-190,” “about 0.6 miles west of Provencal on north side of tracks of T. & P. RR., NW¼ SW¼ SE¼ of sec. 20, T. 8 M. [sic], R. 8 W., *D. advena* zone,” “Natchitoches Parish, Louisiana.” Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 29, figs. 16, 17.

COMMENTS: “T. & P. RR.” = Texas and Pacific Railroad. “*D. advena* zone” = *Discocyclus advena* zone. “T. 8 M.” = T. 8 N. In the explanation of pl. 29, figs. 16, 17, the holotype slide is erroneously referred to as slide no. 2590, and the locality is mistakenly referred to as sample no. 10.

Cibicides mauricensis Howe and Roberts in Howe 1939, *La. Geol. Surv., Geol. Bull.* 14: 87–88.

HOLOTYPE: HVH 2055, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 37,” (Rob-3): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 37 is “from beneath the middle iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 13, figs. 4, 5.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Accepted as *Cibicidina mauricensis* (Howe and Roberts 1939) by Hayward et al. (2020).

Cibicides mcguirti Hussey 1949, *J. Paleontol.* 23: 143.

HOLOTYPE: HVH 2602, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 175,” core at depth “1545',” “salt and pepper” sand and silty shale.” Figured: pl. 29, figs. 12, 15.

Cibicides molacis Poag 1966, *Micropaleontology* 12: 418.

HOLOTYPE: HVH 7718, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation” taken in a blue-green, argillaceous, loose sand bed with *Ostrea blanda*, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 8, figs. 13–15.

PARATYPES: LSUGDM 977, from same sample as holotype, 12 specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Cibicides moreyi Garrett 1939, *J. Paleontol.* 13: 579.

HOLOTYPE: HVH 1961, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," "from core at 5,403–5,406 feet." Figured: pl. 66, figs. 9a–9c.

Cibicides ouachitaensis Howe and Wallace 1932, *La. Dept. Conserv., Geol. Bull.* 2: 78.

HOLOTYPE: HVH 709, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 14, fig. 6a–6c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Cibicides steini Garrett 1942, *J. Paleontol.* 16: 463.

HOLOTYPE: HVH 2408, Miocene; "Stanolind Oil and Gas Company wells in the High Island field, Galveston County, Texas. This field is located near the eastern end of Bolivar Peninsula, in the most eastern extremity of Galveston County, and lies almost in the Gulf of Mexico"; specimen "from no. A-15 Smith, core at 6,169–6,176 feet." Figured: pl. 70, figs. 5a–5c.

COMMENTS: The text states that the specimen came from the core at 6,169–6,176 feet; the slide label says "core 6,169–6,175 feet."

Cibicides submammiformis Hussey 1949, *J. Paleontol.* 23: 143.

HOLOTYPE: HVH 2603, Eocene, Cane River Fm.; "from Sample No. Ru. 510-D-185," "Ru. 510, SE ¼ SE ¼, NW ¼ of sec. 8, T. 8 N., R. 8 W.," "Natchitoches Parish, Louisiana." Ru. 510-D collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 29, figs. 20, 21.

Cibicides umbilicatus Hussey 1949, *J. Paleontol.* 23: 142.

HOLOTYPE: HVH 2600, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 174," core at depth "1544'," "salt and pepper" sand and silty shale." Figured: pl. 29, figs.

18, 19.

COMMENTS: According to Thalmann (1949, p. 101), Hussey proposed the new name *Cibicides rhsmithi* to replace *Cibicides umbilicatus* Hussey 1949, a homonym of *Cibicides umbilicata* Brotzen 1948.

Cibicides westi Howe 1939, *La. Geol. Surv., Geol. Bull.* 14: 88.

HOLOTYPE: HVH 2061, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 2," (JBG-19): "A bluff on the left bank of Sabine River, at Goodwin's shoal, behind the house of Mr. S.J. Speight, near the southwest corner of sec. 31, T. 5 N., R. 12 W.," Sabine Parish, Louisiana. "The locality is near the old site of Columbus and may be reached by taking an old wagon road 100 yards north of Mr. Speight's house. This road leads in about 300 yards to the river bank. The locality is a low bluff, by the shoals, about 300 yards downstream, and exposes about eight feet of section from water level up. The section exposed is a marl with a one-foot compact lime bed near the middle. ... The shoals are produced by slumping and the stratigraphic relations are greatly confused." Sample No. 2 is "from 0–1 foot above limestone ledge." Collected by Julius B. Garrett in summer 1932. Figured: pl. 13, figs. 20–22.

COMMENTS: Garrett collected from the Milams Member of the Cook Mountain Formation (Andersen 1960, p. 90). Toledo Bend Reservoir later covered the sample location; construction of the lake began in 1964. An alternate spelling, "Godwin Shoals," is used on the labels of H.V. Howe's samples from this locality.

Cibicides williamsoni Garrett 1941, *J. Paleontol.* 15: 156.

HOLOTYPE: HVH 1976, [Paleocene], Nanafalia Fm.; "Sample no. 102-B.—Sandy, glauconitic, fossiliferous marl in roadcut on the Camden-Fatama road, lying 4.1 miles southeast of the courthouse at Camden, Wilcox County, Ala. [Alabama]. This locality is Nanafalia in age, and lies in the Grampian Hills. Sample taken about five feet below top of exposure." Collected by Julius B. Garrett with C.F. Washburn. Figured: pl. 26, figs. 15a–15c.

PARATYPES: HVH 1997, same sample as holotype, four specimens, not figured.

Cribrogenerina parkerae Andersen 1961, *La. Geol. Surv., Geol. Bull.* 35 (Pt. 2): 26–27.

HOLOTYPE: HVH 4232, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[l]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 2, figs. 11a, 11b.

PARATYPES from same sample as holotype: HVH 4231, one specimen, figured: pl. 2, figs. 10a, 10b. LSUGDM

115, 31 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58′16.4″ N., Long. 89°08′34.4″ W.)” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Cribroturretoidea miocenica Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 56–57.

HOLOTYPE: HVH 3990, Miocene; “Harang wedge in cuttings at 8217–8247 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., [No. 17], Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, fig. 1.

PARATYPE: HVH 3991, same sample as holotype, one specimen, figured: pl. 12, figs. 2, 3.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Ellis and Messina (1940 et seq.) state that both figures 1 and 2 are the holotype; however, examination of the specimens reveals that figure 2 is the paratype.

Cyclammina caneriverensis Hussey 1943, *J. Paleontol.* 17: 160–161.

HOLOTYPE: HVH 2500, Eocene, Cane River Fm.; “from sample Ru 468” [Hussey Sample 187], “from a hand dug well 42 feet deep at Limekiln Church, NW¼ sec. 85, T. 9 N., R. 7 W., greensand marl section,” “Natchitoches Parish, Louisiana.” Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 26, fig. 12.

PARATYPE: HVH 2501, from same sample as holotype, one specimen, not figured.

COMMENTS: The locality of the paratype is not given in Hussey (1943). The slide label for HVH 2501 lists the locality as Rukas sample Ru 468.

Cyclammina evolvinatus Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 51–52.

HOLOTYPE: HVH 3984, Miocene; “Harang wedge in cuttings at 8247–8278 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 5–6.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Cyclammina hemiammonitiformis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 52.

HOLOTYPE: HVH 3985, Miocene; “Harang wedge in cuttings at 8527–8557 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field,

Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 1–2.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Darbyella danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 24.

HOLOTYPE: HVH 664, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 3, “[f]ossiliferous blue clay, weathering dark brown to yellow. The shells are scattered through the whole mass and occasionally occur in thin beds with light brown sand”; “lower bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 4, figs. 1a–1c.

COMMENTS: “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives. The precise stratigraphic occurrence of this holotype at Danville Landing is uncertain because contradictory information is given in Howe and Wallace (1932: upper bed, p. 11; genus in both beds, p. 24) and on the holotype slide (lower bed).

The two generic names *Darbyella* Howe and Wallace 1932 and *Robulus* de Montfort 1808 are junior synonyms of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964, 1987). Thus, *Darbyella danvillensis* and *Robulus danvillensis* are subjective secondary homonyms of *Lenticulina danvillensis* (Howe and Wallace 1932).

Dentalina acinacoides Hussey 1949, *J. Paleontol.* 23: 126.

HOLOTYPE: HVH 2552, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.” La Salle Parish, Louisiana, “from Sample No. 107,” core at depth “1468’,” “brown silty shale.” Figured: pl. 26, fig. 29.

Dentalina globata Hussey 1949, *J. Paleontol.* 23: 126.

HOLOTYPE: HVH 2551, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.” La Salle Parish, Louisiana, “from Sample No. 115,” core at depth “1479’,” “brown silty shale with some glauconite.” Figured: pl. 26, fig. 24.

COMMENTS: The lithologic description of Sample 115 in Hussey’s (1940, p. 144) dissertation is “brown silty shale.”

Dentalina granulostriata Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 44.

HOLOTYPE: HVH 54, Eocene, Claiborne, Cook Mountain

Fm., Milams Member; "from Sample No. 104," (JH-215): "Fossiliferous glauconitic, calcareous clay. Taken from type Milams member outcrop, four feet above Sample No. 103 (JH-214). Elevation—180 feet." Taken eight feet above "zone of fossiliferous argillaceous limestone concretions," on scarp "on the southwest side of Antwine Creek in the SE¼ NE¼ sec. 17, T. 13 N., R. 3 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 6, fig. 1.

COMMENTS: According to Huner (1939, p. 88), his sample JH-215 was collected from a section that "begins 300 yards south of Mr. Hardin's house in a scarp on the west side of Antwine Creek," in the "NW¼, SE¼ sec. 17, T. 13 N., R. 3 W."

Dentalina hexacostata Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 44.

HOLOTYPE: HVH 49, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 26," (Ru-430): "Yellowish calcareous clays at road cut on north side of road, 1.25 miles northwest of Vowell's Mill School, in the NW¼ NW¼ sec. 21, T. 7 N., R. 9 W. Elevation—315 feet." Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 5, fig. 13.

Dentalina mauricensis Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 45.

HOLOTYPE: HVH 51, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 39," (Rob-5): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness. The lowest of these fossiliferous beds was at water level at the time collected." Sample No. 39 is "from beneath the lowest iron ore ledge and collected at water level. Elevation—77± feet." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 5). Figured: pl. 5, fig. 15.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Dentalina mexicana (Cushman) var. ***danvillensis*** Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 26.

HOLOTYPE: HVH 649, Eocene, Jackson, [possibly

Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 6, fig. 4.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Dentalina natchitochensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 45.

HOLOTYPE: HVH 59, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 5," (Ru-207): "Brown glauconitic calcareous, fossiliferous clays. Sample collected in the limestone boulder bed in road cut on the east side of State Highway 39, 2.3 miles south of Provencal in the SW¼ NE¼ sec. 4, T. 7 N., R. 8 W. Elevation—200 feet." Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 6, fig. 6.

Dentalina paradoxa Hussey 1949, *J. Paleontol.* 23: 126.

HOLOTYPE: HVH 2550, Eocene, Cane River Fm.; "from Sample No. Ru. 463-188," "1.4 miles north of Provencal on Provencal-Hagewood road and .2 mile east of road in creek bed, *D. advena* zone," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 26, fig. 23.

COMMENTS: "*D. advena* zone" = *Discocyclus advena* zone. The sample number is 188, not 1888 as published in explanation of pl. 26, fig. 23 of Hussey (1949, p. 117).

Dentalina winniana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 45–46.

HOLOTYPE: HVH 53, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 123," (JH-367): "Greenish-gray fossiliferous gypsiferous, glauconitic calcareous clay. Taken from drill hole 7½ feet deep on west side of road in the northwest corner of the SE¼ SE¼ SE¼ sec. 7, T. 11 N., R. 4 W. Elevation—235 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 5, fig. 17.

Dimorphina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 44.

HOLOTYPE: HVH 718, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line.

Collected by Henry V. Howe. Figured: pl. 8, figs. 1a, 1b.

COMMENTS: "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives. The precise stratigraphic occurrence of this holotype at Danville Landing is uncertain because the information in Howe and Wallace (1932: upper bed, p. 12, 44) is different from that on the holotype slide (lower bed).

Discorbis bolivarensis Garrett 1942, *J. Paleontol.* 16: 462–463.

HOLOTYPE: HVH 2404, Miocene; "Stanolind Oil and Gas Company wells in the High Island field, Galveston County, Texas. This field is located near the eastern end of Bolivar Peninsula, in the most eastern extremity of Galveston County, and lies almost in the Gulf of Mexico"; specimen "from no. 1 Gordon-Viterbo, core at 4,875–4,895 feet." Figured: pl. 70, figs. 1a–1c.

PARATYPE: HVH 2405, same sample as holotype, one specimen, figured: pl. 70, fig. 2.

Discorbis crosbiei Butler 1962, *J. Paleontol.* 36: 1367.

HOLOTYPE: HVH 6755, Miocene; "Magnolia Petroleum Co. State Lease 883, no. 1-A, Block 46 Field, Vermilion offshore Area," off the coast of Vermilion Parish, Louisiana. "Cuttings from 12,970–13,000 feet." Figured: text-figs. 3a–3c.

PARATYPES from same locality and depth as holotype: HVH 6756, one specimen, not figured. LSUGDM 1097, one specimen, not figured.

Discorbis gravelli Garrett 1939, *J. Paleontol.* 13: 578.

HOLOTYPE: HVH 1953, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," "from core at 5,647–5,651 feet." Figured: pl. 66, figs. 2a–2c.

PARATYPE: HVH 1954, middle Tertiary, *Discorbis* zone; Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas, from core at 5,544–5,549 feet; one specimen, figured: pl. 66, figs. 3a, 3b.

COMMENTS: The catalog number of paratype HVH 1954 was published as no. 1594.

Discorbis huneri Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 74.

HOLOTYPE: HVH 138, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 61," (JH-62): "Calcareous fossiliferous clay containing lenses and stringers of glauconite. Taken in ditch 18 inches above base of slope leading down to Couley Creek along dirt road in the SE¼ NE¼ NE¼ NE¼ sec. 22, T. 10 N., R. 5 W. Elevation—125 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., on July 13, 1936. Figured:

pl. 9, figs. 26, 27.

COMMENTS: According to Howe Loc. 272, Huner collected his sample JH-62 along Emergency Conservation Work (E.C.W.) Road 21 on a slope leading down to Couley Creek, in a ditch on the northeast side of the road, SE¼, NE¼, NE¼ sec 22, T. 10 N., R. 5 W.

Discorbis mauricensis Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 74.

HOLOTYPE: HVH 139, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 39," (Rob-5): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness. The lowest of these fossiliferous beds was at water level at the time collected." Sample No. 39 is "from beneath the lowest iron ore ledge and collected at water level. Elevation—77± feet." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 5). Figured: pl. 9, figs. 28–30.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

"Discorbis" mitra Poag 1966, *Micropaleontology* 12: 408.

HOLOTYPE: HVH 7669, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 13, 4.5 ft. from [above] base of Paynes Hammock Formation" taken in a gray-buff, calcareous, hard sand bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 4, figs. 15, 16.

PARATYPES from same sample as holotype: HVH 7670, one specimen, figured: pl. 4, fig. 17. LSUGDM 965, one specimen, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Discorbis nomada Garrett 1939, *J. Paleontol.* 13: 578.

HOLOTYPE: HVH 1955, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big

Hill prospect, Jefferson County, Texas,” “from core at 5,544–5,549 feet.” Figured: pl. 66, figs. 4a–4c.

Discorbis parva Hussey 1949, *J. Paleontol.* 23: 135.

HOLOTYPE: HVH 2577, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115’ South and 150’ East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 166,” core at depth “1531,” “gray silty shale with some greensand.” Figured: pl. 27, figs. 14, 15.

Discorbis petalana Hussey 1949, *J. Paleontol.* 23: 135.

HOLOTYPE: HVH 2578, Eocene, Cane River Fm.; “from Sample No. Ru. 518-J-207,” “NW ¼ NE ¼ NW ¼ of sec. 6, R. 6 W., in center of negro settlement, 40’ hole extending from 12’ above *D. advena* zone to 8’ below it,” “Natchitoches Parish, Louisiana.” Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 27, figs. 20, 21.

COMMENTS: “*D. advena* zone” = *Discocyclina advena* zone. Hussey (1943, 1949) does not list the township number, and the section quadrants published in 1943 and 1949 do not agree. Grover Murray, in a 1959 personal communication with Ellis and Messina (1952 et seq., entry for *Brachycythere bernardi* Murray and Hussey), describes Rukas locality 518 as “a hand dug well at Chestnut, in the NW¼ NE¼ sec. 6, T. 12 N., R. 6 W., Natchitoches Parish.”

Discorbis rukasi Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 74–75.

HOLOTYPE: HVH 2035, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 19,” (Ru-274 F): “Yellow calcareous clays, 300 feet east and downstream from Sample No. 14 in creek bank.” [Sample No. 14 was “collected just east of the bridge.”] “4.9 miles north of Flora in center of sec. 16, T. 8 N., R. 7 W.,” Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 10, fig. 25.

PARATYPE: HVH 2036, same sample as holotype, one specimen, figured: pl. 10, fig. 26.

Discorbis washburni Garrett 1941, *J. Paleontol.* 15: 155.

HOLOTYPE: HVH 1971, [Paleocene], Nanafalia Fm.; “Sample no. 112-D.—Gray, fossiliferous clay, taken from the face of a low bluff on the west bank of Tombigbee River at Lott’s Landing, Choctaw County, Ala. [Alabama]. This lies about one-half mile north of the bridge on Alabama Highway 10 (Butler-Dixon Mills Highway). Sample taken about 8 feet below top of exposure, and is Nanafalia in age.” Collected by Julius B. Garrett with C.F. Washburn. Figured: pl. 26, figs. 10a–10c.

PARATYPES: HVH 1996, same sample as holotype, nine specimens, not figured.

Dyocibicides danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 78–79.

COTYPES [SYNTYPES]: HVH 743, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe; two specimens, figured: pl. 15, figs. 1a, 1b, 2a, 2b.

COMMENTS: The two cotypes are syntypes, and are mounted on the same slide.

In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Ellipsolagena (?) mauricensis Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 72.

HOLOTYPE: HVH 130, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 39,” (Rob-5): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness. The lowest of these fossiliferous beds was at water level at the time collected.” Sample No. 39 is “from beneath the lowest iron ore ledge and collected at water level. Elevation—77± feet.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 5). Figured: pl. 9, figs. 12, 13.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Accepted as *Parafissurina mauricensis* (Howe and Roberts 1939) by Hayward et al. (2020).

Elphidium latispatium Poag 1966, *Micropaleontology* 12: 415.

HOLOTYPE: HVH 7699, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 11, 3.5 ft. above base of Paynes Hammock Formation” taken in a dark blue sand and

clay bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 7, figs. 3, 4.

PARATYPES: LSUGDM 975, Loc. S19, sample 10, from 2 feet above the base of the Paynes Hammock Formation, taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaspiedi*; 14 specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Elphidium rota Ellis 1939, *J. Paleontol.* 13: 424.

HOLOTYPE: HVH 1893, [Oligocene, Paynes Hammock Fm.], “upper Chickasawhay”; “from the south bank of Chickasawhay River above the highway bridge 2½ miles south of Waynesboro,” Wayne County, Mississippi, “from material immediately above the bed containing *Ostrea blaspiedi*.” Locality CW of the Shreveport Geological Society’s (1934, p. 48) guidebook; collected by Henry V. Howe in June 1934. Figured: pl. 48, figs. 6a, 6b.

PARATYPE: HVH 1894, same sample as holotype, one specimen, figured: pl. 48, fig. 7.

COMMENTS: “Paynes Hammock” is the name later applied to the “upper Chicksawhay” of the 1934 Shreveport Geological Society’s guidebook (MacNeil 1944). Ellis (1939, p. 423) states that geologists’ opinions differed over whether the Chickasawhay beds were either Miocene or Oligocene. The U.S. Geological Survey (2019) considers the Paynes Hammock Formation to be upper Oligocene.

The Shreveport Geological Society’s guidebook (1934, p. 48 and map) places the collecting locality at the NE corner of NW¼, NW¼ section 25, T. 8 N., R. 7 W. Although the bridge has been moved slightly upstream since 1934, the Waynesboro, MS, USGS topographic quadrangle map (U.S. Geological Survey 1982), shows that the bend in the river where samples were collected is in SW section 24. Howe’s sample (Howe Locality 85; Loc. CW-2 of the 1934 guidebook) was collected from “elevation 127–128 feet and is a sandy claystone with echinoid fragments and spines”; it was taken 0.2 mile west (upstream) of the south end of the bridge in 1934.

Entosolenia boutoncapitata Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 63.

HOLOTYPE: HVH 4000, Miocene; “Harang wedge in cuttings at 8527–8557 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, figs. 10–11.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35). The genus *Entosolenia* Williamson 1848 is considered a subjective junior synonym of *Oolina* d’Orbigny 1839 (Hayward et al. 2020); *Entosolenia boutoncapitata* = *Oolina boutoncapitata* (Smith 1948).

Entosolenia vasiformis Hussey 1949, *J. Paleontol.* 23: 133–134.

HOLOTYPE: HVH 2566, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 123,” core at “1486’,” “chocolate-brown shale and greensand with some lignite.” Figured: pl. 27, fig. 9.

COMMENTS: The genus *Entosolenia* Williamson 1848 is considered a subjective junior synonym of *Oolina* d’Orbigny 1839 (Hayward et al. 2020); *Entosolenia vasiformis* = *Oolina vasiformis* (Hussey 1949).

