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A Type Catalog of Fossil Invertebrates
(Mollusca: Ammonoidea)
in the Yale Peabody Museum

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Published at irregular but frequent intervals since 1950, *Postilla* presents short papers based on original scientific research by Yale Peabody Museum staff and research associates, and their colleagues, in the natural science disciplines represented by the collections of the Yale Peabody Museum's curatorial divisions.

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This portrait (opposite) shows Karl M. Waage in the field collecting ammonites from the late Cretaceous Fox Hills Formation of South Dakota, where he spent most of his professional career.

Oil painting by Rudolph F. Zallinger, 1986.

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Printed in the U.S.A.
KARL M. WAAGE, Alan M. Bateman Professor Emeritus of Geology and Geophysics at Yale University, was Curator of Invertebrate Paleontology at the Peabody Museum of Natural History from 1946 to 1986, as well as a past director (1979-1982) of the Peabody. This series of type catalogs of invertebrate fossils is dedicated to Karl, who passed away on October 18, 1999 at the age of 83.

After receiving his doctorate from Princeton University in 1946, Karl joined the faculty of the Yale Geology Department. He served as chair of the department between 1973 and 1976 and was named to the Bateman Professorship in 1977. Karl was active in the Paleontological Society, serving as a Councillor between 1974 and 1976. His research on the paleontology and stratigraphy of the Upper Cretaceous Fox Hills Formation of South Dakota resulted in the publication of two definitive monographs on the paleoenvironments (Waage 1968) and ammonite fauna (Landman and Waage 1993) of the Fox Hills. During his tenure at Yale he was advisor to more than 25 graduate students, many of whom have become leaders in the field of paleobiology.

In the 1950s, Karl worked with Carl O. Dunbar to redesign the Peabody Museum’s Invertebrate Hall with a new emphasis on the life history and evolution of invertebrates. Their textbook on historical geology used many specimens from the Peabody collections to demonstrate geological and paleontological principles. In the early 1960s, Karl directed a major renovation of Peabody’s research collections and facilities, including a series of National Science Foundation grants to reorganize the paleontological collections and expand laboratory facilities for graduate education. These type catalogs, published as part of the Peabody’s Postilla series, are the outgrowth of an NSF funded project to identify and isolate all type specimens from the fossil invertebrate collections and carries on Karl’s initiative to improve the care and accessibility of the Peabody’s paleontological collections.

For the inspiration he gave me, I am honored to dedicate this series of type catalogs to Karl, my mentor, friend and “Chief.”

Russell D. “Tim” White
A Type Catalog of Fossil Invertebrates (Mollusca: Ammonoidea) in the Yale Peabody Museum

Russell D. White and Laura K. Skorina

(Received 12 August 1999)

Abstract

Type material for 206 nominal species of ammonoids are in the Invertebrate Paleontology Collections of Yale University's Peabody Museum of Natural History. Primary types for 86 nominal species include 46 holotypes, 418 syntypes (representing 36 nominal species), 3 lectotypes and 1 neotype. Secondary types for 35 nominal species include 7 allotypes, 105 paratypes and 36 paralectotypes. Tertiary types of 132 nominal species include 852 hypotypes. Most types are from Coahuila (Mexico), South Dakota, Texas and Wyoming and have been described by E. Böse, S.S. Buckman, W.A. Cobban, N.H. Landman, A.K. Miller and K.M. Waage.

Introduction

This catalog lists all known ammonoid types in the Invertebrate Paleontology Collections housed in Yale University’s Peabody Museum of Natural History. This is the eleventh in a series of type catalogs of fossil invertebrates and is a product of an ongoing computerization project to improve the accessibility of the type collections.

Eight type specimens are missing and cannot be located. The collections have been thoroughly searched by the curatorial staff in the 1960s and 1990s and it is believed that these specimens are permanently lost. Missing specimens are indicated with a footnote, and any information on their whereabouts would be greatly appreciated.

Key Words


Organization

Specimens are listed under the originally described binomen; genera and species within genera are indexed alphabetically. Each entry includes the catalog number used by the Division of Invertebrate Paleontology prefixed with the abbreviation YPM and the type status of the original designation, followed by all known references to that name. Any subsequent designations are listed under the original designation and are cross-referenced in the body of the text. Locality descriptions follow each entry or set of entries for each binomen. Errors and inconsistencies are footnoted at the bottom of each binomen.

The type designations used are holotype, syntype, lectotype and neotype for name bearers; allotype, paratype and paralectotype.
for secondary types; hypotype is used for all tertiary types. Name bearers and secondary types are defined as used in the *International Code of Zoological Nomenclature* (ICZN 1985). Tertiary types or hypotypes are treated here as any specimens used in an original species description but not explicitly designated primary or secondary types, any described, figured or measured specimen used in a publication to augment the knowledge of a previously defined species, or any referenced specimen that cannot be placed unequivocally in a known species (e.g., *Hoploscaphites* sp.).

Locality descriptions follow each entry or set of entries with identical locality data. The locality information includes the stratigraphy, geography, collector and date. Stratigraphy has been standardized using *Stratigraphic Nomenclature Databases for the United States, its Possessions and Territories* (MacLachlan et al. 1992).

**Catalog of Ammonoidea**

**Adrianites adamsi** Miller and Furnish

**HoloType** YPM 16761


Permian, Word Fm. First limestone member, section 24, 0.8 mi W of Word Ranch, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Adrianites beyrichi?** Haniel

**Hypotype** YPM 16312


**Adrianites defordi** Miller and Furnish

**Syntype** YPM 16762


**Adrianites dunbari** Miller and Furnish


**Adrianites dunbari** Miller and Furnish


**Hypotype** YPM 16314


**Adrianites dunbari** Miller and Furnish


**Adrianites dunbari** Miller and Furnish


**Hypotype** YPM 16315


**Adrianites dunbari** Miller and Furnish


**Adrianites dunbari** Miller and Furnish


**Hypotype** YPM 16727


**Adrianites dunbari** Miller and Furnish


**Adrianites dunbari** Miller and Furnish


**Hypotype** YPM 16313


**Adrianites defordi** Miller and Furnish

**Syntype** YPM 16762


**Adrianites defordi** Miller and Furnish


**Adrianites defordi** Miller and Furnish


**Hypotype** YPM 16727


**Adrianites defordi** Miller and Furnish


**Adrianites defordi** Miller and Furnish


**Hypotype** YPM 16313


**Adrianites defordi** Miller and Furnish

**Syntype** YPM 16762


**Adrianites defordi** Miller and Furnish


**Adrianites defordi** Miller and Furnish


**Hypotype** YPM 16727


**Adrianites defordi** Miller and Furnish


**Adrianites defordi** Miller and Furnish


**Hypotype** YPM 16313


**Adrianites defordi** Miller and Furnish

**Syntype** YPM 16762


**Adrianites defordi** Miller and Furnish


**Adrianites defordi** Miller and Furnish


**Adrianites plummeri** Miller

**Holotype** YPM 16320


Late Permian. Beds 5, 6 and 7 of Malascachas section, area 1200 m S17W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Agathiceras contractum** Plummer and Scott

See *Agathiceras* sp.

**Agathiceras frechi** Böse

**Hypotype** YPM 16766


Early Permian, Wolfcampian, Wolfcamp Fm. Section 24, *Uddenites* Mbr, bed 1B, Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Agathiceras** sp.

**Hypotype** YPM 15946


Early Permian, Wichita Grp, Clyde Fm. About 4 mi S of Electra, Wichita Co., Texas, USA. Collector: Wrather, W.E.

**Agathiceras suessi** Gemmellaro

**Hypotype** YPM 15229


*Agathiceras suessi* Gemmellaro

**Hypotype** YPM 15230A


Early Permian, Leonardian, Leonard Fm. Section 12, near middle of bed 24, below hill 4920, and N of Peabody Locality B3052, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Incorrectly cited as T-8890 on pl.29, f.11.
**Hypotype** YPM 15230B

**Hypotype** YPM 15230C

Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.  
\(^a\)Not pl.31, f.10 as stated in the plate explanation.  
\(^b\)Not YPM 15320A as stated in the explanations for pl.31, f.10.  
\(^c\)Not YPM 15320A as stated in the explanations for pl.31, f.11.