Eoeponidella obescubacula Poag 1966, *Micropaleontology* 12: 410.

HOLOTYPE: HVH 7677, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation” taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaspiedi*, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 4, figs. 36–38.

PARATYPES: LSUGDM 968, from same sample as holotype, two specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Eoeponidella parvipatera Poag 1966, *Micropaleontology* 12: 410.

HOLOTYPE: HVH 7678, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 12, 3.8 ft. above base of Paynes Hammock Formation” taken in an orange, coarse-grained sand bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 4, figs. 39–41.

PARATYPES: LSUGDM 969, from same sample as holotype, seven specimens, not figured.

COMMENTS: Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Epistomina chromata Hussey 1949, *J. Paleontol.* 23: 137.

HOLOTYPE: HVH 2582, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 116," core at depth "1480'," "brown silty shale with some lignite." Figured: pl. 28, figs. 11, 12.

COMMENTS: The explanation of plate 28 (Hussey 1949, p. 133) erroneously lists the locality as sample no. 1, instead of sample 116.

Eponidella cushmani Stephenson 1935, La. Geol. Surv., *Geol. Bull.* 6: 189–190.

HOLOTYPE: HVH 1410, [Miocene], *Potamides matsoni* zone; from the type locality of the *Potamides matsoni*, "a fifty foot well in Section 28, T. 3 N., R. 2 W., Rapides Parish, Louisiana." Collected by Frank Lewis of Alexandria. Figured: pl. 5, figs. 17–19.

ALLOTYPE [PARATYPE]: HVH 1411, *Potamides matsoni* zone; Pure Oil Company's Yount-Lee No. 9, at depth 5752–5756 feet, Sweet Lake Field, sec. 12, T. 13 S., R. 8 W., Cameron Parish, Louisiana; one specimen, not figured.

COMMENTS: According to Fisk (1940, p. 164–165), the correct type locality of *Potamides matsoni* is "an old abandoned hand-dug well in the center of the SE¼ NW¼ sec. 27, T. 3 N., R. 2 W.," "although Dall originally listed it as being in the NE¼ sec. 28, T. 3 N., R. 2 E." Stephenson (1935, p. 187–188) gives the age of the *Potamides matsoni* zone as either Miocene or Pliocene; later publications place it in the Miocene (Fisk (1940).

Stephenson (1935, p. 189 footnote) states that allotype HVH 1411, "showing characteristics of the last chamber of this species, which is not present on the Holotype, has been used in preparing the description." For details about the locality of the allotype, see the map on p. 152 of Howe and McGuirt (1935).

Eponides ellisorae Garrett 1939, *J. Paleontol.* 13: 579.

HOLOTYPE: HVH 1957, middle Tertiary, *Marginulina idiomorpha* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," "from core at 6,121–6,124 feet." Figured: pl. 66, figs. 6a–6c.

PARATYPES: HVH 1958, same sample as holotype, one specimen, figured: pl. 66, fig. 8. HVH 1959, middle Tertiary, *Discorbis* zone; Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas, from core at 5,647–5,651 feet; one specimen; figured: pl. 66, fig. 7.

Eponides lowei Garrett 1941, *J. Paleontol.* 15: 155.

HOLOTYPE: HVH 1973, Eocene, [Lisbon Fm.]; "Sample no. 126-A.—Green, sandy, glauconitic, fossiliferous marl taken from the bottom of a small ravine lying on

the west bank of the Chickasawhay River and about 100 yards south of the highway bridge at Enterprise, Clarke County, Miss. [Mississippi]. This is the Enterprise marl of E.N. Lowe." Collected by Julius B. Garrett with C.F. Washburn. Figured: pl. 26, figs. 12a–12c.

COMMENTS: "Enterprise marl" is a term no longer used for a basal member of the Lisbon Formation in Mississippi; see "Enterprise Green Marl" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Eponides mammalonicus Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 63–64.

HOLOTYPE: HVH 4001A, Miocene; "Harang wedge in cuttings at 8589–8619 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, figs. 16–18.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

The catalog number HVH 4001 was inadvertently assigned to two different specimens in the collection when two authors were granted blocks of numbers that overlapped. A suffix has been added to the originally published number 4001 to give this specimen a unique identifier: HVH 4001A.

Eponides ouachitaensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 69.

HOLOTYPE: HVH 603, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 13, figs. 8a–8c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Eponides simplex Hussey 1949, *J. Paleontol.* 23: 137.

HOLOTYPE: HVH 2581, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 137," core at depth "1503'–1509'," "light gray silty shale and greensand." Figured: pl. 28, figs. 17, 18.

COMMENTS: Hussey proposed the new name *Eponides inornata* to replace *Eponides simplex* Hussey 1949, a homonym of *Eponides simplex* (White 1928); see Thalmann (1949, p. 101).

Fissurina falcaticosta Poag 1966, *Micropaleontology* 12: 405.

HOLOTYPE: HVH 7647, [Oligocene], Paynes Hammock Fm.; "Loc. PH2, sample B', 5 ft. above base of outcrop" taken in a blue-gray, calcareous, argillaceous sand bed, at "the 12- to 13-foot bluff ... on the east bank of Fisher Creek," "north of its confluence with Dead River, near Paynes Hammock Landing, south of Jackson, Clarke County, Alabama." Collected by C. Wylie Poag. Figured: pl. 3, figs. 23, 24.

PARATYPES: LSUGDM 959, from same sample as holotype, two specimens, not figured.

COMMENTS: Ellis and Messina (1940 et seq.) state that the type specimens were collected from 7 feet above the base of the bluff, instead of the described 5 feet. Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Fissurina insigera Poag 1966, *Micropaleontology* 12: 405.

HOLOTYPE: HVH 7648, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 12, 3.8 ft. above base of Paynes Hammock Formation" taken in an orange, coarse-grained sand bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 3, figs. 25, 26.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Fissurina trigelasina Poag 1966, *Micropaleontology* 12: 405.

HOLOTYPE: HVH 7649, [Oligocene] Paynes Hammock Fm.; "Loc. PH2, sample C', 7 ft. above base of outcrop" taken in a blue-green, calcareous, argillaceous sand bed, at "the 12- to 13-foot bluff ... on the east bank of Fisher Creek," "north of its confluence with Dead River, near Paynes Hammock Landing, south of Jackson, Clarke County, Alabama." Collected by C. Wylie Poag. Figured: pl. 3, figs. 27, 28.

PARATYPE: LSUGDM 960, from same sample as holotype, one specimen, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Frondicularia elegantissima Hussey 1949, *J. Paleontol.* 23: 125.

HOLOTYPE: HVH 2556, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec.

29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 107," core at depth "1468'," "brown silty shale." Figured: pl. 26, fig. 27.

Fursenkoina capreolata Poag 1966, *Micropaleontology* 12: 420, 422.

HOLOTYPE: HVH 7721, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation" taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaniptedi*, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 8, figs. 21, 22.

PARATYPES: LSUGDM 978, from same sample as holotype, two specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Gaudryina geometrica Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 33–34.

HOLOTYPE: HVH 15, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 17," (Ru-274 D): "Yellow calcareous clays, 350 feet east and downstream from Sample No. 14 in creek bank." [Sample No. 14 was "collected just east of the bridge."] "4.9 miles north of Flora in center of sec. 16, T. 8 N., R. 7 W.," Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 2, figs. 6, 7.

Gaudryina koimetercola Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 189 (3).

HOLOTYPE: HVH 769, Oligocene; "Vicksburg, [Warren County,] Mississippi, at the falls nearest the Mississippi River on Glass Bayou, National Park Cemetery, in a three-foot bed of yellowish gray marl." Collected by Karl E. Young in April 1930 (KEY 4, bed 4 sample). Figured: pl. 14 (pl. 1), figs. 1a, 1b.

COMMENTS: The sample material that Young shipped to H.V. Howe is stored in Howe's sample collection under the number Howe Loc. 72-4. On its label, Howe described the sample as "Cooke's original 'Mint Spring Marl,' ... immediately below the massive 25-foot limestone bed which was called 'Glendon.'"

Glandulina simplex Hussey 1949, *J. Paleontol.* 23: 130.

HOLOTYPE: HVH 2561, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 158," core at depth "1519'," "light to dark gray silty shale and greensand." Figured: pl. 26,

fig. 22.

Globigerina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 74.

HOLOTYPE: HVH 712, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 10, figs. 9a–9c.

COMMENTS: The spelling of the genus as “*Globigernia*” on p. 74 is a typographical error; the correct spelling of *Globigerina danvillensis* is on p. 100.

In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

The species name is accepted as *Dipsidripella danvillensis* (Howe and Wallace 1932) by Huber et al. (2006, p. 496–499, 501) and Young et al. (2020). Huber et al. (2006), however, mistakenly give the original combination as *Globorotalia danvillensis*.

Globigerina ouachitaensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 74.

HOLOTYPE: HVH 716, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 10, figs. 7a, 7b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

The holotype specimen is damaged and has a hole in one chamber. Accepted as *Globoturborotalia ouachitaensis* (Howe and Wallace 1932) by Young et al. (2020).

Globorotalia inconspicua Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 85.

HOLOTYPE: HVH 2050, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 61,” (JH-62):

“Calcareous fossiliferous clay containing lenses and stringers of glauconite. Taken in ditch 18 inches above base of slope leading down to Couley Creek along dirt road in the SE¼ NE¼ NE¼ NE¼ sec. 22, T. 10 N., R. 5 W. Elevation—125 feet.” Winn Parish, Louisiana. Collected by John Huner, Jr., on July 13, 1936. Figured: pl. 12, figs. 20–22.

COMMENTS: According to Howe Loc. 272, Huner collected his sample JH-62 along Emergency Conservation Work (E.C.W.) Road 21 on a slope leading down to Couley Creek, in a ditch on the northeast side of the road, SE¼, NE¼, NE¼ sec 22, T. 10 N., R. 5 W.

Globorotalia inflata Hussey 1949, *J. Paleontol.* 23: 141.

HOLOTYPE: HVH 2594, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 137,” core at depth “1503–1509’,” “light gray silty shale and greensand.” Figured: pl. 29, figs. 4, 5.

COMMENTS: According to Young et al. (2020), *Globorotalia inflata* Hussey is poorly understood; it may belong to the genus *Turborotalia*, and the species could be a senior synonym of *Turborotalia pomeroli* (Toumarkine and Bolli 1970).

Globorotalia perforataminuta Hussey 1949, *J. Paleontol.* 23: 141.

HOLOTYPE: HVH 2595, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 123,” core at depth “1486’,” “chocolate-brown shale and greensand with some lignite.” Figured: pl. 29, figs. 6, 7.

COMMENTS: The explanation of plate 29, figs. 6 and 7 (Hussey 1949, p. 140), refers to sample no. 181 instead of no. 123.

Goesella gibbosa Hussey 1943, *J. Paleontol.* 17: 161.

HOLOTYPE: HVH 2508, Eocene, Cane River Fm.; “from sample 118,” “Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW¼ sec. 29, T. 10 N., R. 2 E., La Salle Parish,” Louisiana; “core samples ranging in depth from 1468 feet to 1555 feet.” Figured: pl. 26, fig. 13.

PARATYPES: HVH 2509, from same sample as holotype, two specimens, not figured.

COMMENTS: The species name was originally spelled as *Goësellia gibbosa* Hussey. Hussey’s (1949, p. 115) locality differs slightly from his 1943 paper: “312’ 5” East” vs. “312 feet east.” Sample 118, core at depth 1482 feet, is described by Hussey (1949, p. 115) as “gray-brown shale and greensand.”

Guembelina garretti Howe 1939, La. Geol. Surv., *Geol. Bull.*

14: 61–62.

HOLOTYPE: HVH 102, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 1,” (JBG-18): “A bluff on the left bank of Sabine River, at Goodwin’s shoal, behind the house of Mr. S.J. Speight, near the southwest corner of sec. 31, T. 5 N., R. 12 W.,” Sabine Parish, Louisiana. “The locality is near the old site of Columbus and may be reached by taking an old wagon road 100 yards north of Mr. Speight’s house. This road leads in about 300 yards to the river bank. The locality is a low bluff, by the shoals, about 300 yards downstream, and exposes about eight feet of section from water level up. The section exposed is a marl with a one-foot compact lime bed near the middle.” This “sample came from 0–1 foot below the limestone ledge. The shoals are produced by slumping and the stratigraphic relations are greatly confused.” Collected by Julius B. Garrett in summer 1932. Figured: pl. 8, fig. 14.

COMMENTS: Garrett collected from the Milams Member of the Cook Mountain Formation (Andersen 1960, p. 90). Toledo Bend Reservoir later covered the sample location; construction of the lake began in 1964. An alternate spelling, “Godwin Shoals,” is used on the labels of H.V. Howe’s samples from this locality.

The genus name *Gümbelina* was printed without its umlaut in Howe (1939) as *Gumbelina*; following ICZN rule 32.5.2.1, the correct spelling is *Guembelina*. *G. garretti* is considered a subjective junior synonym of *Chiloguembelina cubensis* (Palmer 1934) in the opinion of Young et al. (2020).

Guembelina mauriciana Howe and Roberts in Howe 1939, La. Geol. Surv., Geol. Bull. 14: 62.

HOLOTYPE: HVH 100, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 37,” (Rob-3): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 37 is “from beneath the middle iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 8, figs. 9–11.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

The genus name *Gümbelina* was printed without

its umlaut in Howe (1939) as *Gumbelina*; following ICZN rule 32.5.2.1, the correct spelling is *Guembelina*. *G. mauriciana* is a subjective junior synonym of *Streptochilus martini* (Pijpers 1933) in the opinion of Young et al. (2020).

Guembelina multicellaris Hussey 1949, *J. Paleontol.* 23: 130–131.

HOLOTYPE: HVH 2562, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 137,” core at depth “1503’–1509’,” “light gray silty shale and greensand.” Figured: pl. 27, fig. 10.

COMMENTS: Hussey (1949) spells the genus as *Gümbelina*. Huber et al. (2006, p. 474) and Young et al. (2020) consider *Guembelina multicellaris* Hussey to be synonymous with *Chiloguembelina ototara* (Finlay 1940).

Guembelitria columbiana Howe 1939, La. Geol. Surv., Geol. Bull. 14: 62.

HOLOTYPE: HVH 101, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 2,” (JBG-19): “A bluff on the left bank of Sabine River, at Goodwin’s shoal, behind the house of Mr. S.J. Speight, near the southwest corner of sec. 31, T. 5 N., R. 12 W.,” Sabine Parish, Louisiana. “The locality is near the old site of Columbus and may be reached by taking an old wagon road 100 yards north of Mr. Speight’s house. This road leads in about 300 yards to the river bank. The locality is a low bluff, by the shoals, about 300 yards downstream, and exposes about eight feet of section from water level up. The section exposed is a marl with a one-foot compact lime bed near the middle. ... The shoals are produced by slumping and the stratigraphic relations are greatly confused.” Sample No. 2 is “from 0–1 foot above limestone ledge.” Collected by Julius B. Garrett in summer 1932. Figured: pl. 8, figs. 12, 13.

COMMENTS: Garrett collected from the Milams Member of the Cook Mountain Formation (Andersen 1960, p. 90). Toledo Bend Reservoir later covered the sample location; construction of the lake began in 1964. An alternate spelling, “Godwin Shoals,” is used on the labels of H.V. Howe’s samples from this locality.

The generic name *Gümbelitria* was printed without its umlaut in Howe (1939); following ICZN rule 32.5.2.1, the correct spelling is *Guembelitria*. The species name is accepted as *Jenkinsina columbiana* (Howe 1939) by Young et al. (2020).

Guttulina magna Hussey 1949, *J. Paleontol.* 23: 129.

HOLOTYPE: HVH 2560, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115’ South and 150’ East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 158,” core at depth “1519’,” “light to

dark gray silty shale and greensand." Figured: pl. 26, fig. 28.

COMMENTS: The explanation of plate 26 (Hussey 1949, p. 117) erroneously lists the locality as sample number 149 instead of number 158.

Guttulina obscura Hussey 1949, *J. Paleontol.* 23: 129.

HOLOTYPE: HVH 2559, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 149," core at depth "1507½'," "glaucopitic shale and sand, *D. advena* zone." Figured: pl. 26, fig. 19.

COMMENTS: "*D. advena* zone" = *Discocyclina advena* zone.

Gyroldina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 69–70.

HOLOTYPE: HVH 606, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 13, figs. 3a–3c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Accepted as *Valvulineria danvillensis* (Howe and Wallace 1932) by Hayward et al. (2020).

Gyroldina limbata Hussey 1949, *J. Paleontol.* 23: 136.

HOLOTYPE: HVH 2580, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 175," core at depth "1545'," "salt and pepper' sand and silty shale." Figured: pl. 28, figs. 6, 7.

Gyroldina lottensis Garrett 1941, *J. Paleontol.* 15: 155.

HOLOTYPE: HVH 1972, [Paleocene], Nanafalia Fm.; "Sample no. 112-D.—Gray, fossiliferous clay, taken from the face of a low bluff on the west bank of Tombigbee River at Lott's Landing, Choctaw County, Ala. [Alabama]. This lies about one-half mile north of the bridge on Alabama Highway 10 (Butler-Dixon Mills Highway). Sample taken about 8 feet below top of exposure, and is Nanafalia in age." Collected by Julius B. Garrett with C.F. Washburn. Figured: pl. 26, figs.

11a–11c.

PARATYPES: HVH 1998, same sample as holotype, three specimens, not figured.

Gyroldina scalata Garrett 1938, *J. Paleontol.* 12: 316.

HOLOTYPE: HVH 1930, Oligocene, Hackberry assemblage, sticky shale overlying Vicksburg; "Superior Oil Company, no. 1, D. Hebert, Hackberry field, Cameron Parish, La. [Louisiana], from core at 6,006–6,026 feet." Figured: pl. 40, figs. 12a–12c.

PARATYPE: HVH 1931, same sample as holotype, one specimen, figured: pl. 40, fig. 13.

Gyroldina vicksburgensis (Cushman) var. *hannai* Garrett 1939, *J. Paleontol.* 13: 578–579.

HOLOTYPE: HVH 1956, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," "from core at 5,647–5,651 feet." Figured: pl. 66, figs. 5a–5c.

Hantkenina danvillensis Howe and Wallace 1934, *J. Paleontol.* 8: 37.

HOLOTYPE: HVH 599, Eocene, Jackson, [possibly Danville Landing Fm.]; "at Danville Landing on the Ouachita River, Catahoula Parish, Louisiana." Collected by Henry V. Howe. Figured: pl. 5, figs. 14, 17.

COMMENTS: Howe and Wallace (1934) do not state from which bed the holotype was collected; however, the specimen's catalog card lists the upper horizon (bed 2) of Howe and Wallace (1932, pp. 8, 10). Spraul (1962, p. 344), who discussed the species with Howe, confirms that the upper bed (bed 2) at Danville Landing is its type locality. The species name is now accepted as *Cribrohantkenina inflata* (Howe 1928); see Spraul (1962, p. 347, pl. 1, figs. 2a, 2b) and Coxall and Pearson (2006, p. 226, pl. 8.3).

Hantkenina inflata Howe 1928, *J. Paleontol.* 2: 14.

HOLOTYPE: HVH 585, [reworked upper Eocene; see Howe in Thalmann (1942, p. 813) and Spraul (1962, p. 343)]; Howe (1928b, p. 14): "from the limestones at the base of the Oligocene section"; "Old Fort St. Stephens Bluff, [Washington County,] Alabama." Collected by Henry V. Howe. Figured: text-fig. 2.

COMMENTS: Howe (1928b) published the holotype's catalog number as Louisiana State University Museum, No. H. 16, but the H.V. Howe Type Collection number is 585.

Howe collected the material used for his 1928 *Hantkenina* study from where he thought it would be "high enough up the bluff to be free from any Eocene contamination"; he found the new species "in the basal limestones overlying the typical Red Bluff Clay" (Howe 1928b, p. 13). However, in a personal communication to Thalmann (1942, p. 813), Howe states that, "when collecting the sample in 1924, he landed on the contact between the Vicksburg and the Jackson

formation at the type locality. The basal Vicksburg beds apparently contain reworked Jackson [Eocene] fossils." According to Howe's letter to Thalmann (1942, p. 814), "the original sample is labeled 'immediately below base of lime section,'" and, in Howe's view, "corresponds with Bed 3 of Cooke's section" (which is identified as "Red Bluff clay" in Cooke (1926, p. 283)). Spraul (1962, p. 343) states that "[t]he exact location of the type locality according to Howe (personal communication) is the same as Cooke's 'Bed number 1'" (identified as "Jackson formation (?) in Cooke (1926, p. 283)).

Howe subsequently discovered aperture details in topotype specimens that resulted in the placement of the species in the subgenus *Cribohantkenina* by Thalmann (1942, pp. 812–813). The species name is now accepted as *Cribohantkenina inflata* (Howe); see Coxall and Pearson (2006, p. 226, pl. 8.3).

Hantkenina mccordi Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 55–56.

HOLOTYPE: HVH 605, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 10, figs. 1a, 1b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) *Geologic Names Committee Archives*.

The species name is now accepted as *Cribohantkenina inflata* (Howe 1928); see Coxall and Pearson (2006, p. 226, pl. 8.3).

Hanzawaia prona Poag 1966, *Micropaleontology* 12: 434.

HOLOTYPE: HVH 7740, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 12, 3.8 ft. above base of Paynes Hammock Formation" taken in an orange, coarse-grained sand bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 9, figs. 29–31.

PARATYPES: LSUGDM 983, from same sample as holotype, eight specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019)

considers the formation to be upper Oligocene.

Haplophragmoides complanata Hussey 1949, *J. Paleontol.* 23: 118.

HOLOTYPE: HVH 2503, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 128," core at depth "1490'," "chocolate-brown shale with some greensand." Figured: pl. 26, fig. 1.

COMMENTS: The figure does not completely match the specimen.

Haplophragmoides houghi Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 47–48.

HOLOTYPE: HVH 3979, Miocene; "Harang wedge in cuttings at 8155–8185 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 10, fig. 6.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Haplophragmoides manilaensis Andersen 1953, *Contrib. Cushman Found. Foramin. Res.* 4: 22.

HOLOTYPE: HVH 4503, Holocene; "from sediments deposited in brackish water environments, a marsh sample" "from Barataria Bay, at Manila Village, [Jefferson Parish,] Louisiana, Sample BB-1." Collected by W.W. Anderson, Conservation Department, New Orleans, Louisiana. Figured: pl. 4, figs. 8a, 8b.

PARATYPES from same sample as holotype: HVH 4211, one specimen, not figured. LSUGDM 690, 11 specimens, not figured.

Haplophragmoides mauricensis Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 30.

HOLOTYPE: HVH 2, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 1, figs. 3–5.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad

bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Haplophragmoides proboscidiiformis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 48.

HOLOTYPE: HVH 3980, Miocene; "Harang wedge in cuttings at 8589–8619 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 9, 10.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Haplophragmoides pseudolatidorsatum Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 48–49.

HOLOTYPE: HVH 3981, Miocene; "Harang wedge in cuttings at 8589–8619 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17 Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 10, figs. 7, 8.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Haplophragmoides wilberti Andersen 1953, *Contrib. Cush. Found. Foram. Res.* 4: 21–22.

HOLOTYPE: HVH 4209, Holocene; "from sediments deposited in brackish water environments," "bottom sample" "from Dog Lake, twenty miles south of Dulac, [Terrebone Parish,] Louisiana, Sample DL-1." Collected by S.E. Roper. Figured: pl. 4, fig. 7a, 7b.

PARATYPES: LSUGDM 688, from same sample as holotype, 21 specimens, not figured.

Haplophragmoides wilsoni Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 49–50.

HOLOTYPE: HVH 3982, Miocene; "Harang wedge in cuttings at 8372–8402 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 11, 12.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Hauerina papillosa Poag 1966, *Micropaleontology* 12: 402.

HOLOTYPE: HVH 7623, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 13, 4.5 ft. above base of Paynes Hammock Formation" taken in a gray-buff, calcareous, hard sand bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 2, figs. 12, 13.

PARATYPES: LSUGDM 956, from same sample as holotype, three specimens, figured: pl. 2, fig. 14.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Hemicristellaria brantlyi Garrett 1941, *J. Paleontol.* 15: 154.

SYNTYPES: HVH 1962, [Paleocene], Nanafalia Fm.; "Sample no. 112-D.—Gray, fossiliferous clay, taken from the face of a low bluff on the west bank of Tombigbee River at Lott's Landing, Choctaw County, Ala. [Alabama]. This lies about one-half mile north of the bridge on Alabama Highway 10 (Butler-Dixon Mills Highway). Sample taken about 8 feet below top of exposure, and is Nanafalia in age." Collected by Julius B. Garrett with C.F. Washburn; one specimen, figured: pl. 26, figs. 1a, 1b.

HVH 1963, [Paleocene], Nanafalia Fm.; "Sample no. 102-B.—Sandy, glauconitic, fossiliferous marl in roadcut on the Camden-Fatama road, lying 4.1 miles southeast of the courthouse at Camden, Wilcox County, Ala. [Alabama]. This locality is Nanafalia in age, and lies in the Grampian Hills. Sample taken about five feet below top of exposure." Collected by Julius B. Garrett with C.F. Washburn; one specimen, figured: pl. 26, fig. 2.

HVH 1964, Sample no. 102-B; one specimen, figured: pl. 26, fig. 3.

HVH 1965, Sample no. 112-D; one specimen, figured: pl. 26, fig. 4.

COMMENTS: The genus *Hemicristellaria* Sherborn 1893 is a synonym of *Hemirobulina* Stache 1864 (Hayward et al. 2020); *Hemicristellaria brantlyi* = *Hemirobulina brantlyi* (Garrett 1941).

Hemicristellaria hatchetigbeensis Garrett 1941, *J. Paleontol.* 15: 154–155.

SYNTYPES: HVH 1966, Eocene, base of Tallahatta Fm.; "Sample no. 106-C.—Light greenish gray, glauconitic marl with casts. This bed is about 3 feet thick, occurring in the face of the steep, main bluff at Hatchetigbee Bluff on Tombigbee River, Washington County, Ala. [Alabama]. This bed lies just at the base of the Tallahatta formation." Collected by Julius B. Garrett with C.F. Washburn; one specimen, figured: pl. 26, fig. 5.

HVH 1967, Eocene, Hatchetigbee Fm.; "from core at 2758–2776 feet from South Mississippi Petroleum Company no. 1 Pearlie Morris, Lamar County," Mississippi. "Gray clay, Hatchetigbee in age." One specimen, figured: pl. 26, fig. 6.

HVH 1968, same sample as HVH 1967; one specimen, figured: pl. 26, figs. 7a, 7b.

COMMENTS: In the explanation of plate 26 for this species, Garrett (1941, p. 154) lists the occurrence as "Hatchetigbee formation, Ala. and Miss.," although sample no. 106-C was collected from a bed that "lies just at the base of the Tallahatta formation."

The genus *Hemicristellaria* Sherborn 1893 is a synonym of *Hemirobulina* Stache 1864 (Hayward et al. 2020); *Hemicristellaria hatchetigbeensis* = *Hemirobulina hatchetigbeensis* (Garrett 1941).

Hemicristellaria hatchetigbeensis Garrett var. ***harrisi*** Garrett 1941, *J. Paleontol.* 15: 155.

HOLOTYPE: HVH 1969, Eocene, Hatchetigbee Fm.; “from core at 2735–2753 feet from South Mississippi Petroleum Company no. 1 Pearlie Morris, Lamar County, Miss.” [Mississippi]. “Gray, glauconitic clay, Hatchetigbee in age.” Figured: pl. 26, figs. 8a, 8b.

PARATYPE: HVH 1970, same sample as holotype, one specimen, figured: pl. 26, fig. 9.

COMMENTS: The genus *Hemicristellaria* Sherborn 1893 is a synonym of *Hemirobulina* Stache 1864 (Hayward et al. 2020); *Hemicristellaria hatchetigbeensis* var. *harrisi* = *Hemirobulina hatchetigbeensis* var. *harrisi* (Garrett 1941).

Hopkinsina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 62.

HOLOTYPE: HVH 677, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 12, figs. 1a–1c.

PARATYPES: HVH 677a, same sample as holotype, two specimens, not figured.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Karrieriella mauricensis Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 34.

HOLOTYPE: HVH 16, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 38,” (Rob-4): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 38 is “from beneath the next to the lowest iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 2, figs. 1, 2.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939)

were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Karrieriella ovata Hussey 1943, *J. Paleontol.* 17: 161.

HOLOTYPE: HVH 2512, Eocene, Cane River Fm.; “from sample 169,” “Louisiana Oil and Ref. Co., Tremont No. 1, 115 feet south and 150 feet east of northwest cor. NW¼ NE¼ sec. 30, T. 10 N., R. 2 E., La Salle Parish,” Louisiana; “core samples ranging in depth from 1500 feet to 1566 feet.” Figured: pl. 26, fig. 5.

COMMENTS: Hussey (1949, p. 116) gives a description of sample 169 from core at depth 1534½ feet as “mostly greensand, ‘salt and pepper’ sand.”

Lagena abnormacostata Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 61–62.

HOLOTYPE: HVH 3998, Miocene; “Harang wedge in cuttings at 8558–8588 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, figs. 8, 9.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Lagena fenestrissima Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 50.

HOLOTYPE: HVH 70, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 38,” (Rob-4): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 38 is “from beneath the next to the lowest iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 6, fig. 18.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Lagena halstedii Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 73–74.

HOLOTYPE: HVH 4360, Holocene; Location No. 37: “Lat. 28°58’16.4” N, Long. 89°08’34.3” W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 16, fig. 10.

PARATYPES: LSUGDM 206, from same sample as holotype, two specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58’16.4” N., Long. 89°08’34.4” W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Lagena inusitata Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 75.

HOLOTYPE: HVH 4352, Holocene; Location No. 37: “Lat. 28°58’16.4” N, Long. 89°08’34.3” W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 16, fig. 14.

PARATYPES: LSUGDM 208, from same sample as holotype, seven specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58’16.4” N., Long. 89°08’34.4” W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Lagena laevis (Montagu) var. ***circumaciculata*** Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 62.

HOLOTYPE: HVH 3999, Miocene; “Harang wedge in cuttings at 8558–8588 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, fig. 12.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Lagena mauricensis Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 51.

HOLOTYPE: HVH 65, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 37,” (Rob-3): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 37 is “from beneath the middle iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 6, fig. 13.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Lagena mexicana Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 76–77.

HOLOTYPE: HVH 4359, Holocene; Location No. 37: “Lat. 28°58’16.4” N, Long. 89°08’34.3” W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 16, fig. 11.

PARATYPES: LSUGDM 211, from same sample as holotype, four specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58’16.4” N., Long. 89°08’34.4” W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Lagena ouachitaensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 29.

HOLOTYPE: HVH 647, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line.

Collected by Henry V. Howe. Figured: pl. 6, fig. 9.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Lagena pleniluna Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 29.

HOLOTYPE: HVH 688, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 6, fig. 5.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Lagena reticulocervix Poag 1966, *Micropaleontology* 12: 403.

HOLOTYPE: HVH 7628, [Oligocene], Paynes Hammock Fm.; "Loc. CX, sample 12, 2.9 ft. above base of Paynes Hammock Formation" taken in a gray-green, calcareous sand bed, in a section "approximately 200 yards south of the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 2, figs. 21, 22.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Lagena salinensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 51–52.

HOLOTYPE: HVH 66, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next

to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 6, fig. 14.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Lagenammina tortuotrigonalis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 41–42.

HOLOTYPE: HVH 3971, Miocene; "Harang wedge in cuttings at 8528–8557 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, fig. 4.

COMMENTS: HVH 3971 was published as a monotype. The well location is shown in Figure 3 of Smith (1948, p. 35).

Lamarckina claibornensis (Cushman) var. **gemmulata** Hussey 1949, *J. Paleontol.* 23: 136.

HOLOTYPE: HVH 2589, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 126," core between 1488 feet and 1489 feet. Figured: pl. 28, fig. 10.

COMMENTS: Hussey (1949, p. 115) has no lithologic information for Sample 126.

"Laryngosigma" strigosa Poag 1966, *Micropaleontology* 12: 404–405.

HOLOTYPE: HVH 7644, [Oligocene], Paynes Hammock Fm.; "Loc. CX, sample 12, 2.9 ft. above base of Paynes Hammock Formation" taken in a gray-green, calcareous sand bed, in a section "approximately 200 yards south of the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 3, figs. 16–18.

PARATYPES: LSUGDM 958CX, Loc. CX, sample 11, from 2.6 feet above the base of Paynes Hammock Formation, taken in an olive-green, arenaceous clay bed; one specimen, not figured. LSUGDM 958PH, Paynes Hammock Fm.; Loc. PH2, sample C', from 7 feet above base of outcrop, taken in a blue-green, calcareous, argillaceous sand bed, at the 12- to 13-foot bluff on the east bank of Fisher Creek, north of confluence with Dead River, near Paynes Hammock

Landing, south of Jackson, Clarke County, Alabama. Collected by C. Wylie Poag; one specimen, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Lenticulina camiarta Poag 1966, *Micropaleontology* 12: 403.

HOLOTYPE: HVH 7631, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 11, 3.5 ft. above base of Paynes Hammock Formation" taken in a dark blue sand and clay bed, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 2, figs. 27, 28.

PARATYPES: LSUGDM 957, Loc. S19, sample 12, from 3.8 feet above the base of the Paynes Hammock Formation, taken in an orange, coarse-grained sand bed; six specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Lenticulina hansenii Garrett 1942, *J. Paleontol.* 16: 461–462.

SYNTYPES: HVH 2402, Miocene; "Stanolind Oil and Gas Company wells in the High Island field, Galveston County, Texas. This field is located near the eastern end of Bolivar Peninsula, in the most eastern extremity of Galveston County, and lies almost in the Gulf of Mexico"; specimen "from no. 1 Gordon-Viterbo, core at 4,875–4,895 feet"; one specimen, figured: pl. 70, figs. 10a, 10b.

HVH 2403, same sample as HVH 2402; one specimen, figured: pl. 70, fig. 9.

Lenticulina jeffersonensis Garrett 1939, *J. Paleontol.* 13: 577.

SYNTYPES: HVH 1944, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," core "from depth of 5,727–5,732 feet"; one specimen, figured: pl. 65, fig. 11.

HVH 1945, same sample; one specimen, figured: pl. 65, figs. 10a, 10b.

HVH 1946, same sample; one specimen, figured: pl. 65, fig. 12.

Lingulina seminuda Reuss var. ***denudata*** Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 61.

HOLOTYPE: HVH 3997, Miocene; "Harang wedge in cuttings at 8465–8495 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 13–15.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Hayward et al. (2020) note: "The specific name is given in the table as *Lingulina seminuda* (Reuss). It is not clear to which species the author intended to refer (fide Ellis & Messina)."

Loxostoma huneri Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 68.

HOLOTYPE: HVH 110, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 80," (JH-96): "Glaucinitic, very fossiliferous marl containing zone of argillaceous limestone concretions up to 10 inches in diameter. Taken three feet below Sample No. 79 (JH-95 B). Elevation—182 feet." Sample No. 80 was taken about 22 feet "below top of slope in well-exposed cut on the southeast side of intersection of State Highway 6 and Couley-St. Maurice road in the SE¼ NW¼ SE¼ NE¼ sec. 20, T. 10 N., R. 5 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 8, figs. 25, 26.

COMMENTS: Sample JH-96 is described in Huner (1939, p. 90) as from a "[z]one of hard very fossiliferous limestone concretions with greensand. *Operculinoides sabinensis*," bed 11 of the section "in road cut along U.S. Highway 84 in the northwest corner of the SE¼ NE¼ sec 20, T. 10 N., R. 5 W., Winn Parish." In Winn Parish, U.S. Highway 84 was formerly Louisiana Highway 6.

The accepted spelling of the generic name is *Loxostomum* (Hayward et al. 2020); species name = *Loxostomum huneri* Howe 1939.

Loxostomum gelbi Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 94–95.

HOLOTYPE: HVH 4410, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 19, figs. 7a, 7b.

PARATYPES: LSUGDM 254, from same sample as holotype, 11 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Marginulina anconoides Hussey 1949, *J. Paleontol.* 23: 122.

HOLOTYPE: HVH 2524, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 123," core at depth "1486'," "chocolate-brown shale and greensand with some lignite." Figured: pl. 25, fig. 3.

Marginulina ascensionensis Howe and McDonald 1938, La. Geol. Surv., *Geol. Bull.* 13: 209–210.

HOLOTYPE: HVH 1885, Miocene; "from Athens Oil Co.'s United Lands No. 2 well, core at 4330 feet, Sorrento dome," Ascension Parish, Louisiana. Figured: pl. 1, figs. 1, 2.

PARATYPES: HVH 1887, same sample as holotype, three specimens, figured: pl. 1, figs. 3, 4.

COMMENTS: Howe and McGuirt's (1938, p. 114-A) map shows the AU-2 well in the northeastern quarter of section 15, T. 10 S., R. 4 E.

Marginulina bulbosa Hussey 1949, *J. Paleontol.* 23: 124.

HOLOTYPE: HVH 2539, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 128," core at depth "1490'," "chocolate-brown shale with some greensand." Figured: pl. 26, figs. 7, 8.

COMMENTS: Hussey's (1949, p. 117) explanation for plate 26, figs. 7 and 8, erroneously refers to the holotype slide as no. 2538.

Marginulina darbyella Hussey 1949, *J. Paleontol.* 23: 122.

HOLOTYPE: HVH 2523, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 173," core at depth "1543'," "salt and pepper' sand and silty shale." Figured: pl. 25, fig. 4.

Marginulina howei Garrett and Ellis 1937, *J. Paleontol.* 11: 631–632.

HOLOTYPE: HVH 1916, middle Tertiary; "from Stanolind Oil and Gas Company no. 3 Mary Duhon, Hackberry field, Cameron Parish, La. [Louisiana], from core at 4,074–4,076 feet." Figured: pl. 86, fig. 9.

PARATYPES: HVH 1917, middle Tertiary; Stanolind Oil and Gas Co. no. 3 Mary Duhon, Hackberry Field, Cameron Parish, Louisiana, from core at 4,130–4,135 feet; one specimen, figured: pl. 86, fig. 18. HVH 1918, same sample as HVH 1917, one specimen, figured: pl. 86, figs. 8a, 8b.

Marginulina huneri Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 43.

HOLOTYPE: HVH 60, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 66," (JH-71): "Weathered

calcareous clay or marl. Taken in well-exposed section on southeast side of Range Creek about 25 feet above channel, along Couley-Coldwater road in the SE¼ NW¼ SE¼ sec. 26, T. 11 N., R. 5 W., Elevation—177 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 6, fig. 7.

COMMENTS: Huner (1939, p. 92) describes the location of his section as "the northeast corner of the NW¼ SE¼ sec. 25, T. 11 N., R. 5 W., Winn Parish, in road cut up slope southeast of Range Creek." Sample JH-71 is from the Milams member of Cook Mountain.

Marginulina idiomorpha Garrett and Ellis 1937, *J. Paleontol.* 11: 631.

HOLOTYPE: HVH 1909, middle Tertiary; "from Stanolind Oil and Gas Company no. 1 C.D. Brown, Hastings field, Brazoria County, Tex. [Texas], from core at 5,560–5,565 feet." Figured: pl. 86, fig. 13.

PARATYPES: HVH 1910, middle Tertiary; Stanolind Oil and Gas Co. no. 3 Sneed, Hastings field, Brazoria County, Texas, from core at 5,690–5,694 feet; one specimen, figured: pl. 86, fig. 5a, 5b. HVH 1911, same sample as holotype, one specimen, figured: pl. 86, fig. 14. HVH 1912, same sample as holotype, one specimen, figured: pl. 86, fig. 6.

Marginulina inconspicua Hussey 1949, *J. Paleontol.* 23: 123.

HOLOTYPE: HVH 2527, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 157," core at depth "1518'," "light to dark gray silty shale and greensand." Figured: pl. 26, fig. 10.

Marginulina inornata Hussey 1949, *J. Paleontol.* 23: 123–124.

HOLOTYPE: HVH 2538, Eocene, Cane River Fm.; "from Sample No. Ru. 510-D-185," "Ru. 510, SE ¼ SE ¼, NW ¼ of sec. 8, T. 8 N., R. 8 W.," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 26, figs. 11, 12.

COMMENTS: The figure does not completely match the specimen.

Marginulina insignifica Hussey 1949, *J. Paleontol.* 23: 122–123.

HOLOTYPE: HVH 2525, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 123," core at depth "1486'," "chocolate-brown shale and greensand with some lignite." Figured: pl. 25, fig. 7.

Marginulina mexicana Cushman var. ***vaginata*** Garrett and Ellis 1937, *J. Paleontol.* 11: 630–631.

HOLOTYPE: HVH 1904, middle Tertiary; "from Stanolind

Oil and Gas Company no. 1 H.H. Ford, Hastings field, Brazoria County, Tex. [Texas], from core at 5,860–5,864 feet." Figured: pl. 86, figs. 17a, 17b.

PARATYPES: HVH 1905, middle Tertiary; Stanolind Oil and Gas Co. no. 1 Laura D. Shaw, Hastings field, Brazoria County, Texas, from core at 5,279–5,287 feet; one specimen, figured: pl. 86, figs. 11a, 11b. HVH 1906, same sample as HVH 1905, one specimen, figured: pl. 86, fig. 10. HVH 1907, middle Tertiary; Stanolind Oil and Gas Co. no. 1 W.B. Wooster, Hastings field, Brazoria County, Texas, from core at 5,784–5,788 feet; one specimen, figured: pl. 86, fig. 2. HVH 1908, middle Tertiary; Stanolind Oil and Gas Co. no. 1 C.P. Williams, South Houston field, Harris County, Texas, from core at 4,674–4,681 feet; one specimen, figured: pl. 86, fig. 12.

Marginulina nonconforma Hussey 1949, *J. Paleontol.* 23: 122.

HOLOTYPE: HVH 2522, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 151," core at depth "1511'," "light gray shale and glauconite." Figured: pl. 26, fig. 9.

COMMENTS: Hussey's (1949, p. 117) explanation for plate 26, fig. 9, erroneously refers to the holotype slide as no. 2521.

Marginulina producta Hussey 1949, *J. Paleontol.* 23: 123.

HOLOTYPE: HVH 2528, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 139," core at "1521'–1531'," "light gray silty shale and greensand." Figured: pl. 25, fig. 9.

Marginulina sorrentoensis Howe and McDonald 1938, *La. Geol. Surv., Geol. Bull.* 13: 210.

HOLOTYPE: HVH 1886, Oligocene? *Marginulina sorrentoensis* faunal zone "overlying the cap rock near the apex of the dome"; "from Gulf's United Lands Co. No. 8 well, a sample taken at 1820 feet, Sorrento dome," Ascension Parish, Louisiana. Figured: pl. 1, figs. 5, 6.