**Ammonites syriacus** Von Buch  
**Hypotype** YPM 1784  
=Knemiceras compressum subcompressum  

**Hypotype** YPM 24806  
Cretaceous. Mount Lebanon [Lebanon Range], Lebanon.  
\(^a\)This includes one specimen and a cast.  
\(^b\)Incorrectly cited as a paratype of *Ammonites syriacus* Conrad.  
\(^c\)Incorrectly cited as *Ammonites syriacus* Conrad, paratype.

**Artinskia adkinsi** Plummer and Scott  
**Paratype** YPM 15936  

Early Permian, Wichita Grp, Admiral Fm. 4.5 mi S of Coleman, Coleman Co., Texas, USA. Collector: Plummer, F.B.  
\(^a\)Cited as a paratype in the explanation for tf.8; however, this specimen was not referred to individually in Plummer and Scott (1937).  

**Artinskia electraensis** Plummer and Scott  
See *Medlicottia* n. sp.

**Baculites asper** Morton  
**Hypotype** YPM 6415  
**Hypotype** YPM 6415A  
**Hypotype** YPM 6415B  
**Hypotype** YPM 6415C  
Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.  
\(^a\)This consists of 12 fragments representing approximately three specimens.

**Baculites codyensis** Reeside  
**Holotype** YPM 6408C  
**Hypotype** YPM 6408  
**Hypotype** YPM 6408A  
HYPOTYPE  YPM 6408B

HYPOTYPE  YPM 6408D

Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

aThis consists of 15 fragments representing approximately three specimens.

**Baculites compressus** Say

HYPOTYPE  YPM 35102

HYPOTYPE  YPM 35103

HYPOTYPE  YPM 35104

Late Cretaceous, Pierre Shale. Sage Creek, Pennington Co., South Dakota, USA.

**Baculites haresi** Reeside

HYPOTYPE  YPM 34700, 34710


**Baculites sp.**

HYPOTYPE  YPM 6406, 6412, 6412A

**Baculites thomi** Reeside

HYPOTYPE  YPM 34719

**Beyrichoceras hornerae** Miller

HOLOTYPE  YPM 17112


Mississippian, Boone Fm. Lower Boone chert boulder, embedded in creek bed, 1.47 mi S30E of county courthouse in Cassville, Cassville Quad., NE NW SE sec33T23NR27W, Barry Co., Missouri, USA. Collector: Horner, E.H.

**Binneyites parkensis** Reeside

HOLOTYPE  YPM 6420

Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

Cibolites mojsisovici Miller
SYNTYPE YPM 15301
=Cibolites waageni (Miller and Furnish).
SYNTYPE YPM 16288, 16295, 55009–55028, 55037–55060
SYNTYPE YPM 16292
=Cibolites waageni (Miller and Furnish).
SYNTYPE YPM 16293
=Cibolites waageni (Miller and Furnish).
SYNTYPE YPM 16294
=Cibolites waageni (Miller and Furnish).
SYNTYPE YPM 16298

Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

This is represented by approximately 40 fragments.
This is represented by approximately 20 fragments.
Suture pattern illustration not recognizable on specimen, but marked as such on label.

Cibolites sp.
HYPTYPE YPM 16297
Early Permian, Leonardian, Leonard Fm. Section 12, bed 1, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Cibolites uddeni Plummer and Scott
HYPTYPE YPM 16803A
HYPTYPE YPM 16803B
Permian, Word Fm. Upper Word, section 10, beds 8 and 9, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Cibolites waageni (Miller and Furnish)
See Cibolites mojsisovici Miller and Xenodiscites waageni Miller and Furnish.

Clymenia undulata Münster
HYPTYPE YPM 2513
Devonian. Ebersdorf, Germany.

Daraelites leonardensis Miller and Furnish
HOLOTYPE YPM 16775
Early Permian, Leonardian, Leonard Fm. Middle Leonard, S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: Schuchert, C.

Daraelites meeki Gemmellaro
HYPTYPE YPM 15214

**Hypotype** YPM 15214A


Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.

**Daraelites scotti** Miller and Furnish

**Hypotype** YPM 15931


**Hypotype** YPM 15938


Middle Pennsylvanian, Bend Grp, Smithwick Shale. 3 mi E of Rochelle, McCulloch Co., Texas, USA.

**Daraelites texanus** Böse

**Hypotype** YPM 12930a, 12930B


**Hypotype** YPM 12930A


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S15E of Lenox, Brewster Co., Texas, USA. Collector: Plummer, F.B.

**Dichotomoceras dichotomum** Buckman

**Paratype** YPM 948


Late Jurassic, Argocian. England.

*aIncorrectly cited as YPM 1868.

**Didymoceras nebrascense** (Meek)

**Hypotype** YPM 6093a


*aThis includes one specimen and two casts.

**Didymoceras sp.**

**Hypotype** YPM 6092, 35001a


*aThis is a composite specimen, comprised of two individuals (YPM 6092 and YPM 35001).

**Dimorphoceras edwini** Miller and Furnish

**Paratype** YPM 25716


Late Mississippian. Near Crab Orchard, Rockcastle Co., Kentucky, USA. Collector: Fischer, M.

**Discoscaphites conradi** (Morton)

**Hypotype** YPM 23048a


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Limopsis-Gervillia Assemblage Zone. Limopsis-Gervillia undifferentiated, part of SW-facing bluff of Whitehorse Ridge extending ESE and bounded on SE by gulch marking ridge break at fault, Whitehorse Ridge, 5-6 mi NW of Whitehorse, Whitehorse Quad., NW CORNER sec28T16NR26E, SE NE SW sec20T16NR26E,

**HYPOTYPE** YPM 27102


**HYPOTYPE** YPM 27103


**HYPOTYPE** YPM 27104


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies. Float, on outcrop and in river bed, high bluff on N bank of Grand River just W of Bullhead, Bullhead Quad., S NW sec24T21NR24E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1956 to 1959.

**HYPOTYPE** YPM 27106

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, *Gervillia* concretions, Little Eagle Lithofacies, *Limopsis-Gervillia* Assemblage Zone. Float, *Gervillia* concretions, probably *Limopsis* horizon, base of soil-covered slope along road on NW bluff of High Bank Creek, and 0.05 mi SW of turnoff to Good Shepherd Church, and 9.8 mi SW of Little Eagle, Little Eagle SW Quad., SE CORNER SW SE sec19T19NR26E, Corson Co., South Dakota, USA. Collector: Waage, K.M.

**HYPOTYPE** YPM 27115


**HYPOTYPE** YPM 27120


**HYPOTYPE** YPM 27127


**HYPOTYPE** YPM 27128


HYPOTYPE YPM 27129


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float, concretion, small slump blocks in lower bluffs on either side of S-draining draw, 0.5 mi due N of Mortonson Ranch house, and 5.5 mi WSW of Little Eagle, Little Eagle NW Quad., E EDGE N NE sec33T20NR26E, Corson Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1962.

HYPOTYPE YPM 27132


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Limopsis concretions, Little Eagle Lithofacies, Limopsis-Gervillia Assemblage Zone. Limopsis concretion, cut on E side of second roadcut N of Little Eagle on McLaughlin-Little Eagle Road, and 3.3 mi N of Little Eagle, Little Eagle Quad., CENTER E SE sec5T20NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1957.

HYPOTYPE YPM 27133


HYPOTYPE YPM 27182


HYPOTYPE YPM 27183


10 Type Catalog of Ammonoidea


HYPOTYPE YPM 27188


HYPOTYPE YPM 27195


HYPOTYPE YPM 27196


HYPOTYPE YPM 27197


HYPOTYPE YPM 27198


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies. Float, on outcrop and in river bed, high bluff on N bank of Grand River just W of Bullhead, Bullhead Quad., S NW sec24T21NR24E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1956 to 1959.

HYPOTYPE YPM 27219


HYPOTYPE YPM 34104


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Limopsis concretions?, Little Eagle Lithofacies, Limopsis-Gervillia Assemblage Zone. Float, concretion, probably Limopsis horizon, base of soil-covered slope along road on NW bluff of High Bank Creek, and 0.05 mi SW of turnoff to Good Shepherd Church, and 9.8 mi SW of Little Eagle, Little Eagle SW Quad., SE CORNER SW SE sec19T19NR26E, Corson Co., South Dakota, USA. Collector: Waage, K.M.