COMMENTS: Howe and McGuirt (1938, p. 131–132) suggest that the species may be from the Oligocene, but "the stratigraphic position of this fauna could not be satisfactorily established." Their map on p. 114-A shows that the GU-8 well is in the SE¼, SW¼ section 15, T. 10 S., R. 4 E.

Marginulina striatoglabrata Hussey 1949, *J. Paleontol.* 23: 123.

HOLOTYPE: HVH 2537, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec.

29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 113," core at depth "1476'," "brown silty shale with some glauconite." Figured: pl. 25, fig. 5.

COMMENTS: The genus is misspelled on p. 123 as *Margulina*. The lithologic description of Sample 113 in Hussey's (1940, p. 144) dissertation is "brown silty shale."

Marginulina subglobosa Hussey 1949, *J. Paleontol.* 23: 123.

HOLOTYPE: HVH 2526, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 157," core at depth "1518'," "light to dark gray silty shale and greensand." Figured: pl. 26, fig. 16.

Marginulina texana Garrett and Ellis 1937, *J. Paleontol.* 11: 632.

HOLOTYPE: HVH 1913, middle Tertiary; "from Stanolind Oil and Gas Company no. B-1 Pipkin, Big Hill Prospect, Jefferson County, Tex. [Texas], from core at 6,560–6,570 feet." Figured: pl. 86, figs. 3a, 3b.

PARATYPES from same sample as holotype: HVH 1914, one specimen, figured: pl. 86, figs. 1a, 1b. HVH 1915, one specimen, figured: pl. 86, fig. 7.

Marginulina triangularis d'Orbigny var. ***danvillensis*** Howe and Wallace 1932, *La. Dept. Conserv., Geol. Bull.* 2: 34.

HOLOTYPE: HVH 679, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 5, figs. 6a, 6b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Marginulina variata Hussey 1943, *J. Paleontol.* 17: 161, 165.

COTYPES [SYNTYPES]: HVH 2529, Eocene, Cane River Fm., "from sample Ru 226" [Hussey Sample 190], "about 0.6 mile west of Provencal on north side of tracks of Texas & Pacific RR., NW¼, SW¼, SE¼, sec. 20, T. 8 N., R. 8 W., *D. advena* zone," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938; one specimen, figured: pl. 27, fig. 2.

HVH 2530, Eocene, Cane River Fm.; "from sample

119," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW $\frac{1}{4}$ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; "core samples ranging in depth from 1468 feet to 1555 feet"; one specimen, figured: pl. 27, fig. 3. [Hussey (1949, p. 115): sample 119, core at depth 1483 feet, "chocolate-brown shale and greensand."]

HVH 2531, Eocene, Cane River Fm.; "from sample 120," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW $\frac{1}{4}$ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; one specimen, figured: pl. 27, fig. 5. [Hussey (1949, p. 115): sample 120, core at depth 1484 feet, "chocolate-brown shale and greensand with some lignite."]

HVH 2532, Eocene, Cane River Fm.; "from sample 118," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW $\frac{1}{4}$ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; one specimen, figured: pl. 27, fig. 1. [Hussey (1949, p. 115): sample 118, core at depth 1482 feet, "gray-brown shale and greensand."]

HVH 2533, Eocene, Cane River Fm.; "from sample 123," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW $\frac{1}{4}$ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; one specimen, figured: pl. 27, fig. 4. [Hussey (1949, p. 115): sample 123, core at depth 1486 feet, "chocolate-brown shale and greensand with some lignite."]

HVH 2534, "from sample 123"; one specimen, figured: pl. 27, fig. 8.

HVH 2535, "from sample 123"; one specimen, figured: pl. 27, fig. 6.

HVH 2536, Eocene, Cane River Fm.; "from sample 148," "Louisiana Oil and Ref. Co., Tremont No. 1, 115 feet south and 150 feet east of northwest cor. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 10 N., R. 2 E., La Salle Parish," Louisiana; "core samples ranging in depth from 1500 feet to 1566 feet"; one specimen, figured: pl. 27, fig. 7. [Hussey (1949, p. 115): sample 148, core at depth 1506 feet, "gray shale, very little glauconite."]

COMMENTS: Although the type specimens of *Marginulina variata* Hussey are called paratypes in the text, they are designated as cotypes in the explanations of Plate 27 and the slide labels. The specimen illustrated in fig. 1 is HVH 2532, not 2530, and fig. 3 is HVH 2530, not 2532 as indicated for plate 27. Hussey's (1949, p. 115) description of the Louisiana Oil and Refining Company, Tremont No. 2 locality differs slightly from his 1943 paper: "312' 5" East" vs. "312 feet east." "*D. advena* zone" = *Discocyclusina advena* zone.

Marginulina winniana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 43.

HOLOTYPE: HVH 61, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 49," (JH-36): "Light-gray glauconitic, calcareous clay. Taken 42 feet below top of cut. ... Elevation—164 feet." "Taken in a run-off ditch

... on the northwest side of State Highway 6, in the northwest corner of the SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T. 10 N., R. 5 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 6, fig. 8, 9.

COMMENTS: The highway in Winn Parish referred to by Howe (1939, p. 11) as State Highway 6 is today U.S. Highway 84. According to the label of Howe Loc. 278, sample JH-36 was collected at elevation 165 feet.

Marssonella altisuturalis Poag 1966, *Micropaleontology* 12: 400.

HOLOTYPE: HVH 7611, [Oligocene], Paynes Hammock Fm.; "Loc. PH2, sample C', 7 ft. above base of outcrop" taken in a blue-green, calcareous, argillaceous sand bed, at "the 12- to 13-foot bluff ... on the east bank of Fisher Creek," "north of its confluence with Dead River, near Paynes Hammock Landing, south of Jackson, Clarke County, Alabama." Collected by C. Wylie Poag. Figured: pl. 1, figs. 16, 17.

PARATYPES: LSUGDM 955, from same sample as holotype, six specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Massilina columbiana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 36.

HOLOTYPE: HVH 29, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 2," (JBG-19): "A bluff on the left bank of Sabine River, at Goodwin's shoal, behind the house of Mr. S.J. Speight, near the southwest corner of sec. 31, T. 5 N., R. 12 W.," Sabine Parish, Louisiana. "The locality is near the old site of Columbus and may be reached by taking an old wagon road 100 yards north of Mr. Speight's house. This road leads in about 300 yards to the river bank. The locality is a low bluff, by the shoals, about 300 yards downstream, and exposes about eight feet of section from water level up. The section exposed is a marl with a one-foot compact lime bed near the middle. ... The shoals are produced by slumping and the stratigraphic relations are greatly confused." Sample No. 2 is "from 0–1 foot above limestone ledge." Collected by Julius B. Garrett in summer 1932. Figured: pl. 3, figs. 17, 18.

COMMENTS: Garrett collected from the Milams Member of the Cook Mountain Formation (Andersen 1960, p. 90). Toledo Bend Reservoir later covered the sample location; construction of the lake began in 1964. An alternate spelling, "Godwin Shoals," is used on the labels of H.V. Howe's samples from this locality.

Massilina goniopleura Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 189–190 (3–4).

HOLOTYPE: HVH 770, Eocene, Moodys Branch Marl; "on Town Creek, Jackson, [Hinds County,] Mississippi,

where it is crossed by the Great Northern Railroad Bridge." Collected by Wade H. Hadley, Jr., and Morton B. Stephenson. Figured: pl. 14 (pl. 1), figs. 2b, 2c.

COMMENTS: According to Stephenson (1937, p. 159, Loc. 1), basal Moodys Branch marl was collected on the north side of Town Creek.

Massilina mauricensis Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 36.

HOLOTYPE: HVH 28, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 3, figs. 14–16.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Massilina stuckeyi Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 33.

HOLOTYPE: HVH 4254, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 5, figs. 5a–5c.

PARATYPES: LSUGDM 130, from same sample as holotype, 15 specimens, not figured.

COMMENTS: Only fragments of the holotype are on its slide. *Massilina stuckeyi* was, therefore, not included in the count of species represented by name-bearing specimens in the collection. The paratypes that Andersen specified in the type description, however, remain.

Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material

may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Miliola alphillipsi Andersen 1988, *Tulane Stud. Geol. Paleontol.* 21: 136.

HOLOTYPE: HVH 10373, Oligocene, Byram Fm.; "from the type locality of the Byram Formation, just north of the bridge on the Pearl River, east of Byram, [Hinds County,] Mississippi. Low water exposes an indurated ledge which may represent an unconformity between the Byram and the underlying Glendon Formation. The sample studied is from the glauconitic marl above the indurated ledge." Collected by H.V. Andersen with Lewis Nichols, Alvin Phillips, and P.J. Coleman on October 15, 1963. Figured: fig. 28.

COMMENTS: Andersen (1988, pp. 132, 136) lists the holotype as LSU GM No. 10,535; the correct catalog number is HVH 10373. In a subsequent publication the author emended the species diagnosis (Andersen 1997, p. 184). According to original collection notes, sample #5 of October 15, 1963, was taken on the west bank of the Pearl River, 9.5 feet above the normally underwater, bored limestone flat and 3.8 feet above the main ledge or flat under the bridge; the sample was also two feet below the uppermost ledge which is exposed just south or downstream from the bridge.

Miliola rolandi Andersen 1984, *Tulane Stud. Geol. Paleontol.* 18: 8, 10.

HOLOTYPE: HVH 10334, [Andersen's (1988) revised locality: Oligocene, Red Bluff Fm.; Hiwannee Station, Wayne County, Mississippi. The samples used from this locality were collected in the 1950s and 1960s.] Figured: figs. 24, 25.

PARATYPE: HVH 10372, same locality as holotype, one specimen, figured in Andersen (1988, p. 136, Fig. 27).

COMMENTS: Andersen (1984, p. 8) lists the holotype as LSU GM No. 10497; however, the catalog number is HVH 10334. Although published by Andersen (1984, p. 8) as "from the Moodys Branch Formation, Riverside Park, Jackson, Mississippi," Andersen (1988, p. 136) corrects the locality; the holotype "is from the Red Bluff Formation, the same locality as specimen No. 10,534." This No. 10534 is the paratype HVH 10372 and is labeled as from Hiwannee Station. Andersen (1988, p. 123) describes the locality as "an outcrop located between the Hiwannee Railroad station and the Chickasawhay River. Today, the railroad station has been moved, and the outcrop is covered and inaccessible."

Andersen (1997, p. 188, 190) emended the species diagnosis and erected a new genus, *Miliolacostata*.

Miliolinella microstoma Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 35.

HOLOTYPE: HVH 6429, Holocene; Buras-Scofield Bayou Region, “wet marsh on the west side of Scofield Bayou,” Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2009, Warren Sample 19, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 4, fig. 9.

PARATYPES from same sample as holotype: HVH 6429a, one specimen, figured: pl. 4, figs. 10, 11. LSUGDM 478, 43 specimens, not figured.

COMMENTS: Warren (1956, p. 136) gives the coordinates for the saline marsh Sample 19 as latitude 29° 15' 12" N, longitude 89° 33' 38" W. Warren (1956) also figures HVH 6429 (pl. 2, fig. 18) and HVH 6429a (pl. 2, figs. 15–17) under the name *Miliolinella* sp. A.

Miliolinella warreni Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 37–38.

HOLOTYPE: HVH 4255, Holocene; Location No. 37: “Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 7, figs. 4a–4c.

PARATYPES: LSUGDM 140, from same sample as holotype, 11 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Neaguities inusitatus Andersen 1984, *Tulane Stud. Geol. Paleontol.* 18: 15.

HOLOTYPE: HVH 10343, Oligocene; “from the Red Bluff formation at Hiwanee Station, [Wayne County,] Mississippi.” [Accepted spelling is Hiwanee.] According to Andersen (1988, p. 123), the samples used from this locality were collected in the 1950s and 1960s. Figured: figs. 37, 38.

COMMENTS: Andersen (1984, pp. 10, 15) lists the holotype as LSU GM No. 10506; however, the catalog number is HVH 10343. According to Andersen (1988, p. 123), the type locality is “an outcrop located between the Hiwanee Railroad station and the Chickasawhay River. Today, the railroad station has been moved, and the outcrop is covered and inaccessible.” Andersen (1997, pp. 185–186) emended the diagnosis of the genus *Neaguities*.

Neobulimina angularima Poag 1966, *Micropaleontology* 12:

406.

HOLOTYPE: HVH 7654, [Oligocene], Paynes Hammock Fm.; “Loc. PH2, sample AA, 0.8 ft. above base of outcrop” taken in a light blue-gray, calcareous, argillaceous sand bed, at “the 12- to 13-foot bluff ... on the east bank of Fisher Creek,” “north of its confluence with Dead River, near Paynes Hammock Landing, south of Jackson, Clarke County, Alabama.” Collected by C. Wylie Poag. Figured: pl. 3, figs. 35–37.

PARATYPES: LSUGDM 962, Paynes Hammock Fm.; Loc. PH2, sample B', 5 feet above the base of the outcrop, taken in a blue-gray, calcareous, argillaceous sand bed; eight specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Neoconorbina rostrata Poag 1966, *Micropaleontology* 12: 411.

HOLOTYPE: HVH 7680, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 13, 4.5 ft. above base of Paynes Hammock Formation” taken in a gray-buff, calcareous, hard sand bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 5, figs. 4–6.

PARATYPES: LSUGDM 970, from same sample as holotype, three specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Nodosarella elongata Hussey 1949, *J. Paleontol.* 23: 135.

HOLOTYPE: HVH 2575, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 171,” core at depth “1538',” “‘salt and pepper’ sand and silty shale.” Figured: pl. 27, fig. 5.

PARATYPE: HVH 2576, Eocene, Cane River Fm.; same core as holotype, Sample No. 156, at depth 1516½ feet, light to dark gray silty shale and greensand; one specimen, figured: pl. 27, fig. 4.

COMMENTS: Only one chamber of the holotype remains on the slide. Although the holotype is listed before the paratype in the explanation of plate 27, figs. 4 and 5, the paratype is figure 4.

Nodosarella elongata is a subjective junior synonym of *Nodosarella lorifera* (Halkyard 1918) in the opinion of Hayward et al. (2012, p. 214).

Nodosaria angularis Leutze 1972, A. A. P. G., *Bull.* 56: 787–788.

HOLOTYPE: HVH 8585, middle Miocene, *Cibicides carstensi* zone; "from -13,500 ft in the Texaco No. 1-B, L.L. and E. well, Sec. 36, T19S., R14E, Terrebonne Parish," Louisiana. Figured: text-fig. 7A.

PARATYPES: Miocene; collected at various depths from the same well site as the holotype.

HVH 8586, from cuttings at 13,530–13,560 feet; one specimen, not figured.

HVH 8587, from cuttings at 13,800–13,830 feet; one specimen, not figured.

HVH 8588, from cuttings at 15,190–15,210 feet; one specimen, not figured.

HVH 8589, from cuttings at 15,330–15,360 feet; one specimen, not figured.

HVH 8590, from cuttings at 15,630–15,660 feet; one specimen, not figured.

HVH 8591, from cuttings at 14,380–14,410 feet; five specimens, not figured.

HVH 8592, from cuttings at 13,500–13,530 feet; six specimens, not figured.

HVH 8593, from cuttings at 14,010–14,040 feet; one specimen, not figured.

HVH 8594, from cuttings at 15,690–15,710 feet; one specimen, not figured.

COMMENTS: Leutze (1972) also refers to the locality as the Texaco No. B-1, L.L. and E. well. The label on slide HVH 8585 says that the holotype is from cuttings at 13,500–13,530 feet. Several of the paratypes originally shared a slide with paratypes from other depths; the sample depths of paratypes HVH 8586, 8587, 8588, 8589, and 8590 may have become mismatched after they were mounted on individual slides.

Nodosaria blanpiedi Ellis 1939, *J. Paleontol.* 13: 423.

HOLOTYPE: HVH 1888, [Oligocene], lower Chickasawhay limestone; "from highway 45, south of Limestone Creek 3 miles north of Waynesboro," Wayne County, Mississippi; "from fossiliferous marl collected 5 feet below the 1-foot-thick hard *Chione* limestone." Locality LC of the Shreveport Geological Society's (1934, pp. 41–43) guidebook; collected by Henry V. Howe. Figured: pl. 48, fig. 1.

PARATYPES from same locality as holotype: HVH 1889, one specimen, figured: pl. 48, fig. 2. HVH 1890, one specimen, figured: pl. 48, fig. 3.

COMMENTS: Ellis (1939, p. 423) states that geologists' opinions differed over whether the Chickasawhay beds were either Miocene or Oligocene. The U.S. Geological Survey (2019) considers the lower Chickasawhay to be Oligocene.

Locality LC of the Shreveport Geological Society (1934, p. 41) extends from the old Highway 45 (now Highway 145) bridge over Limestone Creek, southward for 0.2 mile to the top of the hill in section 25, T. 9 N., R. 7 W. The 1934 guidebook gives the elevation of the *Chione* Limestone as 261–262 feet.

Nodosaria bulba Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 46.

HOLOTYPE: HVH 58, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 49," (JH-36): "Light-gray glauconitic, calcareous clay. Taken 42 feet below top of cut. ... Elevation—164 feet." "Taken in a run-off ditch ... on the northwest side of State Highway 6, in the northwest corner of the SE¼ SE¼ NE¼ sec. 16, T. 10 N., R. 5 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 6, fig. 5.

COMMENTS: The highway in Winn Parish referred to by Howe (1939, p. 11) as State Highway 6 is today U.S. Highway 84. According to the label of Howe Loc. 278, sample JH-36 was collected at elevation 165 feet.

Nodosaria delicata Hussey 1949, *J. Paleontol.* 23: 127.

HOLOTYPE: HVH 2548, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 158," core at depth "1519'," "light to dark gray silty shale and greensand." Figured: pl. 26, fig. 21.

Nodosaria milamensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 47–48.

HOLOTYPE: HVH 50, Eocene, Claiborne, Cook Mountain Fm., Milams Member; "from Sample No. 104," (JH-215): "Fossiliferous glauconitic, calcareous clay. Taken from type Milams member outcrop, four feet above Sample No. 103 (JH-214). Elevation—180 feet." Taken eight feet above "zone of fossiliferous argillaceous limestone concretions," on scarp "on the southwest side of Antwine Creek in the SE¼ NE¼ sec. 17, T. 13 N., R. 3 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 5, fig. 14.

COMMENTS: According to Huner (1939, p. 88), his sample JH-215 was collected from a section that "begins 300 yards south of Mr. Hardin's house in a scarp on the west side of Antwine Creek," in the "NW¼, SE¼ sec. 17, T. 13 N., R. 3 W."

Nodosaria primitiva Hussey 1943, *J. Paleontol.* 17: 165–166.

HOLOTYPE: HVH 2549, Eocene, Cane River Fm.; "from sample 115," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW¼ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; "core samples ranging in depth from 1468 feet to 1555 feet." Figured: pl. 26, fig. 1.

COMMENTS: The lithology of sample 115, core at depth 1479 feet, is given by Hussey (1949, p. 115) as "brown silty shale with some glauconite." Hussey (1940, p. 144), however, describes the sample as "brown silty shale." Hussey's (1949) locality differs slightly from his 1943 paper: "312' 5" East" vs. "312 feet east."

The new name *Nodosaria balaniformis* Hussey 1950, replaces *Nodosaria primitiva* Hussey 1943, a homonym of *Nodosaria primitiva* Kübler and Zwingli 1866; see Thalmann (1950b, p. 42).

Nodosaria pyriformis Hussey 1949, *J. Paleontol.* 23: 127.

HOLOTYPE: HVH 2546, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115’ South and 150’ East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 150,” core at depth “1508½,” “gray-brown shale containing glauconite.” Figured: pl. 26, fig. 25.

COMMENTS: Hussey, in Thalmann (1949, p. 102), proposed the new name *Nodosaria tryloniformis* to replace *Nodosaria pyriformis* due to a possible homonymy. The new name, however, has been deemed unnecessary, and *Nodosaria pyriformis* is the accepted name (Hayward et al. 2020).

Nodosaria selenoides Hussey 1949, *J. Paleontol.* 23: 127.

HOLOTYPE: HVH 2547, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312’ 5” East and 345’ North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 119,” core at depth “1483,” “chocolate-brown shale and greensand.” Figured: pl. 26, fig. 30.

Nodosaria simplex Silvestri var. ***gracibasica*** Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 60.

HOLOTYPE: HVH 3996, Miocene; “Harang wedge in cuttings at 8310–8340 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, fig. 13.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Nonion applini Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 51.

HOLOTYPE: HVH 657, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 9, figs. 4a, 4b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Nonion danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 51–52.

HOLOTYPE: HVH 655, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 9, fig. 3.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Accepted as *Pseudohastigerina micra* (Cole 1927) by Young et al. (2020).

Nonion lunatum Garrett 1938, *J. Paleontol.* 12: 314.

HOLOTYPE: HVH 1921, Oligocene, Hackberry assemblage, sticky shale overlying Vicksburg; “Superior Oil Company, no. 1, D. Hebert, Hackberry field, Cameron Parish, La. [Louisiana], from core at 6,006–6,026 feet.” Figured: pl. 40, figs. 3a–3c.

PARATYPE: HVH 1922, same sample as holotype, one specimen, figured: pl. 40, fig. 4.

Nonion mauricensis Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 57–58.

HOLOTYPE: HVH 96, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 38,” (Rob-4): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness.” Sample No. 38 is “from beneath the next to the lowest iron ore ledge.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 8, figs. 1, 2.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

Nonion preadvenum Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 58–59.

HOLOTYPE: HVH 97, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 61,” (JH-62): “Calcareous fossiliferous clay containing lenses and stringers of glauconite. Taken in ditch 18 inches above base of slope leading down to Couley Creek along dirt road in the SE¼ NE¼ NE¼ NE¼ sec. 22, T. 10 N., R. 5 W. Elevation—125 feet.” Winn Parish, Louisiana. Collected by John Huner, Jr., on July 13, 1936. Figured: pl. 8, figs. 3, 4.

COMMENTS: According to Howe Loc. 272, Huner collected his sample JH-62 along Emergency Conservation Work (E.C.W.) Road 21 on a slope leading down to Couley Creek, in a ditch on the northeast side of the road, SE¼, NE¼, NE¼ sec 22, T. 10 N., R. 5 W.

Nonion struma Ellis 1939, *J. Paleontol.* 13: 423–424.

HOLOTYPE: HVH 1891, [Oligocene], lower Chickasawhay limestone; “from highway 45, south of Limestone Creek 3 miles north of Waynesboro,” Wayne County, Mississippi; “from fossiliferous marl collected 5 feet below the 1-foot-thick hard *Chione* limestone.” Locality LC of the Shreveport Geological Society’s (1934, pp. 41–43) guidebook; collected by Henry V. Howe. Figured: pl. 48, figs. 4a–c.

PARATYPE: HVH 1892, same sample as holotype, one specimen, figured: pl. 48, fig. 5.

COMMENTS: Ellis (1939, p. 423) states that geologists’ opinions differed over whether the Chickasawhay beds were either Miocene or Oligocene. The U.S. Geological Survey (2019) considers the lower Chickasawhay to be Oligocene.

Locality LC of the Shreveport Geological Society (1934, p. 41) extends from the old Highway 45 (now Highway 145) bridge over Limestone Creek, southward for 0.2 mile to the top of the hill in section 25, T. 9 N., R. 7 W. The 1934 guidebook gives the elevation of the *Chione* Limestone as 261–262 feet.

Nonionella danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 52–53.

HOLOTYPE: HVH 672, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 9, figs. 5a–5c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S.

(2020) Geologic Names Committee Archives.

Nonionella mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 59.

HOLOTYPE: HVH 90, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 39,” (Rob-5): “On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.,” Winn Parish, Louisiana. “The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness. The lowest of these fossiliferous beds was at water level at the time collected.” Sample No. 39 is “from beneath the lowest iron ore ledge and collected at water level. Elevation—77± feet.” Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 5). Figured: pl. 7, figs. 19–21.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as “extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed.”

The figures (pl. 7, figs. 19–21) of Howe (1939) do not match the specimen on the holotype slide.

Nonionella winniana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 60.

HOLOTYPE: HVH 93, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 86,” (JH-111): “Very fossiliferous, slightly glauconitic marl 12 feet thick. Taken five feet below top of slope leading down to creek branch, and in upper two feet of marl, in ditch on south side of improved road in the NE¼ SW¼ SW¼ sec. 28, T. 13 N., R. 3 W. ... Elevation—179 feet.” Winn Parish, Louisiana. Collected by John Huner, Jr., in 1936. Figured: pl. 7, figs. 26, 27.

COMMENTS: Huner’s (1939, p. 95) section description places his sample JH-111 in the Milams Member of the Cook Mountain Formation. The improved road is the lower Dodson road according to Howe Loc. 273A (JH-111).

Operculinoides natchitochensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 60.

HOLOTYPE: HVH 149, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 5,” (Ru-207): “Brown glauconitic calcareous, fossiliferous clays. Sample collected in the limestone boulder bed in road cut on the east side of State Highway 39, 2.3 miles south of Provencal in the SW¼ NE¼ sec. 4, T. 7 N., R. 8 W. Elevation—200 feet.”

Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 14, fig. 10.

PARATYPE: HVH 150, same sample as holotype, one specimen, figured: pl. 14, fig. 11.

COMMENTS: The genus *Operculinoides* Hanzawa 1935 is considered a synonym of *Nummulites* Lamarck 1801 (Hayward et al. 2020); *Operculinoides natchitochensis* = *Nummulites natchitochensis* (Howe 1939).

Oridorsalis westi Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 107–109.

HOLOTYPE: HVH 4443, Holocene; Location No. 37: “Lat. 28°58’16.4” N, Long. 89°08’34.3” W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)” “[L]ight-gray clay in the center of mudlump SP-5,” “west side of South Pass,” Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 22, figs. 3a–3c.

PARATYPES: LSUGDM 281, from same sample as holotype, nine specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58’16.4” N., Long. 89°08’34.4” W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Paleopolymorphina eoacnica Hussey 1949, *J. Paleontol.* 23: 128–129.

HOLOTYPE: HVH 2558, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115’ South and 150’ East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 162,” core at depth “1526’,” “gray silty shale with some greensand.” Figured: pl. 26, fig. 20.

Palmula decorata Hussey 1949, *J. Paleontol.* 23: 128.

HOLOTYPE: HVH 2557, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115’ South and 150’ East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 156,” core at depth “1516½’,” “light to dark gray silty shale and greensand.” Figured: pl. 26, fig. 26.

COMMENTS: Hussey proposed the new name *Palmula elegantissima* to replace *Palmula decorata* Hussey 1949, a homonym of *Palmula decorata* Loeblich and Tappan 1941 (Thalman 1949, p. 102).

Palmula huneri Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 49.

HOLOTYPE: HVH 77, Eocene, Claiborne, Cook Mountain

Fm.; “from Sample No. 49,” (JH-36): “Light-gray glauconitic, calcareous clay. Taken 42 feet below top of cut. ... Elevation—164 feet.” “Taken in a run-off ditch ... on the northwest side of State Highway 6, in the northwest corner of the SE¼ SE¼ NE¼ sec. 16, T. 10 N., R. 5 W.,” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 6, figs. 28, 29.

COMMENTS: The highway in Winn Parish referred to here as State Highway 6 is today U.S. Highway 84. According to the label of Howe Loc. 278, sample JH-36 was collected at elevation 165 feet.

Planularia catahoulaensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 36.

COTYPES [SYNTYPES]: HVH 729, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe; two specimens, figured: pl. 3, figs. 3 (young)—4 (adult).

COMMENTS: The two cotypes are syntypes, and are mounted on the same slide.

In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Planularia danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 36–37.

HOLOTYPE: HVH 625, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 3, fig. 1.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Accepted as *Astacolus danvillensis* (Howe and Wallace 1932) by Hayward et al. (2020).

Planularia ouachitaensis Howe and Wallace 1932, La. Dept.

Conserv., *Geol. Bull.* 2: 37.

HOLOTYPE: HVH 629, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 3, figs. 7a, 7b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Planularia parva Hussey 1949, *J. Paleontol.* 23: 125.

HOLOTYPE: HVH 2544, Eocene, Cane River Fm.; "from Sample No. Ru. 226-190," "about 0.6 miles west of Provencal on north side of tracks of T. & P. RR., NW¼ SW¼ SE¼ of sec. 20, T. 8 N., [sic], R. 8 W., *D. advena* zone," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 26, fig. 5.

COMMENTS: "T. & P. RR." = Texas and Pacific Railroad. "*D. advena* zone" = *Discocyclina advena* zone. "T. 8 N." = T. 8 N. Hussey's (1949, p. 117) explanation for plate 26, fig. 5, erroneously refers to sample 107 instead of sample 190.

Planularia winniana Howe and Ellis in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 42.

HOLOTYPE: HVH 32, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 36," (Rob-2): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 36 is "from beneath the next to the highest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 4, fig. 7.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are

clearly observed."

Planulina kniffeni Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 86–87.

HOLOTYPE: HVH 2037, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 87," (JH-113): "Marl containing argillaceous limestone concretions. Taken 12 feet below Sample No. 86 (JH-111) or two feet above contact with weathered fossiliferous greensand. ... Elevation—167 feet." Sample No. 87 was taken about 17 feet "below top of slope leading down to creek branch, ... in ditch on south side of improved road in the NE¼ SW¼ SW¼ sec. 28, T. 13 N., R. 3 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., in 1936. Figured: pl. 11, figs. 1–3.

COMMENTS: Huner (1939, pp. 94–95) describes the section in a road cut at this locality; his sample JH-113 (in bed 10 of his section) was taken from a nine-foot thick marl bed and is from the Milams Member of the Cook Mountain Formation. The "improved road" is the lower Dodson Road according to the label of Howe Loc. 273.

Planulina palmerae Garrett 1942, *J. Paleontol.* 16: 463.

HOLOTYPE: HVH 2400, Miocene; "Stanolind Oil and Gas Company wells in the High Island field, Galveston County, Texas. This field is located near the eastern end of Bolivar Peninsula, in the most eastern extremity of Galveston County, and lies almost in the Gulf of Mexico"; specimen "from no. A-15 Smith, core at 6,059–6,061 feet." Figured: pl. 70, figs. 3a–3c.

PARATYPE: HVH 2401, same sample as holotype, one specimen, figured: pl. 70, fig. 4.

COMMENTS: Garrett (1950) proposed the new name *Planulina palmerana* Garrett 1950, to replace *Planulina palmerae* Garrett 1942, a homonym of *Planulina palmerae* van Bellen 1941.

Plectina regularis Hussey 1949, *J. Paleontol.* 23: 119.

HOLOTYPE: HVH 2507, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 182," core at depth "1564'," "quartz and glauconitic sand and silt." Figured: pl. 26, figs. 3, 4.

Plectina robusta Hussey 1949, *J. Paleontol.* 23: 119.

HOLOTYPE: HVH 2505, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 110," core at depth "1472'," "brown silty shale with some glauconite." Figured: pl. 25, fig. 10.

PARATYPE: HVH 2506, same sample as holotype, two specimens, not figured.

COMMENTS: One of the two specimens on paratype

slide HVH 2506 is sectioned longitudinally.

Polymorphina advena Cushman var. ***nuda*** Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 56.

HOLOTYPE: HVH 81, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 36," (Rob-2): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 36 is "from beneath the next to the highest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 7, fig. 4.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Polymorphina fiski Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 56.

HOLOTYPE: HVH 79, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 61," (JH-62): "Calcareous fossiliferous clay containing lenses and stringers of glauconite. Taken in ditch 18 inches above base of slope leading down to Couley Creek along dirt road in the SE¼ NE¼ NE¼ NE¼ sec. 22, T. 10 N., R. 5 W. Elevation—125 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., on July 13, 1936. Figured: pl. 7, fig. 2.

COMMENTS: According to Howe Loc. 272, Huner collected his sample JH-62 along Emergency Conservation Work (E.C.W.) Road 21 on a slope leading down to Couley Creek, in a ditch on the northeast side of the road, SE¼, NE¼, NE¼ sec 22, T. 10 N., R. 5 W.

Polymorphina franquesi Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 57.

HOLOTYPE: HVH 82, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 36," (Rob-2): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 36 is "from beneath the next to the highest iron ore ledge." Collected by Marion S.

Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 7, figs. 5, 6.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Protelphidium profundifossatum Poag 1966, *Micropaleontology* 12: 416.

HOLOTYPE: HVH 7704, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation" taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaniptedi*, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 7, figs. 13, 14.

PARATYPES: LSUGDM 976, from same sample as holotype, 12 specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Proteonina harangensis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 40–41.

HOLOTYPE: HVH 3970, Miocene; "Harang wedge in cuttings at 8558–8588 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 10, figs. 4, 5.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Proteonina Williamson 1858 is considered a junior synonym of the genus *Reophax* de Montfort 1808 by Loeblich and Tappan (1964, 1987); *Proteonina harangensis* = *Reophax harangensis* (Smith 1948).

Pseudobulimina glaessneri Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 81–82.

HOLOTYPE: HVH 2039, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging

perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 11, figs. 9–11.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Pseudoclavulina columbiana Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 33.

HOLOTYPE: HVH 12, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 1," (JBG-18): "A bluff on the left bank of Sabine River, at Goodwin's shoal, behind the house of Mr. S.J. Speight, near the southwest corner of sec. 31, T. 5 N., R. 12 W.," Sabine Parish, Louisiana. "The locality is near the old site of Columbus and may be reached by taking an old wagon road 100 yards north of Mr. Speight's house. This road leads in about 300 yards to the river bank. The locality is a low bluff, by the shoals, about 300 yards downstream, and exposes about eight feet of section from water level up. The section exposed is a marl with a one-foot compact lime bed near the middle." This "sample came from 0–1 foot below the limestone ledge. The shoals are produced by slumping and the stratigraphic relations are greatly confused." Collected by Julius B. Garrett in summer 1932. Figured: pl. 2, figs. 9, 10.

COMMENTS: Garrett collected from the Milams Member of the Cook Mountain Formation (Andersen 1960, p. 90). Toledo Bend Reservoir later covered the sample location; construction of the lake began in 1964. An alternate spelling, "Godwin Shoals," is used on the labels of H.V. Howe's samples from this locality.

Pseudoclavulina elongata Hussey 1943, *J. Paleontol.* 17: 161.

HOLOTYPE: HVH 2510, Eocene, Cane River Fm.; "from sample 137," "Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW¼ sec. 29, T. 10 N., R. 2 E., La Salle Parish," Louisiana; "core samples ranging in depth from 1468 feet to 1555 feet." Figured: pl. 26, figs. 3, 4.

PARATYPE: HVH 2511, same sample as holotype, one specimen, not figured.

COMMENTS: The lithology of sample 137, core at depth 1503–1509 feet, is described by Hussey (1949) as "light gray silty shale and greensand." Hussey's (1949, p. 115) locality differs slightly from his 1943 paper: "312' 5" East" vs. "312 feet east."

Pseudoeponides anderseni Warren 1957, *Contrib. Cushman Found. Foramin. Res.* 8: 39.

HOLOTYPE: HVH 6430, Holocene; Buras-Scofield Bayou Region, "wet marsh on the northeast side of Crosscut Canal at Bay Pomme d'Or," Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2009, Warren Sample 5, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 4, figs. 12, 13.

PARATYPES from same sample as holotype: HVH 6430a, one specimen, figured: pl. 4, figs. 14, 15. LSUGDM 479, 60 specimens, not figured.

COMMENTS: Warren (1956, p. 134) gives the latitude and longitude of the polyhaline marsh Sample 5 as 29° 19' 45" N, 89° 33' 42" W. Warren (1956) also figures HVH 6430 (pl. 4, figs. 19, 20) under the name *Eponides* sp. A.

Accepted as *Helenina anderseni* (Warren 1957) by Hayward et al. (2020).

Pseudoglandulina mauricensis Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 48.

HOLOTYPE: HVH 62, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 6, fig. 10.

COMMENTS: The basal spine is not visible in the holotype.

Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

The genus *Pseudoglandulina* Cushman 1929 is considered a synonym of *Pyramidulina* Fornasini 1894 (Hayward et al. 2020); *Pseudoglandulina mauricensis* = *Pyramidulina mauricensis* (Howe and Roberts 1939).

Pseudoguembelina kempensis Esker 1968, *Contrib. Cushman Found. Foramin. Res.* 19: 168–169.

HOLOTYPE: HVH 8082, Upper Cretaceous, Kemp Clay, *Globotruncana gansseri* zone; "2–4' below the contact between the Littig Conglomerate and the

Kemp Clay, on Walker's Creek about 5½ miles NE of Cameron, [Milam County,] Texas." Loc. 21 of George C. Esker, III's (1968b) dissertation. Figured: text-figs. 1, 2.

PARATYPES from same sample as holotype: HVH 8083, one specimen, figured: text-figs. 4, 5. HVH 8084, one specimen, figured: text-fig. 3. HVH 8085, seven specimens, not figured.

COMMENTS: "Walkers Creek" is the spelling accepted by the U.S. Board on Geographic Names (2019).

Pulvinulinella bella Hussey 1949, *J. Paleontol.* 23: 140.

HOLOTYPE: HVH 2592, Eocene, Cane River Fm.; "from Sample No. Ru. 518-N-211," "NW ¼ NE ¼ NW ¼ of sec. 6, R. 6 W., in center of negro settlement, 40' hole extending from 12' above *D. advena* zone to 8' below it," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 28, figs. 1–3.

COMMENTS: "*D. advena* zone" = *Discocyclina advena* zone. Hussey (1943, 1949) does not list the township number, and the section quadrants published in 1943 and 1949 do not agree. Grover Murray, in a 1959 personal communication with Ellis and Messina (1952 et seq., entry for *Brachyocythere bernardi* Murray and Hussey), describes Rukas locality 518 as "a hand dug well at Chestnut, in the NW¼ NE¼ sec. 6, T. 12 N., R. 6 W., Natchitoches Parish."

Since *Pseudoparrella* Cushman and ten Dam 1948 replaced the homonym *Pulvinulinella* Cushman 1926, Hussey acknowledges that *Pulvinulinella bella* should be *Pseudoparrella bella* (Hussey 1949) in a personal communication with Ellis and Messina (1940 et seq.).

Pulvinulinella danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 71–72.

HOLOTYPE: HVH 618, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 13, figs. 7a–7c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Cushman and ten Dam (1948) proposed the new name *Pseudoparrella* to replace the homonym *Pulvinulinella* Cushman 1926; *Pulvinulinella danvillensis* = *Pseudoparrella danvillensis* (Howe and Wallace 1932).

Pulvinulinella harrisi Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 193–194 (7–8).

HOLOTYPE: HVH 774, Eocene, Moodys Branch marl; "on Town Creek, Jackson, [Hinds County,] Mississippi, where it is crossed by the Great Northern Railroad Bridge." Collected by Wade H. Hadley, Jr., and Morton B. Stephenson. Figured: pl. 14 (pl. 1), figs. 6a–6c.

COMMENTS: According to Stephenson (1937, p. 159, Loc. 1), basal Moodys Branch marl was collected on the north side of Town Creek. Cushman and ten Dam (1948) proposed the new name *Pseudoparrella* to replace the homonym *Pulvinulinella* Cushman 1926; *Pulvinulinella harrisi* = *Pseudoparrella harrisi* (Hadley 1935).

Pulvinulinella huneri Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 81.

HOLOTYPE: HVH 2042, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 78," (JH-94): "Glaucinitic, calcareous clay occurring four feet below zone of fossiliferous argillaceous limestone concretions. Taken from drill hole four feet deep in the SW¼ SE¼ SE¼ sec. 17, T. 10 N., R. 5 W., along abandoned logging road between State Highway 6 and Cedar Bluff on Saline Bayou. Elevation—191 feet." Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 11, figs. 14–16.

PARATYPE: HVH 2042a, same sample as holotype, one specimen, not figured.

COMMENTS: The highway in Winn Parish referred to here as State Highway 6 is today U.S. Highway 84. Cushman and ten Dam (1948) proposed the new name *Pseudoparrella* to replace the homonym *Pulvinulinella* Cushman 1926; *Pulvinulinella huneri* = *Pseudoparrella huneri* (Howe 1939).

Pyrgo inornata (d'Orbigny) var. ***danvillensis*** Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 21–22.

HOLOTYPE: HVH 637, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 2, figs. 1a, 1b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Pyrgo magnacaudata Smith 1948, La. Geol. Surv., *Geol. Bull.*

26: 58.

HOLOTYPE: HVH 3993, Miocene; "Harang wedge in cuttings at 8403–8433 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW $\frac{1}{4}$ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, figs. 14–16.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Pyrgo phlegeri Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 38–39.

HOLOTYPE: HVH 4274, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 8, figs. 1a–1c.

PARATYPES from same sample as holotype: HVH 4275, one specimen, figured: pl. 8, figs. 2a–2c. LSUGDM 143, eight specimens, not figured. LSUGDM 144, 12 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Quasicibicides anderseni Rosen 1985, *Gulf Coast Assoc. Geol. Soc., Trans.* 35: 490–491.

HOLOTYPE: HVH 8499, Upper Cretaceous, Blufftown Formation, middle Blufftown member; Loc. CR9, type Blufftown locality, "a series of high bluffs overlooking the Chattahoochee River, about 0.2 mile (0.32 km) west of the former post office of old Blufftown and one mile (1.6 km) southwest of Upper Bradley Place," Stewart County, Georgia. Collected by Rashel Nikravesch Rosen between December 1965 and January 1966. Figured: pl. 1, figs. 1, 2.

PARATYPES from Loc. CR9, middle Blufftown: HVH 8498, one specimen, figured: pl. 1, figs. 5–7. LSUGDM 1247, one specimen, figured: pl. 1, figs. 3, 4.

COMMENTS: According to Nikravesch (1967, p. 147), CR9 is the northern hill of the type Blufftown locality, along the east bank of the Chattahoochee River, "about 36 miles south of Columbus, Georgia, and 100 feet north of CR-10." Several samples were collected at location CR9 at intervals of 1 to 1.5 meters; Rosen (1985), however, did not specify the samples from which the holotype and paratypes were collected.

Paratype figure numbers are incorrect in the

text (Rosen 1985, p. 490), but they are accurate in the plate caption. Rosen (1985, p. 490) mistakenly published the catalog numbers HVH 8521 and 8522 as hypotypes; those numbers belong to specimens of a different species.

Quinqueloculina acuta Hussey 1949, *J. Paleontol.* 23: 120.

HOLOTYPE: HVH 2517, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W. $\frac{1}{4}$ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 118," core at depth "1482'," "gray-brown shale and greensand." Figured: pl. 25, figs. 17, 18.

Quinqueloculina amygdulata Hussey 1949, *J. Paleontol.* 23: 120.