HYPOTYPE YPM 35157


HYPOTYPE YPM 35159


aThis specimen was dissected by N.H. Landman to expose the inner whors.

bThis specimen was sawed along the dorsal-ventral axis by N.H. Landman.

Discoscaphites conradi conradi (Morton)

HYPOTYPE YPM 2076


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Prairie Bluff, Wilcox Co., Alabama, USA.

HYPOTYPE YPM 2077


HYPOTYPE YPM 2078


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Unington, Perry Co., Alabama, USA.

HYPOTYPE YPM 2079


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Prairie Bluff, Wilcox Co., Alabama, USA.

Discoscaphites conradi gulosus (Morton)

HYPOTYPE YPM 2080


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Prairie Bluff, Wilcox Co., Alabama, USA.

HYPOTYPE YPM 2083


Late Cretaceous, Selma Grp, Ripley Fm. Canton Bluff [presumably the bluffs along the Alabama River, 1 mi E of Canton Bend], Wilcox Co., Alabama, USA. Collector: Schowalter, E.R.

HYPOTYPE YPM 2085


Late Cretaceous, Selma Grp. “Rotten Limestone,” Alabama River, Baldwin Co., Alabama, USA.

HYPOTYPE YPM 2086


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Prairie Bluff, Wilcox Co., Alabama, USA.

**HYPOTYPE YPM 2089**


**HYPOTYPE YPM 2094**


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Prairie Bluff, Wilcox Co., Alabama, USA.

**HYPOTYPE YPM 27094**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Protocardi-Oxytoma* Assemblage Zone. Float, slumped about 6 ft, concretion, irregularly shaped spur with narrow SE-trending tip downfaulted so that lower barren concretions cap it, 0.3 mi E of SD Rte 63, SE of O'Leary Ranch house, and about 1 mi N of Moreau River, and 3.8 mi NNE of Green Grass, Parade NW Quad., NE SW SE sec8T13NR25E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

Cited as a paratype, but not part of the original type series. Jeletzky and Waage (1978) intended to denote the opposite sex of the holotype.

**HYPOTYPE YPM 23045**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Limopsis-Gervillia* Assemblage Zone. Concretions, chiefly from upper LGAZ *Gervillia* concretions, roadcut on McLaughlin-Little Eagle Road through first hill

**HYPOTYPE YPM 23050**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower *nicolleti* Assemblage Zone. Concretion, in creek bed about 200 ft S of Strong's stock dam, 0.5 mi ESE of Paul Strong Ranch house, S of Moreau River, and 5.5 mi N of Parade, Parade Quad., NW CORNER NW SW sec8T13NR25E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1959.

**Hypotype** YPM 27110


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Limopsis-Gervillia Assemblage Zone. Layered, barrel-shaped concretion (upper Gervillia part =26f and lower Limopsis part = 26g), E-facing bluff of sharp ridge on W bank of Grand River at E-W part of bend, 2.5 mi S of Bullhead, Miscol NE Quad., CENTER NW sec6T20NR25E, Corson Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**Hypotype** YPM 27114


**Hypotype** YPM 27117


**Hypotype** YPM 27121


**Hypotype** YPM 27124


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper nicolleti Assemblage Zone. Float accumulation from road widening and grading, concretions, road gutter and new (1964) cut on McLaughlin-Little Eagle Road ("roller-coaster road") on small hill about 4 mi S of Little Eagle, Little Eagle SE Quad., along section line S half of W EDGE SW SW sec9T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**Hypotype** YPM 27126


**Hypotype** YPM 27189


**Hypotype** YPM 27190


**Hypotype** YPM 27191


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float, in river bed, high bluff on N bank of Grand River just W of Bullhead, Bullhead Quad., S NW sec24T21NR24E,

**HYPOTYPE** YPM 27192


**HYPOTYPE** YPM 27193


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Gravel pits, Moreau River Valley, Dewey Co., South Dakota, USA. Collector: Ross, H.

**HYPOTYPE** YPM 27194


**HYPOTYPE** YPM 27199


**HYPOTYPE** YPM 27200


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper *nicolleti* Assemblage Zone. Concretions, section A, 5.5 ft above base of unit 6, lot 3, exposure at toe at W end of spur, on E side of E tributary of Little Oak Creek, and 4 mi SSW of Little Eagle, Little Eagle Quadr., SW NE NE sec7T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1959.

**HYPOTYPE** YPM 27201


**HYPOTYPE** YPM 27202


**HYPOTYPE** YPM 27203


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Limopsis-Gervillia* Assemblage Zone. Concretions, top of spur 0.8 mi SE of High Bank Creek, S of Grand River, and 5.7 mi SW of Little Eagle, Little Eagle SW Quadr., N NE NE NE sec15T19NR26E, Corson Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**HYPOTYPE** YPM 27204

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float, concretion, exposures along S side of Grand River, just E of small tributary gully, and 1.2 mi ENE of Petersen Ranch house, and 4.5 mi ENE of Miscol, Miscol NE Quad., NE CORNER SW NE NW sec17T20NR25E, Corson Co., South Dakota, USA. Collector: Speden, I.G., 1962.

HYPOTYPE YPM 27205

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, abyssinus-mandanensis Biofacies. 2 concretions between jarosite at top of Trail City and underlying Nucula-layer concretions, S-facing bluff along small, flat, E-trending spur, 0.8 mi SE of Petersen Ranch house, and 0.5 mi W of Grand River, and 3.9 mi ENE of Miscol, Miscol NE Quad., CENTER S EDGE SE sec18T20NR25E, CENTER N EDGE NE sec19T20NR25E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1964.

HYPOTYPE YPM 27206

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper nicoleti Assemblage Zone. Float accumulation from road widening and grading, concretions, road gutter and new (1964) cut on McLaughlin-Little Eagle Road ("roller-coaster road") on small hill about 4 mi S of Little Eagle, Little Eagle SE Quad., along section line S half of W EDGE SW SW sec9T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1959.

HYPOTYPE YPM 34107

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Limopsis-Gervillia Assemblage Zone. Float, Gervillia concretions, butte-like toe of SE-trending spur and adjoining outcrops and

HYPOTYPE YPM 35158

CAST OF HYPOTYPE YPM 35872


Late Cretaceous, Fox Hills Fm, Trail City Mbr. South Dakota, USA.

See also Discoscaphites conradi gulosus (Morton).

This specimen was dissected by N.H. Landman and a median section was prepared from the inner whorls.

a This specimen was dissected by N.H. Landman and a median section was prepared from the inner whorls.

b This specimen was dissected by N.H. Landman to expose the inner whorls.

c This specimen was sawed along the dorsal-ventral axis by N.H. Landman.

d This is a cast. The original specimen, USNM 486023, is at the Smithsonian Institution.

**Discoscaphites nebrascensis (Owen)**

**HYPOTYPE** YPM 23166


Late Cretaceous, Fox Hills Fm, Timber Lake Mbr, Cucullaea Assemblage Zone. Concretion, about 8 ft below level of 1957 Sphenodiscus concretions, upper sand, sand bank, RR cut at Lantry Dam, 1.5 mi WNW of Lantry, Lantry Quad., CENTER SW SW sec31T12NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

**Discoscaphites rossi Landman and Waage**

**HOLOTYPE** YPM 23052


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Around top of SE-trending spur, in field SW of stock pond, 0.2 mi SSW of Fred Kost Ranch house, and 1 mi E of SD Rte 63, and 2.2 mi NNE of High Elk Hill, and 3.5 mi SSW of Eagle Butte Village, High Elk Hill Quad., CENTER W SW SW sec31T12NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1983.

**ALLOTYPE** YPM 23090


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Kost Ranch, 3 mi SSW of Eagle Butte Village [same area as Waage Locality 305], Lantry Quad., Ziebach Co., South Dakota, USA. Collector: Parsons, D.J.

**HYPOTYPE** YPM 23083


**HYPOTYPE** YPM 23085


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Kost Ranch, 3 mi SSW of Eagle Butte Village [same area as Waage Locality 305], Lantry Quad., Ziebach Co., South Dakota, USA. Collector: Parsons, D.J.

**HYPOTYPE** YPM 23093


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, around top of SE-trending spur, in field SW of stock pond, 0.2 mi SSW of Fred Kost Ranch house, and 1 mi E of SD Rte 63, and 2.2 mi NNE of High Elk Hill, and 3.5 mi SSW of Eagle Butte Village, High Elk Hill Quad., CENTER W SW SW sec31T12NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1983.

**HYPOTYPE** YPM 23094


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Concretions, in road and roadcut, ridge-crest exposures along cutoff of secondary road, along top of small, sharp ridge that trends NW-SE from E1/2SW1/4sec32T12NR24E to NW CORNER NE1/4sec5T11NR24E, 3 mi due S of Eagle Butte Village, Herbert Creek Quad., E SW sec32T12NR24E, NW CORNER NE sec5T11NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1957 to 1964.

**HYPOTYPE** YPM 23095

Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr, abyssinus-mandanensis Biofacies. Concretions, just below top of big Sphenodiscus Layer, top of first prominent spur 0.2 mi NW of S part of Peabody Locality C0088, and 2 mi SW of Green Grass, Lantry NE Quad., CENTER W W NE sec27T14NR23E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**HYPOTYPE YPM 23096**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Concretions, in road and roadcut, ridge-crest exposures along cutoff of secondary road, along top of small, sharp ridge that trends NW-SE from E1/2SW1/4sec32T12NR24E to NW CORNER NE1/4sec5T11NR24E, 3 mi due S of Eagle Butte Village, Herbert Creek Quad., E SW sec32T12NR24E, NW CORNER NE sec5T11NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1957 to 1964.

**HYPOTYPE YPM 23097**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float on Timber Lake ridge N of main gully, exposures flanking gully head just W of SD Rte 63, at first sharp curve as road drops into breaks on N side of Moreau River, and 4.5 mi ENE of Green Grass, Parade NW Quad., NE SW NW sec32T15NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

**HYPOTYPE YPM 23100**


**HYPOTYPE YPM 23103**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

**HYPOTYPE YPM 23105**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, roadcuts along SD Rte 63 about 3.5 mi N of Moreau River bridge, and 5 mi NNE of Green Grass, Parade NW Quad., section line NE sec30T15NR24E, section line NW sec29T15NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1940.

**HYPOTYPE YPM 23108**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Kost Ranch, 3 mi SSW of Eagle Butte Village [same area as Waage Locality 305], Lantry Quad., Ziebach Co., South Dakota, USA. Collector: Parsons, D.J.

**HYPOTYPE YPM 27081**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

**HYPOTYPE YPM 27084**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Concretions, in road and roadcut, ridge-crest exposures along cutoff of secondary road, along top of small, sharp ridge that trends NW-SE from E1/2SW1/4sec32,T12N,R24E to NW CORNER NE1/4sec5T11N,R24E, 3 mi due S of Eagle Butte Village, Herbert Creek Quad., E SW sec32T12NR24E, NW CORNER NE sec5T11NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1957 to 1964.
18 Type Catalog of Ammonoidea

HYPOTYPE YPM 32291
Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from Sphenodiscus Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

^This specimen was dissected by N.H. Landman to expose the inner whorls.

Discoscaphites sp.

HYPOTYPE YPM 34114^a

HYPOTYPE YPM 35095

^This is an ammonitella on an SEM stub.

Discoscaphites waagei Birkelund

CAST OF HYPOTYPE YPM 31803^a

^This is a cast. The original specimen is at the University of Copenhagen.

Dunbarites rectilaterialis (Miller)
See Paralegoceras rectilaterial Miller.

Dunveganoceras pondi Haas

HYPOTYPE YPM 14897
Late Cretaceous, Dakota Fm. Basal part of Graneros Shale in the Sioux City Brick and Tile Company's claypit, North Riverside, Woodbury, Iowa, USA.

Eccyliopterus? sp.

HYPOTYPE YPM 17284

Emperoceras beecheri Hyatt

SYNTAXYPE YPM 6131A^a

SYNTAXYPE YPM 6131B^a

^This includes one specimen and two casts.

Eoaraxoceras ruzhencevi Spinosa, Furnish and Glenister
See Kingoceras kingi Miller.

Eoasianites deciensis (Plummer and Scott)

HYPOTYPE YPM 16788
Late Pennsylvanian, Gaptank Fm. Upper Gaptank, Zone of *Uddenites*, Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Eoasianites modestus (Böse)**

**HYPOTYPE** YPM 15939


Early Permian, Wolfcampian, Wolfcamp Fm. Upper Wolfcamp, 2.75 mi N of Decie Ranch, Brewster Co., Texas, USA. Collector: Baker, C.L.

**HYPOTYPE** YPM 16789


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, Zone of *Uddenites*, 5 mi NE of Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Eothalassoceras keytei** (Smith)

**HYPOTYPE** YPM 16787


Early Permian, Wolfcampian, Wolfcamp Fm. *Uddenites* bed, about 0.5 mi W of Peabody Locality B3119, below hill 4815, and NW of Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Eothinites hessensis** Miller and Furnish

**SYNTYPE** YPM 16782A


**SYNTYPE** YPM 16782B


**SYNTYPE** YPM 16783A, 16783B


Early Permian, Leonardian, Hess Limestone. Uppermost Hess, 1.1 mi SW of Word Ranch house, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Epithalassoceras ruzencevi** Miller and Furnish

**HOLOTYPE** YPM 16303


Late Permian. Beds 5, 6 and 7 of Malascachas section, area 1200 m S17W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Eulophoceras natalense** Hyatt

**HOLOTYPE** YPM 956


Late Cretaceous. Port Natal [probably Umzamba beds at mouth of Umzamba River at the Natal/ Transkei border], South Africa.

**Exiteloceras oronense** (Lewy)

**HYPOTYPE** YPM 68


Late Cretaceous, Monmouth Grp, Navesink Fm. Atlantic Highlands, Monmouth Co., New Jersey, USA.

**Gastrioceras angusticameratum** Miller

See **Gastrioceras** sp.

**Gastrioceras bakeri** Miller

See **Gastrioceras** sp.

**Gastrioceras drakei** Miller

See **Gastrioceras** sp.

**Gastrioceras gaptankense** Miller

**HOLOTYPE** YPM 12933A


**PARATYPE** YPM 12933B


*A thorough search of the collections by the curatorial staff in the 1960s and 1990s could not locate this specimen. It is believed to be permanently lost.*
Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

**PARATYPE** YPM 12944


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 2.5 mi S of Arnold Ranch, below Dugout Creek overthrust, N side of hill, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

\(^a\)Cited as a cotype on p.292, but designated the holotype in Miller (1930, p.402).

\(^b\)Cited as a cotype on p.292, but designated a paratype in Miller (1930, p.402).

**Gastrioceras multiseptum** Miller

See **Gastrioceras** sp.

**Gastrioceras paucireticulatum** Miller

See **Gastrioceras** sp.

**Gastrioceras** sp.

**HYPOTYPE** YPM 13088


**HYPOTYPE** YPM 13089


=**Gastrioceras bakeri** Miller. **HOLOTYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.87, pl.13, f.15-17.

**HYPOTYPE** YPM 13090, 14096–14122


=**Gastrioceras bakeri** Miller. **PARATYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.87.

**HYPOTYPE** YPM 13091


**HYPOTYPE** YPM 13092


=**Gastrioceras dakei** Miller. **PARATYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.89.

**HYPOTYPE** YPM 13093


=**Gastrioceras multiseptum** Miller. **HOLOTYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.90, pl.13, f.9,10.

**HYPOTYPE** YPM 13094


=**Gastrioceras multiseptum** Miller. **PARATYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.90, pl.13, f.11.

**HYPOTYPE** YPM 13095


**HYPOTYPE** YPM 13096, 14126


**HYPOTYPE** YPM 14123


=**Gastrioceras dakei** Miller. **PARATYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.89.

**HYPOTYPE** YPM 14124, 14125


=**Gastrioceras dakei** Miller. **PARATYPE.** Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.89.