HOLOTYPE: HVH 2516, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W. $\frac{1}{4}$, of the N.E. $\frac{1}{4}$ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 152," core at depth "1512'," "light gray shale and glauconite." Figured: pl. 25, figs. 19, 20.

Quinqueloculina bienvillensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 34.

HOLOTYPE: HVH 31, Eocene, Claiborne, upper part of Sparta Fm.; "from Sample No. 131," (RDR B-22): "On or near line between SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27 and the SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 17 N., R. 6 W. Road cut on the west side of State Highway 12, two feet above base of exposure," Bienville Parish, Louisiana. Collected by R. Dana Russell between 1936 and 1938. Figured: pl. 4, figs. 4–6.

Quinqueloculina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 22.

HOLOTYPE: HVH 635, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 2, figs. 2a–2c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Quinqueloculina fragilissima Hussey 1949, *J. Paleontol.* 23: 121.

HOLOTYPE: HVH 2520, Eocene, Cane River Fm.; "La.

Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E., La Salle Parish, Louisiana, "from Sample No. 111," core at "1473'," "brown silty shale with some glauconite." Figured: pl. 25, figs. 16, 21.

Quinqueloculina garrettii Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 30.

HOLOTYPE: HVH 4253, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 4, figs. 5a–5c.

PARATYPES: LSUGDM 125, from same sample as holotype, 22 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Quinqueloculina gibbosa Hussey 1949, *J. Paleontol.* 23: 120.

HOLOTYPE: HVH 2514, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E., La Salle Parish, Louisiana, "from Sample No. 107," core at depth "1468'," "brown silty shale." Figured: pl. 25, figs. 24, 25.

Quinqueloculina harrisi Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 35.

HOLOTYPE: HVH 19, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 2, figs. 13–15.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north

and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Quinqueloculina mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 35.

HOLOTYPE: HVH 33, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 4, figs. 8–10.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Quinqueloculina parvatriangularis Hussey 1949, *J. Paleontol.* 23: 121.

HOLOTYPE: HVH 2519, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E., La Salle Parish, Louisiana, "from Sample No. 109," core at depth "1470'," "brown silty shale." Figured: pl. 25, figs. 14, 15.

COMMENTS: The holotype is severely damaged.

Quinqueloculina salinensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 35.

HOLOTYPE: HVH 30, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 4, figs. 1–3.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939)

were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Quinqueloculina striaturata Hussey 1949, *J. Paleontol.* 23: 120–121.

HOLOTYPE: HVH 2518, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 107," core at depth "1468'," "brown silty shale." Figured: pl. 25, figs. 22, 23.

Quinqueloculina subgibbosa Hussey 1949, *J. Paleontol.* 23: 120.

HOLOTYPE: HVH 2515, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 107," core at depth "1468'," "brown silty shale." Figured: pl. 25, figs. 26, 27.

COMMENTS: Hussey (1949, p. 120) erroneously refers to the holotype slide as No. 2315.

Quinqueloculina tipswordi Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 31–32.

HOLOTYPE: HVH 4250, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 5, figs. 2a–2c.

PARATYPES: LSUGDM 128, from same sample as holotype, 13 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Recurvoides gillieparkeri Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 46–47.

HOLOTYPE: HVH 3978, Miocene; "Harang wedge in

cuttings at 8341–8371 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 10, figs. 1–3.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Reophax beaurecarsoni Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 42.

HOLOTYPE: HVH 3972, Miocene; "Harang wedge in cuttings at 8341–8371 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, fig. 5.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Reophax davepopei Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 42–43.

HOLOTYPE: HVH 3973, Miocene; "Harang wedge in cuttings at 8155–8185 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, fig. 7.

PARATYPE: HVH 3974, same sample as holotype, one specimen, figured: pl. 11, fig. 8.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Reussella costata Hussey 1949, *J. Paleontol.* 23: 133.

HOLOTYPE: HVH 2570, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 137," core at depth "1503'–1509'," "light gray silty shale and greensand." Figured: pl. 27, fig. 3.

Reussella goochi Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 70.

HOLOTYPE: HVH 118, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 49," (JH-36): "Light-gray glauconitic, calcareous clay. Taken 42 feet below top of cut. ... Elevation—164 feet." "Taken in a run-off ditch ... on the northwest side of State Highway 6, in the northwest corner of the SE¼ SE¼ NE¼ sec. 16, T. 10 N., R. 5 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 8, figs. 38, 39.

COMMENTS: The highway in Winn Parish referred to by Howe (1939, p. 11) as State Highway 6 is today U.S. Highway 84. According to the label of Howe Loc. 278, sample JH-36 was collected at elevation 165 feet.

Robertina howei Hussey 1949, *J. Paleontol.* 23: 131.

HOLOTYPE: HVH 2564, Eocene, Cane River Fm.; "from Sample No. Ru. 510-D-185," "Ru. 510, SE ¼ SE ¼, NW ¼ of sec. 8, T. 8 N., R. 8 W.," "Natchitoches Parish,

Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 27, figs. 6, 7.

Robertina mcguirti Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 82.

HOLOTYPE: HVH 109, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 36," (Rob-2): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 36 is "from beneath the next to the highest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 2). Figured: pl. 8, figs. 23, 24.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Robulus chambersi Garrett 1939, *J. Paleontol.* 13: 576.

SYNTYPES: HVH 1940, middle Tertiary, *Discorbis* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," core "from depth of 5,647–5,651 feet"; one specimen, figured: pl. 65, figs. 9a, 9b.

HVH 1941, same sample; one specimen, figured: pl. 65, fig. 8.

COMMENTS: The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964; Hayward et al. 2020); *Robulus chambersi* = *Lenticulina chambersi* (Garrett 1939).

Robulus (?) danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 39–40.

HOLOTYPE: HVH 617, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 5, fig. 7.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological

Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravelle (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

The two generic names *Robulus* de Montfort 1808 and *Darbyella* Howe and Wallace 1932 are junior synonyms of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964, 1987). Thus, *Robulus danvillensis* and *Darbyella danvillensis* are subjective secondary homonyms of *Lenticulina danvillensis* (Howe and Wallace 1932).

Robulus lacerta Garrett 1939 *J. Paleontol.* 13: 576.

HOLOTYPE: HVH 1942, middle Tertiary, *Marginulina idiomorpha* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," core "from depth of 6,034–6,037 feet." Figured: pl. 65, fig. 7.

PARATYPE: HVH 1943, same sample as holotype, one specimen, figured: pl. 65, figs. 6a, 6b.

COMMENTS: The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964; Hayward et al. 2020); *Robulus lacerta* = *Lenticulina lacerta* (Garrett 1939).

Robulus limbatus Hussey 1949, *J. Paleontol.* 23: 124.

HOLOTYPE: HVH 2540, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 165," core at depth "1529'," "brown-gray shale with some greensand." Figured: pl. 25, fig. 13.

COMMENTS: Hussey proposed the new name *Robulus pachysuturalis* to replace *Robulus limbatus* Hussey 1949, a secondary homonym of *Robulina limbata* Bornemann 1855 (Thalmann 1949, p. 102). The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964; Hayward et al. 2020); *Robulus limbatus* Hussey = *Lenticulina pachysuturalis* (Hussey 1949).

Robulus lowmani Andersen 1961, La. Geol. Surv., *Geol. Bull.* 35 (Pt. 2): 51–52.

HOLOTYPE: HVH 4291, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[l]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 10, figs. 8a, 8b.

PARATYPES: LSUGDM 166, from same sample as holotype, 11 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et

seq.) describe the type locality as “a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.).” The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Accepted as *Lenticulina lowmani* (Andersen 1961) by Hayward et al. (2020).

Robulus macomberi Butler 1962, *J. Paleontol.* 36: 1364, 1367.

HOLOTYPE: HVH 6751, Miocene; “Magnolia Petroleum Co. State Lease 883, no. 1-A, Block 46 Field, Vermilion offshore Area,” off the coast of Vermilion Parish, Louisiana. “Cuttings from 12,970–13,000 feet.” Figured: text-figs. 3d, 3e.

PARATYPES from same locality and depth range as holotype: HVH 6752, one specimen, figured: text-figs. 3f–i. LSUGDM 1096, one specimen, not figured.

COMMENTS: According to Butler (1962, p. 1363), *Robulus macomberi* has been known in the petroleum industry as *Robulus* “43,” *Robulus* “L,” and *Cristellaria* “angular.” The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964; Hayward et al. 2020); *Robulus macomberi* = *Lenticulina macomberi* (Butler 1962).

Robulus translucidus Hussey 1949, *J. Paleontol.* 23: 125.

HOLOTYPE: HVH 2543, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 107,” core at depth “1468',” “brown silty shale.” Figured: pl. 25, fig. 6.

COMMENTS: Hussey proposed the new name *Robulus claratus* to replace *Robulus translucidus* Hussey 1949 due to a possible homonymy (Thalmann 1949, p. 102). The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964; Hayward et al. 2020); *Robulus translucidus* Hussey = *Lenticulina clarata* (Hussey 1949).

Robulus trochoides Hussey 1949, *J. Paleontol.* 23: 124.

HOLOTYPE: HVH 2541, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 164,” core at depth “1528',” “brown-gray shale with some greensand.” Figured: pl. 25, fig. 11.

COMMENTS: Hussey (1949, p. 124) erroneously refers to the holotype slide as No. 2451 instead of 2541. The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich

and Tappan 1964; Hayward et al. 2020); *Robulus trochoides* = *Lenticulina trochoides* (Hussey 1949).

Robulus umbonatus Hussey 1949, *J. Paleontol.* 23: 124.

HOLOTYPE: HVH 2542, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 124,” core at depth “1487',” “chocolate-brown shale and greensand with some lignite.” Figured: pl. 25, fig. 12.

COMMENTS: Hussey proposed the new name *Robulus vitrealis* to replace *Robulus umbonatus* Hussey 1949, a homonym of *Robulina umbonata* Reuss 1851 (Thalmann 1949, p. 102). The generic name *Robulus* de Montfort 1808 is considered a synonym of *Lenticulina* Lamarck 1804 (Loeblich and Tappan 1964; Hayward et al. 2020); *Robulus umbonatus* Hussey = *Lenticulina vitrealis* (Hussey 1949).

Rosalina scopulata Poag 1966, *Micropaleontology* 12: 411.

HOLOTYPE: HVH 7681, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 12, 3.8 ft. above base of Paynes Hammock Formation” taken in an orange, coarse-grained sand bed, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 5, figs. 7–9.

COMMENTS: Paratype LSUGDM 971 is missing from the collection. Poag’s (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Saracenaria danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 41–42.

HOLOTYPE: HVH 627, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 4, figs. 3a–3c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Saracenaria lamptoni Andersen 1961, La. Geol. Surv., *Geol.*

Bull. 35 (Pt. 2): 61.

HOLOTYPE: HVH 4345, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 14, figs. 3a–3c.

PARATYPES: LSUGDM 180, from same sample as holotype, six specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Saracenaria limbata Hussey 1949, *J. Paleontol.* 23: 126.

HOLOTYPE: HVH 2554, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 113," core at depth "1476'," "brown silty shale with some glauconite." Figured: pl. 26, figs. 15, 18.

COMMENTS: The lithologic description of Sample 113 in Hussey's (1940, p. 144) dissertation is "brown silty shale."

Saracenaria mexicana Andersen 1961, *La. Geol. Surv., Geol. Bull.* 35 (Pt. 2): 60.

HOLOTYPE: HVH 4344, Holocene; Location No. 37: "Lat. 28°58'16.4" N, Long. 89°08'34.3" W; South Pass mudlump No. 5, surface sample. (L.S.U. Geol. Mus. No. M-144.)" "[L]ight-gray clay in the center of mudlump SP-5," "west side of South Pass," Mississippi River, Plaquemines Parish, Louisiana (Andersen 1961, pp. 15, 17, 200). Collected by Harold V. Andersen between 1948 and 1949. Figured: pl. 14, figs. 1a–1c.

PARATYPES: LSUGDM 179, from same sample as holotype, 14 specimens, not figured.

COMMENTS: Location maps are in figures 1 and 2 of Andersen (1961, pp. 8–9). Ellis and Messina (1940 et seq.) describe the type locality as "a mudlump island off the mouth of South Pass, 2600 feet southeast of the sand spit, Lower Mississippi River Delta, Louisiana (Lat. 28°58'16.4" N., Long. 89°08'34.4" W.)." The material may be Holocene or Pleistocene; for a discussion of the age of mudlump samples and the Holocene-Pleistocene boundary in the Gulf of Mexico, see Haman (1981) and Stringer (1992).

Saracenaria moresiana Howe and Wallace 1932, *La. Dept. Conserv., Geol. Bull.* 2: 42.

HOLOTYPE: HVH 738, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 2, figs. 8a–8c.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Saracenaria parva Hussey 1949, *J. Paleontol.* 23: 126.

HOLOTYPE: HVH 2555, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 110," core at depth "1472'," "brown silty shale with some glauconite." Figured: pl. 26, fig. 13.

COMMENTS: In the text, Hussey (1949, p. 126) erroneously refers to the holotype slide as No. 2535 instead of 2555.

Saracenaria perforata Hussey 1949, *J. Paleontol.* 23: 125.

HOLOTYPE: HVH 2553, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 148," core at depth "1506'," "gray shale, very little glauconite." Figured: pl. 26, fig. 14.

COMMENTS: In the explanation of pl. 26, fig. 14 (Hussey 1949, p. 117), the sample is mistakenly referred to as no. 14 instead of the correct sample no. 148.

Sigmavirgulina spissitruncula Poag 1966, *Micropaleontology* 12: 424, 426.

HOLOTYPE: HVH 7725, [Oligocene], Paynes Hammock Fm.; "Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation" taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaspiedi*, in a section "approximately 270 yards north of Locality CX" and 70 yards north of "the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi." Collected by C. Wylie Poag. Figured: pl. 8, figs. 29, 30.

PARATYPES: LSUGDM 979, from same sample as holotype, six specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a "Lower Miocene?" age to the Paynes Hammock Formation

was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Sigmoilina inconspicua Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 36–37.

HOLOTYPE: HVH 17, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 61,” (JH-62): “Calcareous fossiliferous clay containing lenses and stringers of glauconite. Taken in ditch 18 inches above base of slope leading down to Couley Creek along dirt road in the SE¼ NE¼ NE¼ NE¼ sec. 22, T. 10 N., R. 5 W. Elevation—125 feet.” Winn Parish, Louisiana. Collected by John Huner, Jr., on July 13, 1936. Figured: pl. 2, figs. 16–18.

COMMENTS: According to Howe Loc. 272, Huner collected his sample JH-62 along Emergency Conservation Work (E.C.W.) Road 21 on a slope leading down to Couley Creek, in a ditch on the northeast side of the road, SE¼, NE¼, NE¼ sec 22, T. 10 N., R. 5 W.

Sigmomorphina mindenensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 55.

HOLOTYPE: HVH 74, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 169,” (HVH [Loc.]-258): “Cut on the south side of U.S. Highway 80, two miles by speedometer from Minden courthouse, in sec. 26, T. 19 N., R. 9 W. Near the base of the Cook Mountain section,” Webster Parish, Louisiana. Collected by Henry V. Howe in 1926. Figured: pl. 6, figs. 23, 24.

Siphogenerina fredsmithi Garrett 1939, *J. Paleontol.* 13: 577.

HOLOTYPE: HVH 1952, middle Tertiary, *Discorbis* zone; “Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas,” “from core at 5,711–5,714 feet.” Figured: pl. 66, fig. 1.

Siphogenerina spinulosa Hussey 1949, *J. Paleontol.* 23: 132–133.

HOLOTYPE: HVH 2573, Eocene, Cane River Fm.; “La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.,” La Salle Parish, Louisiana, “from Sample No. 137,” core at depth “1503'–1509',” “light gray silty shale and greensand.” Figured: pl. 27, fig. 13.

COMMENTS: Hussey (1949, p. 133) erroneously refers to the holotype slide as No. 2575 in the text instead of 2573.

Siphonina carinata Hussey 1943, *J. Paleontol.* 17: 166.

HOLOTYPE: HVH 2583, Eocene, Cane River Fm.; “from sample 128,” “Louisiana Oil and Ref. Co., Tremont No. 2, 312 feet east and 345 feet north of southwest cor. SW¼ sec. 29, T. 10 N., R. 2 E., La Salle Parish,” Louisiana; “core samples ranging in depth from 1468 feet to 1555 feet.” Figured: pl. 26, figs. 14, 15.

COMMENTS: The lithology of sample 128, core at depth 1490 feet, is given by Hussey (1949, p. 115)

as “chocolate-brown shale with some greensand.” Hussey's (1949) locality also differs slightly from his 1943 paper: “312' 5" East” vs. “312 feet east.”

Siphonina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 70.

HOLOTYPE: HVH 600, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper bed” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 13, figs. 1a, 1b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives.

Siphonina ficticuspis Poag 1966, *Micropaleontology* 12: 412.

HOLOTYPE: HVH 7686, [Oligocene], Paynes Hammock Fm.; “Loc. S19, sample 10, 2 ft. above base of Paynes Hammock Formation” taken in a blue-green, argillaceous, loose sand bed with *Ostrea blaspiedi*, in a section “approximately 270 yards north of Locality CX” and 70 yards north of “the bridge on the Waynesboro-Laurel road (U.S. Highway 84) on the west bank of the Chickasawhay River, west of Waynesboro, Wayne County, Mississippi.” Collected by C. Wylie Poag. Figured: pl. 5, figs. 22–24.

PARATYPES: LSUGDM 972, from same sample as holotype, four specimens, not figured.

COMMENTS: Poag's (1966b) assignment of a “Lower Miocene?” age to the Paynes Hammock Formation was provisional. The U.S. Geological Survey (2019) considers the formation to be upper Oligocene.

Siphonina goochi Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 77.

HOLOTYPE: HVH 2028, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 80,” (JH-96): “Glauconitic, very fossiliferous marl containing zone of argillaceous limestone concretions up to 10 inches in diameter. Taken three feet below Sample No. 79 (JH-95 B). Elevation—182 feet.” Sample No. 80 was taken about 22 feet “below top of slope in well-exposed cut on the southeast side of intersection of State Highway 6 and Couley-St. Maurice road in the SE¼ NW¼ SE¼ NE¼ sec. 20, T. 10 N., R. 5 W.,” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 10, fig. 12.

PARATYPE: HVH 2028a, same sample as holotype, one

specimen, not figured.

COMMENTS: Sample JH-96 is described in Huner (1939, p. 90) as from a "[z]one of hard very fossiliferous limestone concretions with greensand. *Operculinoides sabinensis*," bed 11 of the section "in road cut along U.S. Highway 84 in the northwest corner of the SE¼ NE¼ sec 20, T. 10 N., R. 5 W., Winn Parish." In Winn Parish, U.S. Highway 84 was formerly Louisiana Highway 6.

Siphonina umbonata Hussey 1949, *J. Paleontol.* 23: 137–138.

HOLOTYPE: HVH 2584, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 109," core at depth "1470'," "brown silty shale." Figured: pl. 29, figs. 2, 3.

COMMENTS: In the explanation of pl. 29, figs. 2 and 3, Hussey (1949, p. 140), mistakenly refers to the holotype slide as no. 2586.

Siphoninella chambersi Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 77–78.

HOLOTYPE: HVH 2026, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 10, figs. 7–9.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Siphoninella parva Hussey 1949, *J. Paleontol.* 23: 138.

HOLOTYPE: HVH 2586, Eocene, Cane River Fm.; "from Sample No. Ru. 518-J-207," "NW ¼ NE ¼ NW ¼ of sec. 6, R. 6 W., in center of negro settlement, 40' hole extending from 12' above *D. advena* zone to 8' below it," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 29, fig. 1.

COMMENTS: "*D. advena* zone" = *Discocyclus advena* zone. Hussey (1943, 1949) does not list the township

number, and the section quadrants published in 1943 and 1949 do not agree. Grover Murray, in a 1959 personal communication with Ellis and Messina (1952 et seq., entry for *Brachycythere bernardi* Murray and Hussey), describes Rukas locality 518 as "a hand dug well at Chestnut, in the NW¼ NE¼ sec. 6, T. 12 N., R. 6 W., Natchitoches Parish."

Spiroloculina bidentata Hadley 1935, *Bull. Amer. Paleo.* 22 (No. 74): 191–192 (5–6).

HOLOTYPE: HVH 771, Eocene, Moodys Branch Marl; "on Town Creek, Jackson, [Hinds County,] Mississippi, where it is crossed by the Great Northern Railroad Bridge." Collected by Wade H. Hadley, Jr., and Morton B. Stephenson. Figured: pl. 14 (pl. 1), figs. 4a, 4b.

COMMENTS: According to Stephenson (1937, p. 159, Loc. 1), basal Moodys Branch marl was collected on the north side of Town Creek.

Spiroloculina lamposa Hussey 1949, *J. Paleontol.* 23: 121.

HOLOTYPE: HVH 2521, Eocene, Cane River Fm.; "from Sample No. Ru. 510-D-185," "Ru. 510, SE ¼ SE ¼, NW ¼ of sec. 8, T. 8 N., R. 8 W.," "Natchitoches Parish, Louisiana." Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 26, fig. 6.

COMMENTS: Hussey's (1949, p. 117) explanation of pl. 26, fig. 6, refers to the holotype slide as no. 2512 instead of the correct no. 2521.

Spiroloculina ocularis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 57–58.

HOLOTYPE: HVH 3992, Miocene; "Harang wedge in cuttings at 8334–8364 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 9, figs. 3, 4.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Spiroplectammina grossefinale Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 53.