Early Permian, Bursum Fm. Clay pits, 1.25 mi E of Tularosa on US Hwy 70, CENTER SW1/4sec21T14SR10E, Otero Co., New Mexico, USA. Collector: Baker, C.L. and Drake, N.F.

**Gastrioceras subtilicostatum** Böse

**SYNTYPE** YPM 13087, 14059–14094


Early Permian, Bursum Fm. Clay pits, 1.25 mi E of Tularosa on US Hwy 70, CENTER SW1/4 sec 21 T14 S R10 E, Otero Co., New Mexico, USA. Collector: Baker, C.L. and Drake, N.F.

**Gonioloboceras discoidale** Böse

SYNTYPE YPM 13081


=**Milleroceras minusculum** Miller. HOLOTYPE. Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.73, pl.12, f.8-10.


SYNTYPE YPM 13082


=**Milleroceras minusculum** Miller. PARATYPE. Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.73, pl.12, f.11.


SYNTYPE YPM 13083, 14022–14039


=**Milleroceras minusculum** Miller. PARATYPE. Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.73.


SYNTYPE YPM 13084


SYNTYPE YPM 14040, 14049–14058


Early Permian, Bursum Fm. Clay pits, 1.25 mi E of Tularosa on US Hwy 70, CENTER SW1/4 sec 21 T14 S R10 E, Otero Co., New Mexico, USA. Collector: Baker, C.L. and Drake, N.F.

**Gonioloboceras? sp.**

HYPOTYPE YPM 13085, 14041–14048


HYPOTYPE YPM 13086


=**Wiedeyoceras lineolatum** Miller. HOLOTYPE. Miller, A.K. 1932a. J. Paleont. v.6, n.1, p.82, pl.13, f.3-5.


Early Permian, Bursum Fm. Clay pits, 1.25 mi E of Tularosa on US Hwy 70, CENTER SW1/4 sec 21 T14 S R10 E, Otero Co., New Mexico, USA. Collector: Baker, C.L. and Drake, N.F.

**Gurleyoceras discoidale** (Böse)

See **Gonioloboceras discoidale** Böse.

**Hamites sp.**

HYPOTYPE YPM 6382

Landman, N.H. 1984. Natural History v.93, n.8, p.34.

Cretaceous. Lower California, Mexico.

**Hammatoceras cappucinum** Buckman

PARATYPE YPM 6256


Early Jurassic, Toarcian. Cole Station, Somerset, England, United Kingdom.
**Haresiceras placentiforme** Reeside

**Hypotype** YPM 34699


Late Cretaceous, Telegraph Creek Fm, Elk Basin Sandstone Mbr, Scaphites hippocrepis 1 Zone. Top surface of uppermost unit of Elk Basin, N-S butte top ridge, E side of basinal cove of anticline, 0.5-0.7 mi due N of Elk Basin Village (abandoned), Elk Basin, Elk Basin Quad., straddles Range line E SIDE SE NE NE sec24T58NR100W, straddles Range line W SIDE SW NW NW sec19T58NR99W, SE SE sec35T9SR100W, Carbon Co., Montana, USA. Collector: Hicks, J.F., 1992.

**Helicoceras stevensonii** Whitfield

**Hypotype** YPM 6091


**Hoploscaphites birkelundi** Landman and Waage

**Holotype** YPM 27172


**Allotype** YPM 27210


**Hypotype** YPM 27179


HYPOTYPE  YPM 27180
Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. All fossiliferous horizons, walls and sides gulleys of NW-flowing tributary of Spring Creek, 0.75 mi NE of Wasserberger Ranch house, and 5.5 mi SW of Redbird, from NW CORNER to SE CORNER NE sec13T37NR63W, Redbird Quad., NE sec13T63WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., White, R.D. and Key, M., 1985.

HYPOTYPE  YPM 27181
Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. Throughout massive sand, bluffs 0.2 mi N of E-W road to Wasserberger Ranch house beginning 0.2 mi W of draw that crosses road 1.3 mi W of US Rte 85, and extending E for 0.6 mi, and 1.25-1.75 mi E of Wasserberger Ranch house, and 5.5 mi SSW of Redbird, from SW NE SE to NE NW SE sec12T37NR63W, Redbird Quad., NE sec12T63WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., Wright, S. and Kurtz, J., 1983.

HYPOTYPE  YPM 27207

HYPOTYPE  YPM 27208

HYPOTYPE  YPM 27209

HYPOTYPE  YPM 27211

HYPOTYPE  YPM 27218
Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. Throughout massive sand, bluffs 0.2 mi N of E-W road to Wasserberger Ranch house beginning 0.2 mi W of draw that crosses road 1.3 mi W of US Rte 85, and extending E for 0.6 mi, and 1.25-1.75 mi E of Wasserberger Ranch house, and 5.5 mi SSW of Redbird, from SE SW to W SE sec18T37NR62W, Redbird Quad., S S sec18T62WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., Wright, S. and Kurtz, J., 1983.

**Hypotype** YPM 34698


Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. Throughout massive sand, bluffs 0.2 mi N of E-W road to Wasserberger Ranch house beginning 0.2 mi W of draw that crosses road 1.3 mi W of US Rte 85, and extending E for 0.6 mi, and 1.25-1.75 mi E of Wasserberger Ranch house, and 5.5 mi SSW of Redbird, from SE SW to W SE sec18T37NR62W, Redbird Quad., S S sec18T62WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., Wright, S. and Kurtz, J., 1983.

**Hoploscaphites cheyennensis** (Owen)

**Hypotype** YPM 23689


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Protocardia-Oxytoma* Assemblage Zone. 1.5 ft above barren layer in POAZ, SW side of SE-trending spur paralleling and just W of SD Rte 63, and between 0.3 and 0.5 mi S of Peabody Locality C0030, and 2.6 mi SSE SE of O'Leary Ranch house, and about 1 mi N of Moreau River, and 3.6 mi NNE of Green Grass, Parade NW Quad., CENTER SW SW sec32T15NR24E, SW NW SW sec32T14NR23E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**Hypotype** YPM 27090


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1940 to 1962.

**Hypotype** YPM 23046


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, concretions, *linguiformis* concretions with small *Cuculaea* concretions in or a few feet below them, exposures on NW-facing bluff and spurs below it, overlooking Moreau River, and 1.5-2 mi S of Green Grass, Lyny NE Quad., E NE sec26T14NR23E, NW CORNER sec26T14NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., Speden, I.G., 1986.

**Hypotype** YPM 23057


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, concretions in gravel pit on S side of Moreau River just NW of SD Rte 65, and 6.8 mi E of Thunder Butte Village, Dupree NE Quad., NW CORNER SE sec4T14NR22E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1940 to 1962.

**Hypotype** YPM 23058


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with

**HYPOTYPE YPM 23059**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr, *Cucullaea* Assemblage Zone. Many concretions, cut on abandoned county road at top of rise 0.1 mi N of Meadow Creek, and 0.7 mi SW of Peach Lake, and 9.7 mi S of Firesteel, Peach Lake Quad., along middle part of section line W EDGE SW sec4T15NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**HYPOTYPE YPM 23060**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies. Float, several horizons, POAZ to top of TCM, top knob on end of SE-trending spur, and 6 mi NW of Whitehorse, Whitehorse Quad., SE NW NW sec30T16NR26E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

**HYPOTYPE YPM 23741**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr, *Cucullaea* Assemblage Zone. Concretion, cut on abandoned county road at top of rise 0.1 mi N of Meadow Creek, and 0.7 mi SW of Peach Lake, and 9.7 mi S of Firesteel, Peach Lake Quad., along middle part of section line W EDGE SW sec4T15NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**HYPOTYPE YPM 23744**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr, *Cucullaea* Assemblage Zone. Concretion, cut on abandoned county road at top of rise 0.1 mi N of Meadow Creek, and 0.7 mi SW of Peach Lake, and 9.7 mi S of Firesteel, Peach Lake Quad., along middle part of section line W EDGE SW sec4T15NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**HYPOTYPE YPM 27066**


**HYPOTYPE YPM 27146**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

**HYPOTYPE YPM 27228**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr, *Sphenodiscus* Layer. Float, concretion, SW-facing exposures on ridge extending NW from bluffs on Timber Lake Mbr, and about 0.5 mi W of Peabody Locality C0089, and 2.5 mi WSW of Green Grass, Lantry NE Quad., NE SE sec21T14NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1962.

**HYPOTYPE YPM 27229**


**HYPOTYPE YPM 27230**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

**HYPOTYPE YPM 27231**

Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, along SD Rte 63 about 3.5 mi N of Moreau River bridge, and 5 mi NNE of Green Grass, Parade NW Quad., section line NE sec30T15NR24E, section line NW sec29T15NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1940.

HYPOTYPE YPM 27232


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, from butte and small prominences and bluffs to S and near road, SW slope of prominent butte on divide between Red Earth Creek and Meadow Creek, 4.5 mi NNW of Green Grass, Lantry NE Quad., CENTER NE SW sec27T15NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

HYPOTYPE YPM 27233


HYPOTYPE YPM 27234


HYPOTYPE YPM 27239


HYPOTYPE YPM 27241


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from Sphenodiscus Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

HYPOTYPE YPM 27242


HYPOTYPE YPM 34696


HYPOTYPE YPM 34697


This specimen was dissected by N.H. Landman to expose the inner whorls.

This specimen was sawed along the dorsal-ventral axis by N.H. Landman.

Hoploscaphites melloi Landman and Waage

HOLOTYPE YPM 23044


HYPOTYPE YPM 23042


HYPOTYPE YPM 23043


HYPOTYPE YPM 23066


HYPOTYPE YPM 23067


HYPOTYPE YPM 23068

Hypotype YPM 23071

Hypotype YPM 23072
Late Cretaceous, Maastrichtian, Montana Grp, Pierre Shale, Mobridge Mbr. Float in upper Mobridge, NW-facing bluff S of Moreau River, 0.2 mi SW of SD Rte 63, and 2 mi NE of Green Grass, Parade NW Quad., N SE SE sec7T14NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1940.

Hoploscaphites nebrascensis (Owen)
Hypotype YPM 27157


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretion 1, 11-13 ft below base of unit A in measured section, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M. and Biscaye, P.E., 1957.

Hypotype YPM 23768


Hypotype YPM 23769


Hypotype YPM 23770


**HYPOTYPE YPM 23041**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicoleti Assemblage Zone. Western of 3 exposures aligned E-W, on N-facing toes of spurs at head of tributary to Little Oak Creek, and 4 mi SSW of Little Eagle, Little Eagle SE Quad., CENTER NE SW sec7T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1959.

**HYPOTYPE YPM 23053**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicoleti Assemblage Zone. Concretion 1, 11-13 ft below base of unit A (peanut brittle), bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S NE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M. and Hilgeford, P., 1957.

**HYPOTYPE YPM 23055**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicoleti Assemblage Zone. Concretion 2, 11-13 ft below base of unit A in measured section, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S NE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M. and Biscaye, P.E., 1957.

**HYPOTYPE YPM 23055**


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicoleti Assemblage Zone. Concretions, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S NE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M. and Biscaye, P.E., 1957.
Postilla 222

Type Catalog of Ammonoidea


**Hypotype** YPM 23056


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies. Float in lower Trail City, most but not all from LN AZ (some from LGAZ), bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M. and Barker, D., 1956.

**Hypotype** YPM 23064


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Irish Creek Lithofacies, Cucullaea Assemblage Zone. WSW-facing bluff on N side of Moreau River about 2 mi E of Thunder Butte Bridge, and 3.5 mi ENE of Thunder Butte Village, Dupree NE Quad., Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1961.

**Hypotype** YPM 23213


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretion 3, 7.5 ft below Limopsis Layer, in face on SW side of slump block 300 ft SSW of Peabody Locality C0066, Whitehorse Ridge, and 6 mi NW of Whitehorse, Whitehorse Quad., SE NW sec30T16NR26E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**Hypotype** YPM 23707


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper nicolleti Assemblage Zone. 3 concretions, chiefly NE side of narrow gully at SW end of Waage Locality 52, 3 mi SSW of Little Eagle, and 0.5 mi W of SD Rte 63, Little Eagle Quad., NW NE NW sec8T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1959.

**Hypotype** YPM 23740


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretion 3, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M., 1941.

**Hypotype** YPM 23742


**Hypotype** YPM 23751


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretion 3, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M., 1941.

**Hypotype** YPM 27144


**Hypotype** YPM 27221


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper nicolleti Assemblage Zone. Concretions, section A, 5.5 ft above base of unit 6, lot 3, exposure at toe at W

**Hypotype** YPM 27223


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower *nicolleti* Assemblage Zone. Western of 3 exposures aligned E-W, on N-facing toes of spurs at head of tributary to Little Oak Creek, and 4 mi SSW of Little Eagle, Little Eagle SE Quad., CENTER NE SW sec7T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1959.

**Hypotype** YPM 27224


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower *nicolleti* Assemblage Zone. Concretion 1, 11-13 ft below base of unit A in measured section, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M. and Biscaye, P.E., 1957.

**Hypotype** YPM 27225


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower *nicolleti* Assemblage Zone. Concretion 3, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M., 1941.

**Hypotype** YPM 27226


**Hypotype** YPM 27227


Late Cretaceous, Maastrichtian, Montana Grp, Pierre Shale, Elk Butte Mbr. Siderite concretions, in place from concretion layers 5-20 ft above river and float from those layers in river bed below, NE-facing cliff on W bank of Moreau River, 1.5 mi due W of SD Rte 65 bridge, and 6.7 mi E of Thunder Butte Village, Dupree NE Quad., CENTER E NE NW sec3T14NR21E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., White, R.D. and Ross, H., 1985.

**Hypotype** YPM 27228


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper *nicolleti* Assemblage Zone. Float accumulation from road widening and grading, concretions, road gutter and new (1964) cut on McLaughlin-Little Eagle Road ("roller-coaster road") on small hill about 4 mi S of Little Eagle, Little Eagle SE Quad., along section line S half of W EDGE SW SW sec9T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**Hypotype** YPM 27229


**Hypotype** YPM 27230


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, *Protocardia-Oxytoma* Assemblage Zone. Several concretions all form 1 exposure, questionably in place, small outcrops on shoulders of spurs E and W of main gully draining SW 1/4 of section 24, and 9 mi W of Little Eagle, Little Eagle NW Quad., CENTER E SW sec24T20NR25E, CENTER W SW...
Postilla 222

Type Catalog of Ammonoidea


HYPOTYPE YPM 27244


HYPOTYPE YPM 27245


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower *nicolleti* Assemblage Zone. Concretion 1, 11-13 ft below base of unit A in measured section, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Waage, K.M., 1941.

HYPOTYPE YPM 27246


HYPOTYPE YPM 27247


HYPOTYPE YPM 27248


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper *nicolleti* Assemblage Zone. Scattered poor exposures for 0.4 mi along trail on spur leading NNE from SD Rte 63, and 4 mi ESE of Green Grass, Parade NW Quad., CENTER N SW sec27T14NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1961.
HYPOTYPE YPM 32370

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretion, SE side of spur, exposures on small E-trending spur, 1 mi S of Maxon Ranch house, and 2.5 mi NW of Little Eagle, Little Eagle Quad., NE CORNER NW sec18T20NR27E, NW CORNER NE sec18T20NR27E, Corson Co., South Dakota, USA. Collector: Speden, I.G., 1962.

HYPOTYPE YPM 33189

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float, concretion, exposures on spurs and slump blocks N and NE of bluffs on Timber Lake Mbr, and about 0.5 mi NW of Peabody Locality C0088, and 2 mi WSW of Green Grass, Lantry NE Quad., SE SW sec22T14NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1962.

HYPOTYPE YPM 34110

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Part of nicolleti concretion, cut on E side of second roadcut N of Little Eagle on McLaughlin-Little Eagle Road, and 3.3 mi N of Little Eagle, Little Eagle Quad., CENTER E SE sec5T20NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1964.