HOLOTYPE: HVH 3986, Miocene; "Harang wedge in cuttings at 8465–8495 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, figs. 6, 7.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Spiroplectammina howei Stuckey 1946, *J. Paleontol.* 20: 164.

HOLOTYPE: HVH 3310, Oligocene, Vicksburg; "J.B. Garrett and C.F. Washburn, Locality 71, Sample C. Red Bluff on the Chickasawhay River two and one-half miles north of Hiwannee, Mississippi." Collected by Julius B. Garrett and Carlton F. Washburn between 1935 and 1939. Figured: pl. 29, figs. 8a, 8b.

PARATYPES from same sample as holotype: HVH 3311,

one specimen, figured: pl. 29, figs. 10a, 10b. HVH 3312, one specimen, figured: pl. 29, figs. 9a, 9b.

COMMENTS: The locality is either Clarke County or Wayne County, Mississippi.

Spiroplectammina natchitochensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 31.

HOLOTYPE: HVH 3, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 10," (Ru-238) (Ru-276): "Yellow calcareous clays collected at road cut 0.8 mile south of the new Old River bridge in the SE¼ SE¼ sec. 9, T. 8 N., R. 7 W.," Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 1, figs. 6–7.

Spiroplectammina waughii Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 53–54.

HOLOTYPE: HVH 3987, Miocene; "Harang wedge in cuttings at 8527–8557 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, figs. 3, 4.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Sulcophax palustris Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 31.

HOLOTYPE: HVH 6421, Holocene; Buras-Scofield Bayou Region, "wet marsh on the northeast side of Crosscut Canal at Bay Pomme d'Or," Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2009, Warren Sample 5, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 3, fig. 1.

PARATYPES from same sample as holotype: HVH 6421a, one specimen, figured: pl. 3, fig. 2. HVH 6421b, one specimen, figured: pl. 3, figs. 3, 4. GDM 470, five specimens, not figured.

COMMENTS: Warren (1956, p. 134) gives the latitude and longitude of the polyhaline marsh Sample 5 as 29° 19' 45" N, 89° 33' 42" W. Warren (1956) figures HVH 6421 (pl. 1, figs. 7, 8) and HVH 6421a (pl. 1, figs. 5, 6) under the name *Sulcophax* sp. A.

Loeblich and Tappan (1984, pp. 1160–1161) described the new genus *Warrenita* for this species; the accepted name is *Warrenita palustris* (Warren 1957).

Texina ferayi Andersen 1984, *Tulane Stud. Geol. Paleontol.* 18: 17.

HOLOTYPE: HVH 10346, Eocene, Weches Fm., Viesca Member; "located on the right bank of the Colorado River at Smithville, [Bastrop County,] Texas." Collected by H.V. Andersen. Figured: figs. 43, 45, 46.

PARATYPES from same locality as holotype: HVH 10347, one specimen, figured: fig. 44. HVH 10348, one specimen, not figured.

COMMENTS: Andersen (1984, pp. 12, 17) lists the holotype catalog number as LSU GM No. 10509; the correct catalog number is HVH 10346. Paratype HVH 10347 is listed as LSU GM No. 10510. Loeblich and Tappan (1987, pp. 352–353) consider *Texina* Andersen 1984 a junior synonym of *Neaguities* Andersen 1984. Andersen (1997, p. 187, fig. 27) rejects this opinion, and presents convincing evidence (wall structure, aperture) supporting the separation of the two genera.

Textularia broussardi Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 18.

HOLOTYPE: HVH 724, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 1, figs. 3a, 3b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Textularia danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 18.

HOLOTYPE: HVH 683, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions"; "upper horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 1, figs. 2a, 2b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Textularia mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 31–32.

HOLOTYPE: HVH 11, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 37," (Rob-3): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges.

Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 37 is "from beneath the middle iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 3). Figured: pl. 1, figs. 18, 19.

PARATYPE: HVH 10, Eocene, Claiborne, Cook Mountain Fm.; from Sample No. 87, (JH-113): Marl containing argillaceous limestone concretions. Taken 12 feet below Sample No. 86 (JH-111) or two feet above contact with weathered fossiliferous greensand. Elevation—167 feet. Sample No. 87 was taken about 17 feet below top of slope leading down to creek branch, in ditch on south side of improved road in the NE¼ SW¼ SW¼ sec. 28, T. 13 N., R. 3 W., Winn Parish, Louisiana. Collected by John Huner, Jr., in 1936; one specimen, figured: pl. 1, figs. 16, 17.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Sample JH-113 of Huner (1939, p. 95) is from the Milams Member of the Cook Mountain Formation. The "improved road" is the lower Dodson Road according to Howe Loc. 273.

Textularia mornhinvegi Garrett 1939, *J. Paleontol.* 13: 575.

SYNTYPES: HVH 1935, middle Tertiary, *Heterostegina* zone; "Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," core "from depth of 5,984–5,994 feet"; one specimen, figured: pl. 65, figs. 1a, 1b.

HVH 1936, same sample; one specimen, figured: pl. 65, fig. 2.

Textularia ouachitaensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 20.

HOLOTYPE: HVH 732, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 3, "[f]ossiliferous blue clay, weathering dark brown to yellow. The shells are scattered through the whole mass and occasionally occur in thin beds with light brown sand"; "lower horizon" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 1, figs. 1a, 1b.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Lower Danville of Howe and Wallace" (bed 3) as 25 to 50 feet. "Danville Landing" was first used

as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Textularia palustris Warren 1957, *Contrib. Cush. Found. Foram. Res.* 8: 34.

HOLOTYPE: HVH 6428, Holocene; Buras-Scofield Bayou Region, "wet marsh on the northeast side of Crosscut Canal at Bay Pomme d'Or," Plaquemines Parish, Louisiana. LSU Geology Museum Locality No. 2009, Warren Sample 5, collected by Godfrey W. Grant and Albert David Warren on October 22, 1953. Figured: pl. 4, fig. 5.

PARATYPES from same sample as holotype: HVH 6428a, one specimen, figured: pl. 4, figs. 3, 4. LSUGDM 477, 22 specimens, not figured.

COMMENTS: Warren (1956, p. 134) gives the latitude and longitude of the polyhaline marsh Sample 5 as 29° 19' 45" N, 89° 33' 42" W. Warren (1956) figures HVH 6428 (pl. 2, fig. 3) and HVH 6428a (pl. 2, figs. 4–6) under the name *Textularia* sp. A.

Textularia palustris is the type species of the genus *Palustrella* Bronnimann, Whittaker, and Zaninetti 1992, and is accepted as *Palustrella palustris* (Warren 1957) (Hayward et al. 2020).

Textularia seligi Stuckey 1946, *J. Paleontol.* 20: 164–165.

HOLOTYPE: HVH 3315, Oligocene, Vicksburg; "Stanolind Oil and Gas Co., no. 1 M.E. Giles, Old Ocean Field, Brazoria County, Texas. Core at 10,480–90 feet." Figured: pl. 29, figs. 2a–2c.

PARATYPES from same sample as holotype: HVH 3316, one specimen, figured: pl. 29, figs. 3a, 3b. HVH 3317, one specimen, figured: pl. 29, figs. 1a, 1b.

Textulariella polygona Hussey 1949, *J. Paleontol.* 23: 119.

HOLOTYPE: HVH 2504, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 151," core at depth "151'," "light gray shale and glauconite." Figured: pl. 25, fig. 8.

Triloculina garretti Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 37.

HOLOTYPE: HVH 18, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 1," (JBG-18): "A bluff on the left bank of Sabine River, at Goodwin's shoal, behind the house of Mr. S.J. Speight, near the southwest corner of sec. 31, T. 5 N., R. 12 W.," Sabine Parish, Louisiana. "The locality is near the old site of Columbus and may be reached by taking an old wagon road 100 yards north of Mr. Speight's house. This road leads in about 300 yards to the river bank. The locality is a low bluff, by the shoals, about 300 yards downstream,

and exposes about eight feet of section from water level up. The section exposed is a marl with a one-foot compact lime bed near the middle." This "sample came from 0–1 foot below the limestone ledge. The shoals are produced by slumping and the stratigraphic relations are greatly confused." Collected by Julius B. Garrett in summer 1932. Figured: pl. 2, figs. 3–5.

COMMENTS: Garrett collected from the Milams Member of the Cook Mountain Formation (Andersen 1960, p. 90). Toledo Bend Reservoir later covered the sample location; construction of the lake began in 1964. An alternate spelling, "Godwin Shoals," is used on the labels of H.V. Howe's samples from this locality.

Triloculina mindenensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 37.

HOLOTYPE: HVH 27, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 169," (HVH [Loc.]-258): "Cut on the south side of U.S. Highway 80, two miles by speedometer from Minden courthouse, in sec. 26, T. 19 N., R. 9 W. Near the base of the Cook Mountain section," Webster Parish, Louisiana. Collected by Henry V. Howe in 1926. Figured: pl. 3, figs. 11–13.

Triloculina natchitochensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 38.

HOLOTYPE: HVH 21, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 5," (Ru-207): "Brown glauconitic calcareous, fossiliferous clays. Sample collected in the limestone boulder bed in road cut on the east side of State Highway 39, 2.3 miles south of Provencal in the SW¼ NE¼ sec. 4, T. 7 N., R. 8 W. Elevation—200 feet." Natchitoches Parish, Louisiana. Collected by Justin M. Rukas between 1936 and 1938. Figured: pl. 3, figs. 3–5.

COMMENTS: The holotype specimen is not as prominently costate as in the figures. The specimen is slightly damaged.

Tritubulogenerina mauricensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 69–70.

HOLOTYPE: HVH 116, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 38," (Rob-4): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." Sample No. 38 is "from beneath the next to the lowest iron ore ledge." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 4). Figured: pl. 8, figs. 34–35.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample

locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Trochammina claibornensis Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 40.

HOLOTYPE: HVH 34, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 98," (JH-203): "Chocolate-brown, lignitic shale. Taken 49 feet below Sample No. 97 (JH-200). Elevation—108 feet." JH-200 was taken in a "ditch on southwest side of State Highway 1, 10 feet below top of slope leading down to floodplain of Little Natches Creek and Saline Bayou, in the southwest corner of the NE¼ SE¼ NE¼ sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 4, figs. 11, 12.

COMMENTS: Huner (1939, LGS Bull. 15, p. 101–102) describes his locality as the "southwest corner of the NE¼ NE¼ sec. 15, T. 9 N., R. 6 W., Winn Parish, along U.S. Highway 71, about a quarter of a mile southeast of Little Natches Bayou, ... the section exposed from the top of the ridge down to the flood plain." His sample JH-203 is from the base of the Little Natches Member. According to Huner's measured section, the elevation at the top of the slope is about 174 feet. Sample JH-200 was collected from Huner's bed 25 (elevation 160 to 163 feet), and sample JH 203 was collected from bed 8 (elevation 108.5 to 119.5 feet).

Trochammina lafourchensis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 59.

HOLOTYPE: HVH 3994, Miocene; "Harang wedge in cuttings at 8155–8185 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, figs. 5, 6.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35). The name *Trochammina lafourchensis* Smith 1948 was published on the errata sheet accompanying *Geological Bulletin* 26 to replace the name *Trochammina howei* Smith 1948 (p. 59), a homonym of *Trochammina howei* Cushman 1944; see Thalmann (1950a, p. 737).

Trochamminoides discotrochus Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 43–44.

HOLOTYPE: HVH 3975, Miocene; "Harang wedge in cuttings at 8155–8185 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, fig. 2.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Trochamminoides novalateralis Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 44–45.

HOLOTYPE: HVH 3976, Miocene; “Harang wedge in cuttings at 8496–8526 feet in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, fig. 1.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Trochamminoides thompsoni Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 45–46.

HOLOTYPE: HVH 3977, Miocene; “Harang wedge in cuttings at 8372–8402 feet, in the Gulf Refining Co.’s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana,” SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, fig. 9.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Tubulogenerina jacksonensis Howe 1934, *J. Paleontol.* 8: 420.

HOLOTYPE: HVH 748, Eocene, Jackson; “Bunker Hill, on the Ouachita River, [Caldwell Parish,] Louisiana. Its horizon is approximately that of the Moody’s Branch marl of Mississippi, i.e., basal Jackson.” Collected by R.W. Harris in January 1926. Figured: pl. 51, fig. 8a, 8b.

PARATYPE: HVH 749, Eocene, basal Jackson; abandoned lime pit, 5.1 miles south of Ocala, [Marion County,] Florida, on the road to Belleview; collected by Henry V. Howe with R.J. Russell in 1933; one specimen, not figured.

COMMENTS: Howe (1934) does not include the names of the collectors; however, samples in the museum collections provided additional collecting event data: Harris’ sample from the Bunker Hill locality was collected in a shell bed (Moody’s Branch) from a slump block 10 to 15 feet above the river. Howe’s sample at the abandoned quarry south of Ocala came from the Ocala limestone 15 feet below the top of the quarry.

Uvigerina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 62–63.

HOLOTYPE: HVH 693, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, “[l]ight yellow, quite fossiliferous clay, containing large selenite crystals and large concretions”; “upper horizon” “at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana,” near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 12, fig. 5.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the “Upper Danville of Howe and Wallace” (bed 2) as 50 to 70 feet. “Danville Landing” was first used as a stratigraphic name in the Shreveport Geological Society’s (1934) guidebook in the correlation chart

prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see “Danville Landing” in the U.S.G.S. (2020) Geologic Names Committee Archives. Ellis and Messina (1940 et seq.) mistakenly state that the upper horizon is bed 3 instead of the correct bed 2.

Uvigerina howei Garrett 1939, *J. Paleontol.* 13: 577.

HOLOTYPE: HVH 1948, middle Tertiary, *Discorbis* zone; “Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas,” “from core at 5,647–5,651 feet.” Figured: pl. 65, fig. 17.

PARATYPE: HVH 1949, middle Tertiary, *Discorbis* zone; Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas, from core at 5,711–5,714 feet; one specimen, figured: pl. 65, fig. 13.

Uvigerina israelskyi Garrett 1939, *J. Paleontol.* 13: 577.

HOLOTYPE: HVH 1950, middle Tertiary, *Heterostegina* zone; “taken from a core from Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas,” at “depth of 5,932–5,935 feet.” Figured: pl. 65, fig. 15.

PARATYPE: HVH 1951, same sample as holotype, one specimen, figured: pl. 65, fig. 16.

Uvigerina russelli Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 71.

HOLOTYPE: HVH 108, Eocene, Claiborne, Cook Mountain Fm.; “from Sample No. 74,” (JH-85): “Glaucinitic, calcareous clay occurring four feet below zone of fossiliferous argillaceous limestone concretions exposed on top of hill. Taken a few inches below surface along slope on the south side of creek in the SW¼ NE¼ SE¼ sec. 13, T. 11 N., R. 5 W.,” Winn Parish, Louisiana. Collected by John Huner, Jr., between 1936 and 1938. Figured: pl. 8, figs. 21, 22.

COMMENTS: According to the label of Howe Loc. 283 (JH-85), “[t]his sample was collected by J. Huner along the C.C.C. road that runs south from La. 9, and taken from a hill slope on the south side of creek.”

Accepted by Hayward et al. (2020) as *Uvigerinella abbreviata* var. *russelli* (Howe 1939).

Uvigerina stephensoni Garrett 1938, *J. Paleontol.* 12: 315–316.

HOLOTYPE: HVH 1923, Oligocene, Hackberry assemblage, sticky shale overlying Vicksburg; “Magnolia Petroleum Company, no. 1, H.B. Funchess, Jr., Jefferson County, Tex. [Texas], from core at 7,771–7,773 feet.” Figured: pl. 40, fig. 7.

PARATYPES: HVH 1924, same sample as holotype, one specimen, figured: pl. 40, figs. 5a, 5b. HVH 1925, Oligocene, Hackberry fauna, overlying Vicksburg; Superior Oil Company no. 1, D. Hebert, Hackberry field, Cameron Parish, Louisiana, from core at 6,006–6,026 feet; one specimen, figured: pl. 40, fig. 6.

Uvigerina subfusiformis Hussey 1949, *J. Paleontol.* 23: 132.

HOLOTYPE: HVH 2572, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 107," core at depth "1468'," "brown silty shale." Figured: pl. 27, fig. 1.

COMMENTS: In the text, Hussey (1949, p. 132) says that the holotype is from Sample No. 107, but the explanation of Plate 27, fig. 1, says sample no. 137 [core at depth 1503–1509 feet].

Uvigerinella subquadrata Hussey 1949, *J. Paleontol.* 23: 131.

HOLOTYPE: HVH 2571, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345' North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 118," core at depth "1482'," "gray-brown shale and greensand." Figured: pl. 27, fig. 12.

COMMENTS: According to Hayward et al. (2020), *Uvigerinella subquadrata* Hussey is a subjective junior synonym of *Uvigerinella abbreviata* var. *russelli* (Howe 1939).

Vaginulina pseudosenticosa Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 59–60.

HOLOTYPE: HVH 3995, Miocene; "Harang wedge in cuttings at 8465–8495 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 12, fig. 12.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Valvulineria gracilis Hussey 1949, *J. Paleontol.* 23: 135–136.

HOLOTYPE: HVH 2579, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 165," core at depth "1529'," "brown-gray shale with some greensand." Figured: pl. 28, figs. 13, 14.

Verneuilina hannai Smith 1948, La. Geol. Surv., *Geol. Bull.* 26: 55–56.

HOLOTYPE: HVH 3989, Miocene; "Harang wedge in cuttings at 8341–8371 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 11, figs. 10, 11.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35).

Virgulina danvillensis Howe and Wallace 1932, La. Dept. Conserv., *Geol. Bull.* 2: 65–66.

HOLOTYPE: HVH 687, Eocene, Jackson, [possibly Danville Landing Fm.]; bed 2, "[light yellow, quite

fossiliferous clay, containing large selenite crystals and large concretions"; "upper bed" "at Danville Landing on the Ouachita [River], Catahoula Parish, Louisiana," near the Caldwell-Catahoula Parish line. Collected by Henry V. Howe. Figured: pl. 11, figs. 2a, 2b.

PARATYPE: HVH 687a, same sample as holotype, one specimen, not figured.

COMMENTS: In his section description for Danville Landing, Chawner (1936, p. 88) gives the elevation of the "Upper Danville of Howe and Wallace" (bed 2) as 50 to 70 feet. "Danville Landing" was first used as a stratigraphic name in the Shreveport Geological Society's (1934) guidebook in the correlation chart prepared by M.A. Hanna and Donald Gravell (table opposite p. 30); see "Danville Landing" in the U.S.G.S. (2020) Geologic Names Committee Archives.

Fursenkoina Loeblich and Tappan 1961 is accepted as the replacement name for the homonym *Virgulina* d'Orbigny 1826 (Hayward et al. 2020); *Virgulina danvillensis* = *Fursenkoina danvillensis* (Howe and Wallace 1932).

Virgulina mcguirti Howe and Roberts in Howe 1939, La. Geol. Surv., *Geol. Bull.* 14: 65.

HOLOTYPE: HVH 123, Eocene, Claiborne, Cook Mountain Fm.; "from Sample No. 35," (Rob-1): "On the left bank of Saline Bayou beneath the Louisiana & Arkansas Railroad bridge at St. Maurice, sec. 15, T. 9 N., R. 6 W.," Winn Parish, Louisiana. "The lower part of the bluff is marine and is traversed by five iron ore ledges. Below each of these ledges there is a fossiliferous layer of clay, each layer averaging perhaps 1½ feet in thickness." "This sample was from immediately below the uppermost iron ore ledge. Elevation—85 feet." Collected by Marion S. Roberts in 1932 with H.V. Howe (Roberts 1934, Bed 1). Figured: pl. 9, fig. 1.

COMMENTS: Sample Nos. 35 through 39 of Howe (1939) were collected at the type locality of the Saline Bayou member of the Cook Mountain Formation. Due to an irregular section, the section number of the sample locality is 37, not 15. Robert C. Howe (1963, p. 6) describes the type exposure as "extending both north and south of the Louisiana and Arkansas Railroad bridge in the extreme northern part of irregular section 37, T. 9 N., R. 6 W. That part of the section south of the bridge is best exposed and the ironstone beds are clearly observed."

Fursenkoina Loeblich and Tappan 1961 is accepted as the replacement name for the homonym *Virgulina* d'Orbigny 1826 (Hayward et al. 2020); *Virgulina mcguirti* = *Fursenkoina mcguirti* (Howe and Roberts 1939).

Virgulina regularis Hussey 1949, *J. Paleontol.* 23: 134.

HOLOTYPE: HVH 2568, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 2, 312' 5" East and 345'

North of the Southwest corner of the S.W.¼ of Sec. 29, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 137," core at depth "1503'–1509'," "light gray silty shale and greensand." Figured: pl. 27, fig. 11.

COMMENTS: *Fursenkoina* Loeblich and Tappan 1961 is accepted as the replacement name for the homonym *Virgulina* d'Orbigny 1826 (Hayward et al. 2020); *Virgulina regularis* = *Fursenkoina regularis* (Hussey 1949).

Virgulina spinulosa Hussey 1949, *J. Paleontol.* 23: 134.

HOLOTYPE: HVH 2567, Eocene, Cane River Fm.; "La. Oil and Ref. Co., Tremont No. 1, 115' South and 150' East of the Northwest corner of the N.W.¼, of the N.E.¼ of Sec. 30, T. 10 N., R. 2 E.," La Salle Parish, Louisiana, "from Sample No. 152," core at depth "1512'," "light gray shale and glauconite." Figured: pl. 27, fig. 8.

COMMENTS: Hussey's (1949, p. 132) explanation of pl. 27, fig. 8, refers to the holotype slide as no. 2568 and the sample as no. 137, instead of the correct slide number 2567 and sample number 152.

Fursenkoina Loeblich and Tappan 1961 is accepted as the replacement name for the homonym *Virgulina* d'Orbigny 1826 (Hayward et al. 2020); *Virgulina spinulosa* = *Fursenkoina spinulosa* (Hussey 1949).

Vulvulina ignava Garrett 1939, *J. Paleontol.* 13: 575–576.

SYNTYPES: HVH 1937, middle Tertiary, *Marginulina idiomorpha* zone; "taken from a core from Stanolind Oil and Gas Company no. B-2 Pipkin, Big Hill prospect, Jefferson County, Texas," at "depth of 6,121–6,124 feet"; one specimen, figured: pl. 65, figs. 3a, 3b.

HVH 1938, same sample; one specimen, figured: pl. 65, fig. 5.

HVH 1939, same sample; one specimen, figured: pl. 65, fig. 4.

Vulvulina pennatula (Batsch) var. ***cuneata*** Smith 1948, *La. Geol. Surv., Geol. Bull.* 26: 54–55.

HOLOTYPE: HVH 3988, Miocene; "Harang wedge in cuttings at 8310–8340 feet, in the Gulf Refining Co.'s Delta Securities Co., Inc., No. 17, Bully Camp field, Lafourche Parish, Louisiana," SW¼ sec. 36, T. 19 S., R. 21 E. Figured: pl. 10, figs. 9–11.

COMMENTS: The well location is shown in Figure 3 of Smith (1948, p. 35). The parentheses around the species author's name are missing on p. 54.

ACKNOWLEDGMENTS

Our thanks go to retired collections manager Alvin M. Phillips for sharing with the senior author his knowledge of the collections.

LITERATURE CITED

ANDERSEN, H.V. 1951. Two new genera of Foraminifera from Recent deposits in Louisiana. *Journal of Paleontology* 25: 31–34.

ANDERSEN, H.V. 1953. Two new species of *Haplophragmoides* from the Louisiana Coast. *Contributions from the Cushman Foundation for Foraminiferal Research* 4: 21–22.

ANDERSEN, H.V. 1960. Geology of Sabine Parish. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 34: 1–164.

ANDERSEN, H.V. 1961. Genesis and paleontology of the Mississippi River mudlumps, Part II: Foraminifera of the mudlumps, lower Mississippi River delta. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 35, Pt. 2: 1–208.

ANDERSEN, H.V. 1984. The wall structure of superfamily Miliolacea and its lineage in the Gulf Coastal Plain. *Tulane Studies in Geology and Paleontology* 18: 1–19.

ANDERSEN, H.V. 1988. Gulf Coastal Plain pitted Miliolacea and related species in Grignon and Damery, France. *Tulane Studies in Geology and Paleontology* 21: 121–142.

ANDERSEN, H.V. 1997. Superfamily Miliolacea: a three-fold layered wall—superfamily Miliolacea Ehrenberg, 1839, emended; new superfamily Hauerinacea. *Tulane Studies in Geology and Paleontology* 30: 181–196.

ANDERSEN, H.V. 1999. Abstract of Harold V. Andersen oral history interview, Mss. 4700.1265, Louisiana and Lower Mississippi Valley Collections, LSU Libraries, Baton Rouge, Louisiana.

BRAUNSTEIN, J. (editor). 1957. Dr. Henry V Howe. *Gulf Coast Association of Geological Societies, Transactions* 7: 337–340.

BUTLER, E.A. 1962. *Robulus macomberi* and *Discorbis crosbiei*—useful Miocene Foraminifera from Louisiana. *Journal of Paleontology* 36: 1363–1367.

CHAWNER, W.D. 1936. Geology of Catahoula and Concordia Parishes. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 9: 1–232.

COHEN, K.M., FINNEY, S.C., GIBBARD, P.L. & FAN, J.-X. 2013. The ICS International Chronostratigraphic Chart. *Episodes* 36: 199–204. www.episodes.org.

COOKE, C.W. 1926. The Cenozoic formations. Pp. 251–297

- in ADAMS, G.I., BUTTS, C., STEPHENSON, L.W. & COOKE, C.W. *Geology of Alabama. Geological Survey of Alabama Special Report No. 14.*
- COXALL, H.K. & PEARSON, P.N. 2006. Taxonomy, biostratigraphy, and phylogeny of the Hantkeninidae (*Clavigerinella*, *Hantkenina*, and *Cribohantkenina*). Pp. 213–256 in PEARSON, P.N., OLSSON, R.K., HUBER, B.T., HEMLEBEN, C. & BERGGREN, W.A. (editors). *Atlas of Eocene Planktonic Foraminifera. Cushman Foundation Special Publication No. 41.*
- CUSHMAN, J.A. 1946. A rich foraminiferal fauna from the Cocoa sand of Alabama. *Cushman Laboratory for Foraminiferal Research, Special Publication No. 16.*
- CUSHMAN, J.A. & HOWE, H.V. 1927. A species of *Siphoninella* in the Tertiary of America. *Contributions from the Cushman Laboratory for Foraminiferal Research 3*: 120–121.
- CUSHMAN, J. A. & TEN DAM, A. 1948. *Pseudoparrella*, a new generic name, and a new species of *Parrella*. *Contributions from the Cushman Laboratory for Foraminiferal Research 24*: 49–50.
- ELLIS, A.D. JR. 1939. Significant Foraminifera from the Chickasawhay beds of Wayne County, Mississippi. *Journal of Paleontology 13*: 423–424.
- ELLIS, B.F. & MESSINA, A. 1940 et seq. *Catalogue of Foraminifera*. Micropaleontology Press, American Museum of Natural History, New York. Accessed at <http://www.micropress.org/em/> on 30 July 2020.
- ELLIS, B.F. & MESSINA, A. 1952 et seq. *Catalogue of Ostracoda*. Micropaleontology Press, American Museum of Natural History, New York. Accessed at <http://www.micropress.org/em/> on 16 December 2019.
- ESKER, G.C. III. 1968a. A new species of *Pseudoguembelina* from the Upper Cretaceous of Texas. *Contributions from the Cushman Foundation for Foraminiferal Research 19*: 168–169.
- ESKER, G.C. III. 1968b. Biostratigraphy of the Cretaceous-Tertiary boundary in the East Texas Embayment based on planktonic Foraminifera. Louisiana State University PhD. Dissertation. Baton Rouge, Louisiana.
- FISK, H.N. 1940. *Geology of Avoyelles and Rapides Parishes*. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin No. 18*: 1–240.
- FISK, H.N. 1960. Henry Van Wagenen Howe, Sidney Powers Memorial Medalist. *American Association of Petroleum Geologists, Bulletin 44*: 1260–1261.
- GARRETT, J.B. 1938. The Hackberry Assemblage—an interesting foraminiferal fauna of post-Vicksburg age from deep wells in the Gulf Coast. *Journal of Paleontology 12*: 309–317.
- GARRETT, J.B. 1939. Some middle Tertiary smaller Foraminifera from subsurface beds of Jefferson County, Texas. *Journal of Paleontology 13*: 575–579.
- GARRETT, J.B. 1941. New middle Eocene Foraminifera from southern Alabama and Mississippi. *Journal of Paleontology 15*: 153–156.
- GARRETT, J.B. 1942a. A new species of *Discorbis* from the Weches Formation of Texas. *Journal of Paleontology 16*: 484.
- GARRETT, J.B. 1942b. Some Miocene Foraminifera from subsurface strata of coastal Texas. *Journal of Paleontology 16*: 461–463.
- GARRETT, J.B. 1950. New name for a Texas Miocene foraminifer. *Journal of Paleontology 24*: 506.
- GARRETT, J.B. & ELLIS, A.D. JR. 1937. Distinctive Foraminifera of the genus *Marginulina* from middle Tertiary beds of the Gulf Coast. *Journal of Paleontology 11*: 629–633.
- HADLEY, W.H. 1935. Seven new species of Foraminifera from the Tertiary of the Gulf Coast. *Bulletins of American Paleontology 22*(74): 187–196 + plate 14.
- HAMAN, D. 1981. Late Quaternary microproblematica (*Voorthuyseniella*) from a Mississippi Delta mudlump. *Tulane Studies in Geology and Paleontology 16*: 81–96.
- HANOR, J.S. 1996. School of Geoscience (administrative history). Campus Correspondence (11 April 1996) to Faculty, Geology and Geophysics. Archives of the Section of Fossil Protists and Invertebrates, LSU Museum of Natural Science, Louisiana State University, Baton Rouge, LA.
- HARRIS, R.W. 1926. Foraminifera from Jackson outcrops along Ouachita and Red rivers of Louisiana. Louisiana State University M.S. Thesis. Baton Rouge, Louisiana.
- HAYWARD, B.W., KAWAGATA, S., SABAA, A.T., GRENFELL, H.R., VAN KERCKHOVEN, L., JOHNSON, K. & THOMAS, E. 2012. The last global extinction (Mid-Pleistocene) of deep-sea benthic foraminifera (*Chrysalogoniidae*, *Ellipsoidinidae*, *Glandulonodosariidae*, *Plectofrondiculariidae*, *Pleurostomellidae*, *Stilostomellidae*), their Late Cretaceous-Cenozoic history and taxonomy. *Cushman Foundation for Foraminiferal Research Special Publication No. 43.*

- HAYWARD, B.W., LE COZE, F., VACHARD, D. & GROSS, O. 2020. World Foraminifera Database. Accessed at <http://www.marinespecies.org/foraminifera/> on 5 August 2020.
- HOWE, H.V. 1928a. Additions to the list of species occurring in the type Red Bluff clay, Hiwannee, Mississippi. *Journal of Paleontology* 2: 173–176.
- HOWE, H.V. 1928b. An observation on the range of the genus *Hantkenina*. *Journal of Paleontology* 2: 13–14.
- HOWE, H.V. 1930. The genus *Bolivinella* in the Oligocene of Mississippi. *Journal of Paleontology* 4: 263–267.
- HOWE, H.V. 1934. *Bitubulogenerina*, a Tertiary new genus of Foraminifera. *Journal of Paleontology* 8: 417–421.
- HOWE, H.V. 1939. Louisiana Cook Mountain Eocene Foraminifera. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 14: 1–122.
- HOWE, H.V. 1942. Fauna of the Glendon Formation at its type locality. *Journal of Paleontology* 16: 264–271.
- HOWE, H.V. & MCDONALD, S.M. 1938. Two new species of the foraminiferal genus *Marginulina* from the Sorrento Oil Field, Louisiana. Pp. 209–211 in HOWE, H.V., RUSSELL, R.J., KNIFFEN, F.B., MCGUIRT, J.H. & MCDONALD, S.M. 1938. Reports on the geology of Iberville and Ascension Parishes. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 13.
- HOWE, H.V. & MCGUIRT, J.H. 1935. Salt domes of Cameron and Vermilion Parishes. Pp. 73–166 in HOWE, H.V., RUSSELL, R.J., MCGUIRT, J.H., CRAFT, B.C. & STEPHENSON, M.B. Reports on the geology of Cameron and Vermilion Parishes. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 6.
- HOWE, H.V. & MCGUIRT, J.H. 1938. Salt domes of Iberville and Ascension Parishes. Pp. 87–187 in HOWE, H.V., RUSSELL, R.J., KNIFFEN, F.B., MCGUIRT, J.H. & MCDONALD, S.M. 1938. Reports on the geology of Iberville and Ascension Parishes. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 13.
- HOWE, H.V. & MORESI, C.K. 1933. The contribution of Louisiana State University to the development of Louisiana geology. *Louisiana Conservation Review*, April 1933: 23–33.
- HOWE, H.V. & WALLACE, W.E. 1932. Foraminifera of the Jackson Eocene at Danville Landing on the Ouachita, Catahoula Parish, Louisiana. Louisiana Department of Conservation, Bureau of Scientific Research and Statistics, Minerals Section, *Geological Bulletin* No. 2: 1–118.
- HOWE, H.V. & WALLACE, W.E. 1934. Apertural characteristics of the genus *Hantkenina*, with description of a new species. *Journal of Paleontology* 8: 35–37.
- HOWE, R.C. 1963. Type Saline Bayou Ostracoda of Louisiana. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 40: 1–62.
- HUBER, B.T., OLSSON, R.K. & PEARSON, P.N. 2006. Taxonomy, biostratigraphy, and phylogeny of Eocene microperforate planktonic Foraminifera (*Jenkinsina*, *Cassigerinelloita*, *Chiloguembelina*, *Streptochilus*, *Zeauvigerina*, *Tenuitella*, and *Cassigerinella*) and Problematica (*Dipsidripella*). Pp. 461–508 in PEARSON, P.N., OLSSON, R.K., HUBER, B.T., HEMLEBEN, C. & BERGGREN, W.A. (editors). Atlas of Eocene Planktonic Foraminifera. *Cushman Foundation Special Publication* No. 41.
- HUNER, J. JR. 1939. Geology of Caldwell and Winn Parishes. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 15: 1–356.
- HUSSEY, K.M. 1940. Louisiana Cane River Eocene Foraminifera. Louisiana State University PhD. Dissertation. Baton Rouge, Louisiana.
- HUSSEY, K.M. 1943. Distinctive new species of Foraminifera from the Cane River Eocene of Louisiana. *Journal of Paleontology* 17: 160–167.
- HUSSEY, K.M. 1949. Louisiana Cane River Eocene Foraminifera. *Journal of Paleontology* 23: 109–144.
- INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE (ICZN). 1999. *International Code of Zoological Nomenclature*, 4th edition. International Trust for Zoological Nomenclature, London, xxix + 306 pp.
- LEUTZE, W.P. 1972. Stratigraphy of *Cibicides carstensi* zone, Miocene of Louisiana. *American Association of Petroleum Geologists, Bulletin* 56: 775–789.
- LOEBLICH, A.R. JR. & TAPPAN, H. 1964. *Treatise on Invertebrate Paleontology, Part C, Protista 2: Sarcodina, chiefly "Thecamoebians" and Foraminiferida*, vol. 1–2. Geological Society of America and University of Kansas Press, Lawrence, Kansas.
- LOEBLICH, A.R. JR. & TAPPAN, H. 1984. Some new proteinaceous and agglutinated genera of Foraminiferida. *Journal of Paleontology* 58: 1158–1163.

- LOEBLICH, A.R. JR. & TAPPAN, H. 1987. *Foraminiferal Genera and their Classification*. 2 volumes. Van Nostrand Reinhold Company, New York.
- LSU BOARD OF SUPERVISORS. 1964. Regular Meeting of Board of Supervisors May 25, 1964, Item 5.f. Archives of the Section of Fossil Protists and Invertebrates, LSU Museum of Natural Science, Louisiana State University, Baton Rouge, LA.
- LSU DEPARTMENT OF GEOLOGY AND GEOPHYSICS. 2019. A brief history of LSU Geology and Geophysics. Accessed at https://www.lsu.edu/science/geology/about_lsu_geology/program_history/index.php on 25 February 2019.
- MACNEIL, F.S. 1944. Oligocene stratigraphy of southeastern United States. *American Association of Petroleum Geologists, Bulletin* 28: 1313–1354.
- MORGAN, J.P. 1974. Memorial to Henry V. Howe, 1896–1973. *Geological Society of America Memorials* 5, 7 pp.
- MORGAN, J.P. 1987. A tribute: Drs. H.V. Howe and R.J. Russell. Howe Russell Geoscience Complex Dedication Program, November 7, 1987. Archives of the Section of Fossil Protists and Invertebrates, LSU Museum of Natural Science, Louisiana State University, Baton Rouge, LA.
- NEAGU, T. 1968. *Andersenia rumana*, n. gen., n. sp., and some taxonomic observations on the subfamily Valvulininae. *Contributions from the Cushman Foundation for Foraminiferal Research* 19: 120–122.
- NIKRAVESH, R. 1967. The Foraminifera and paleoecology of the Blufftown Formation (Upper Cretaceous) of Georgia and eastern Alabama. Louisiana State University PhD. Dissertation. Baton Rouge, Louisiana.
- PILLANS, B. & GIBBARD, P. 2012. Chapter 30—The Quaternary Period. Pp. 979–1010 in GRADSTEIN, F.M., OGG, J.G., SCHMITZ, M.D. & OGG, G.M. (editors). *The Geologic Time Scale*, Volume 1. Amsterdam: Elsevier B.V.
- POAG, C.W. 1966a. *Arcanispira depressa* n. sp. from the Florida Miocene Chipola Formation. *Contributions from the Cushman Foundation for Foraminiferal Research* 17: 140–141.
- POAG, C.W. 1966b. Paynes Hammock (Lower Miocene?) foraminifera of Alabama and Mississippi. *Micropaleontology* 12: 393–440.
- ROBERTS, M.S. 1934. Upper Claiborne Foraminifera of the “Saline Bayou” or “St. Maurice” type locality. Louisiana State University M.S. Thesis. Baton Rouge, Louisiana.
- ROSEN, R.N. 1985. Foraminiferal stratigraphy and paleoecology of the Blufftown Formation (Santonian–Campanian) of Georgia and eastern Alabama. *Gulf Coast Association of Geological Societies, Transactions* 35: 485–492.
- SEN GUPTA, B.K. & SMITH, L.E. 2010. Beauty from the deep, the Henry V. Howe Type Collection of Microfossils. Pp. 204–205 in LINDSAY, L.F. (editor). *Treasures of LSU*. Louisiana State University Press, Baton Rouge, Louisiana.
- SHREVEPORT GEOLOGICAL SOCIETY. 1934. Stratigraphy and paleontological notes on the Eocene (Jackson Group), Oligocene and lower Miocene of Clarke and Wayne Counties, Mississippi. Shreveport Geological Society Guidebook, Eleventh Annual Field Trip.
- SMITH, D.J. 1948. Miocene Foraminifera of the “Harang sediments” of southern Louisiana. Pp. 23–76 in POPE, D.E. & SMITH, D.J. The Harang fauna of Louisiana. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 26.
- SPRAUL, G.L. 1962. Current status of the upper Eocene foraminiferal guide fossil, *Cribohantkenina*. *Gulf Coast Association of Geological Societies, Transactions* 12: 343–347.
- STEPHENSON, M.B. 1935. Some microfossils of the *Potamides matsoni* zone of Louisiana. Pp. 187–196 in HOWE, H.V., RUSSELL, R.J., MCGUIRT, J.H., CRAFT, B.C. & STEPHENSON, M.B. Reports on the geology of Cameron and Vermilion Parishes. Department of Conservation, Louisiana Geological Survey, *Geological Bulletin* No. 6.
- STEPHENSON, M.B. 1937. Middle Tertiary Ostracoda of the genus *Cytheridea*. *Journal of Paleontology* 11: 145–159.
- STRINGER, G.L. 1992. Late Pleistocene–Early Holocene teleostean otoliths from a Mississippi River mudlump. *Journal of Vertebrate Paleontology* 12: 33–41.
- STUCKEY, C.W. JR. 1946. Some Textulariidae from the Gulf Coast Tertiary. *Journal of Paleontology* 20: 163–165.
- THALMANN, H.E. 1942. Foraminiferal genus *Hantkenina* and its subgenera. *American Journal of Science* 240: 809–820.
- THALMANN, H.E. 1949. Homonyms in Foraminifera erected during 1948 and 1949. *Contributions from the Cushman Laboratory for Foraminiferal Research* 25: 100–103.
- THALMANN, H.E. 1950a. Bibliography and index to new

- genera, species and varieties of Foraminifera for the Year 1949. *Journal of Paleontology* 24: 699–745.
- THALMANN, H.E. 1950b. New names and homonyms in Foraminifera. *Contributions from the Cushman Foundation for Foraminiferal Research* 1: 41–45.
- U.S. BOARD ON GEOGRAPHIC NAMES. 2019. Geographic Names Information System (online database). Accessed at <https://geonames.usgs.gov/apex/f?p=138:1:0:::> on 22 October 2019.
- U.S. GEOLOGICAL SURVEY. 1982. Waynesboro, Mississippi, 1964 edition, photorevised 1982. 1:24,000. 7.5 Minute Series (Topographic). Reston, VA. United States Department of the Interior, USGS.
- U.S. GEOLOGICAL SURVEY. 2007. Divisions of Geologic Time—Major chronostratigraphic and geochronologic units. Fact Sheet 2007–3015.
- U.S. GEOLOGICAL SURVEY. 2019. National Geologic Map Database, U.S. Geologic Names Lexicon (“Geolex”). Accessed at <https://ngmdb.usgs.gov/Geolex/search> on 22 October 2019.
- U.S. GEOLOGICAL SURVEY. 2020. Geologic Names Committee Archives. Accessed at <https://ngmdb.usgs.gov/Geolex/stratres/card> on 5 March 2020.
- WARREN, A.D. 1956. Ecology of Foraminifera of the Buras-Scofield Bayou region, southeast Louisiana. *Gulf Coast Association of Geological Societies, Transactions* 6: 131–151.
- WARREN, A.D. 1957. Foraminifera of the Buras-Scofield Bayou region, southeast Louisiana. *Contributions from the Cushman Foundation for Foraminiferal Research* 8: 29–40.
- YOUNG, J.R., WADE, B.S. & HUBER B.T. (editors). 2020. Pforams@mikrotax website. Accessed at <http://www.mikrotax.org/pforams> on 25 May 2020.