HYPOTYPE YPM 34111

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper nicolleti Assemblage Zone. Concretion, about in place, exposures on hill slope immediately E of E abutment of stock dam, about 0.5 mi N of Johnson Brothers Ranch house, and 6 mi S of Little Eagle, Little Eagle SE Quad., NW CORNER NE NW sec29T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M.

HYPOTYPE YPM 34116

Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, and from measured section, Sphenodiscus Layer and CAZ, 2 separate places on SW-facing bluffs, on W side of SD Rte 63, SE of O'Leary Ranch house, and about 1 mi N of Moreau River, and 4 mi NNE of Green Grass, Parade NW Quad., NE NE NE sec31T15NR24E, NW NW sec32T15NR24E, SE SE sec30T15NR24E, SW SW sec29T15NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

HYPOTYPE YPM 34118

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretions, bluffs of Beaver Creek and tributaries, Seeman Park, 1 mi SE of Linton, Strasburg Quad., along section line N NE sec20T132NR76W, along section line S SE sec17T132NR76W, Emmons Co., North Dakota, USA. Collector: Mackenzie, C., 1939.

HYPOTYPE YPM 34119

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. Concretions, exposures on tops of bluffs, roadcut on E side of spur, roadcut on N side of roadcut on old US Rte 12 about 0.75 mi S of Wapkapla Road, N side of hill with Ridgeview 1954 benchmark, and 4.5 mi S of Mahto, Wapkapla NW Quad., NW SW sec15T20NR28E, SW CORNER NW sec15T20NR28E, Corson Co., South Dakota, USA. Collector: Waage, K.M. and Barker, D., 1956.

HYPOTYPE YPM 34692

**HYPOTYPE** YPM 34693


**HYPOTYPE** YPM 34694


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Upper nicolleti* Assemblage Zone. Concretion, Waage Locality 2 of new SD Rte 63, new roadcut along SD Rte 63 ("old roller-coaster road"), 2.0 mi due N of turnoff to W to Johnson Brothers Ranch, and 4.5 mi S of Little Eagle, Little Eagle SE Quad., center of section line between sec16 and sec17 sec16T19NR27E, center of section line between sec16 and sec17 sec17T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1967.

See also *Hoploscaphites nicolleti* (Morton).

\(^{a}\)This includes one specimen and a cast.

\(^{b}\)Cited as allotype, but not part of the original type series. Landman and Waage (1993) use the term to denote the opposite sex of the neotype.

\(^{c}\)This specimen was sawed along the dorsal-ventral axis by N.H. Landman.

\(^{d}\)Included with this specimen is an SEM stub with the ventral muscle attachment area.

\(^{e}\)This specimen was dissected by N.H. Landman to expose the inner whorls.

\(^{f}\)The mandible of this specimen is mounted on an SEM stub.

\(^{g}\)This specimen is an SEM stub with hook-like structures.

\(^{h}\)This is an ammonitella mounted on an SEM stub.

\(^{i}\)This is a juvenile specimen mounted on an SEM stub.

\(^{k}\)This includes one hook-like structure embedded in matrix and one hook-like structure on an SEM stub.

\(^{m}\)This specimen was dissected by N.H. Landman and a median section was prepared from the inner whorls.

**Hoploscaphites? sp.**

**HYPOTYPE** YPM 27166


**HYPOTYPE** YPM 44139


**Hypotype** YPM 27168


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower nicolleti Assemblage Zone. nicolleti concretion, base, E end of hill, S-facing bluff, S side of trail, about 500-700 ft E along trail from Peabody Locality C0006, Whitehorse Ridge, and 6 mi NW of Whitehorse, Redbird Quad., about 300 ft N of CENTER SW sec20T16NR26E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

See also undet. Scaphitidae.

**Hunanites siangtanensis** Chao

**Hypotype** YPM 28141


Lower Carboniferous. SW of Changlingpu, Siangtan, Hunan, China.

**Jeletzkytes dorfi** Landman and Waage

**Holotype** YPM 23175


**Allotype** YPM 23212


Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. All fossiliferous horizons, walls and side gulleys of NW-flowing tributary of Spring Creek, 0.75 mi NE of Wasserberger Ranch house, and 5.5 mi SW of Redbird, from NW CORNER to SE CORNER NE sec13T37NR63W, Redbird Quad., NE sec13T63WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., Wright, S. and Kurtz, J., 1983.

**Hypotype** YPM 23174


Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. Persistent concretionary bed at top of unit 4 of massive sand, bluffs 0.2 mi N of E-W road to Wasserberger Ranch house beginning 0.2 mi W of draw that crosses road 1.3 mi W of US Rte 85, and extending E for 0.6 mi, and 1.25-1.75 mi E of Wasserberger Ranch house, and 5.5 mi SSW of Redbird, from SE SW to W SE sec18T37NR62W, Redbird Quad., S S sec18T62WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., Wright, S. and Kurtz, J., 1983.

**Hypotype** YPM 23176


**Hypotype** YPM 23177


**Hypotype** YPM 23179

Late Cretaceous, Maastrichtian, Fox Hills Fm, Massive Marine Sand Lithofacies. Throughout massive sand, bluffs 0.2 mi N of E-W road to Wasserberger Ranch house beginning 0.2 mi W of draw that crosses road 1.3 mi W of US Rte 85, and extending E for 0.6 mi, and 1.25-1.75 mi E of Wasserberger Ranch house, and 5.5 mi SSW of Redbird, from SE SW to W SE sec18T37NR62W, Redbird Quad., S S sec18T62WR37N, Niobrara Co., Wyoming, USA. Collector: Waage, K.M., Landman, N.H., Wright, S. and Kurtz, J., 1983.

**HYPOTYPE** YPM 23180


**HYPOTYPE** YPM 23183


**HYPOTYPE** YPM 23185


**HYPOTYPE** YPM 27212


**HYPOTYPE** YPM 27214


**HYPOTYPE** YPM 27215


**HYPOTYPE** YPM 27216


**HYPOTYPE** YPM 27217

Jeletzkytes nebrascensis (Owen)

**HYPOTYPE** YPM 23065


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from Sphenodiscus Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.
HYPOTYPE YPM 23144


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Includes CAZ and *Sphenodiscus* Layer, all collections from float and in sand banks of roadcut of abandoned US Rte 12, RR cut and spillway of Lantry Dam, 1.5 mi WNW of Lantry, Lantry Quad., CENTER SW SW sec4T12NR22E, Dewey Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1940 to 1962.

HYPOTYPE YPM 23145


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

HYPOTYPE YPM 23146


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, concretions, CAZ and *Sphenodiscus* Layer, top of bluff, S-facing bluffs forming amphitheatre, 1.6 mi N of Moreau River, and 2 mi S of the French Ranch, and 6 mi NW of Green Grass, Lantry NE Quad., NE CORNER SE sec31T14NR21E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1959.

HYPOTYPE YPM 23147


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Includes CAZ and *Sphenodiscus* Layer, all collections from float and in sand banks of roadcut of abandoned US Rte 12, RR cut and spillway of Lantry Dam, 1.5 mi WNW of Lantry, Lantry Quad., CENTER SW SW sec4T12NR22E, Dewey Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1940 to 1962.

HYPOTYPE YPM 23151


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, concretion, site B, near top of flat-topped ridge on W side of tributary of Swan Creek, 7 mi S of Moreau River, and 5.5 mi NNE of Ridgeview, Ridgeview NE Quad., E SW SW sec14T14NR27E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1963.

HYPOTYPE YPM 23165


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, concretions in gravel pit on S side of Moreau River just NW of SD Rte 65, and 6.8 mi E of Thunder Butte Village, Dupree NE Quad., NW CORNER SE sec3T14NR21E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M.

HYPOTYPE YPM 23172


Late Cretaceous, Maastrichtian, Fox Hills Fm, upper Trail City Mbr, Irish Creek Lithofacies. Float and in place, upper two large concretion layers and beds between (*Sphenodiscus* and CAZ), dissected SW-trending spur, and eastward-extending bluff, N side of Moreau River, and 0.5 mi E of SD Rte 65, and 10 mi NNW of Bear Creek Village, Lantry NW Quad., NE CORNER NE sec1T14NR21E, SE CORNER SE sec36T15NR21E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1959.

HYPOTYPE YPM 23195


HYPOTYPE YPM 23198


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float and in place, from *Sphenodiscus* Layer up through CAZ, roadcut and adjacent outcrops along W side of SD Rte 63, between 5.5 and 6 mi S of intersection with US Rte 212, High Elk Hill, 6 mi SSW of Eagle Butte Village, High Elk Hill Quad., W W SW sec12T11NR23E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1940 to 1941.

HYPOTYPE YPM 23210


Late Cretaceous, Maastrichtian, Fox Hills Fm, upper Trail City Mbr, Irish Creek Lithofacies. Unit 4, 4.5
ft above RB concretions of unit 3, section 1, S-facing bluff, Oliver Jewett Ranch, N side of Moreau River, and 0.5 mi E of SD Rte 65, and 10 mi NNW of Bear Creek Village, Landry NW Quad., CENTER NE sec1T14NR21E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1959.

HYPOTYPE YPM 23215


Late Cretaceous, Maastrichtian, Fox Hills Mbr, Trail City Mbr, Irish Creek Lithofacies, Cucullaea Assemblage Zone. Blufts S of the Moreau River, between the forks of the county roads leading NW to the village and N to the bridge, and about 1 mi SE of Thunder Butte Village, Thunder Butte Quad., CENTER sec3T14NR20E, E sec3T14NR20E, Ziebach Co., South Dakota, USA. Collector: Speden, I.G., 1962.

HYPOTYPE YPM 23223


Late Cretaceous, Maastrichtian, Fox Hills Mbr. Concretions, in road and roadcut, ridgecrest exposures along cutoff of secondary road, along top of small, sharp ridge that trends NW-SE from E1/2SW1/4sec2T12NR24E to NW CORNER NE1/4sec5T11NR24E, 3 mi due S of Eagle Butte Village, Herbert Creek Quad., E SW sec32T12NR24E, NW CORNER NE sec5T11NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1957 to 1964.

HYPOTYPE YPM 23687


Late Cretaceous, Maastrichtian, Fox Hills Mbr. Float, concretions in gravel pit on S side of Moreau River just NW of SD Rte 65, and 6.8 mi E of Thunder Butte Village, Dupree NE Quad., NW CORNER SE sec3T14NR21E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M.

HYPOTYPE YPM 23697


Late Cretaceous, Maastrichtian, Fox Hills Mbr. Includes CAZ and Sphenodiscus Layer, all collections from float and in sand banks of roadcut of abandoned US Rte 12, RR cut and spillway of Landry Dam, 1.5 mi WNW of Landry, Landry Quad., CENTER SW SW sec4T12NR22E, Dewey Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1940 to 1962.

HYPOTYPE YPM 23735


Late Cretaceous, Maastrichtian, Fox Hills Mbr, abyssinus-mandanensis Biofacies. Concretions, just below top of big Sphenodiscus layer, top of first prominent spur 0.2 mi NW of S part of Peabody Locality C0088, and 2 mi SW of Green Grass, Lantry NE Quad., CENTER W W NE sec27T14NR23E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**Hypotype** YPM 32534


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, from butte and small prominences and bluffs to S and near road, SW slope of prominent butte on divide between Red Earth Creek and Meadow Creek. 4.5 mi NNW of Green Grass, Lantry NE Quad., E NE SW sec27T15NR23E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

**Hypotype** YPM 32591


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Irish Creek Lithofacies, *Cucullaea* Assemblage Zone. Concretions, 9-ft zone from top of unit 2 to top of unit 3 of section, bluffs S of the Moreau River, between the forks of the county roads leading NW to the village and N to the bridge, and about 1 mi SE of Thunder Butte Village, Thunder Butte Quad., CENTER SW NE sec3T14NR20E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1961.

**Hypotype** YPM 32597


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Irish Creek Lithofacies, *Cucullaea* Assemblage Zone. Concretions, 9-ft zone from top of unit 2 to top of unit 3 of section, bluffs S of the Moreau River, between the forks of the county roads leading NW to the village and N to the bridge, and about 1 mi SE of Thunder Butte Village, Thunder Butte Quad., CENTER SW NE sec3T14NR20E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1961.

**Hypotype** YPM 34112


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Float, concretions, S knob, ridge-crest exposures along cutoff of secondary road, along top of small, sharp ridge that trends NW-SE from E1/2SW1/4sec32T12NR24E to NW CORNER NE1/4sec5T11NR24E, 3 mi due S of Eagle Butte Village, Herbert Creek Quad., E SW sec32T12NR24E, NW CORNER NE sec5T11NR24E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**Cast of Hypotype** YPM 44518


Late Cretaceous, Maastrichtian, Fox Hills Fm. Long Lake, along Missouri River, Emmons Co., North Dakota, USA.

See also *Discoscaphites nebrascensis* (Owen), *Hoploscaphites cheyennensis* (Owen) and *Hoploscaphites nebrascensis* (Owen).

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**Jeletzytes spedeni** Landman and Waage

**Holotype** YPM 27160


**Allotype** YPM 23710


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**Jeletzytes spedeni** Landman and Waage

**Hypotype** YPM 23061


**Hypotype** YPM 23062


**Hypotype** YPM 23063


**Hypotype** YPM 23110


**HYPOTYPE** YPM 23122


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float, slumped about 6 ft, concretion, irregularly shaped spur with narrow SE-trending tip downfaulted so that lower barren concretions cap it, 0.3 mi E of SD Rte 63, SE of O’Leary Ranch house, and about 1 mi N of Moreau River, and 3.8 mi NNE of Green Grass, Parade NW Quad., NE SW SW sec32T15NR24E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**HYPOTYPE** YPM 23124


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float accumulation from road widening and grading, some in place, concretions, road gutter and new (1964) cut on McLaughlin-Little Eagle Road (“roller-coaster road”) on small hill about 4 mi S of Little Eagle, Little Eagle SE Quad., along section line S half of W EDGE SW SW sec9T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**HYPOTYPE** YPM 23199


**HYPOTYPE** YPM 23200


**Hypotype** YPM 23220


**Hypotype** YPM 23224


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Limopsis-Gervillia* Assemblage Zone. Float, small slump blocks in lower bluffs on either side of S-draining draw, 0.5 mi due N of Mortonson Ranch house, and 5.5 mi WSW of Little Eagle, Little Eagle NW Quad., CENTER S line sec33T20NR26E, Corson Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1962.

**Hypotype** YPM 23699


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Upper nicolleti* Assemblage Zone?. Float, concretion, exposures on hill slope immediately E of E abutment of stock dam, about 0.5 mi N of Johnson Brothers Ranch house, and 6 mi S of Little Eagle, Little Eagle SE Quad., NW CORNER NE NW sec29T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M.

**Hypotype** YPM 23704


**Hypotype** YPM 23706


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, *Protocardia-Oxytoma* Assemblage Zone. Concretions, irregularly shaped spur with narrow SE-trending dip downfaulted so that lower barren concretions cap it, 0.3 mi E of SD Rte 63, SE of O’Leary Ranch house, and about 1 mi N of Moreau River, and 3.8 mi NNE of Green Grass, Parade NW Quad., NE SW SE sec32T15NR24E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1959.
Assemblage Zone. Zone above jarosite, exposures on hill slope immediately E of E abutment of stock dam, about 0.5 mi N of Johnson Brothers Ranch house, and 6 mi S of Little Eagle, Little Eagle SE Quad., NW CORNER NE NW sec29T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M.

**Hypotype** YPM 23778


**Hypotype** YPM 24817


**Hypotype** YPM 24819


**Hypotype** YPM 27156


**Hypotype** YPM 27162


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Lower *nicolleti* Assemblage Zone. Concretions, Waage Locality 4 of new SD Rte 63, new roadcut along rerouted SD Rte 63, 0.1 mi W of “old roller-coaster road,” and 0.4 mi NNW of Peabody Locality C0018, and 2.1 mi S of Grand River Bridge, and 3.1 mi S of Little Eagle, Little Eagle Quad., NE NE NE sec8T19NR27E,

**Hypotype** YPM 32593


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Limopsis concretions, Little Eagle Lithofacies, Limopsis-Gervillia Assemblage Zone. Float, numerous concretions on lower slopes, just W of Whitehorse road and across road from localities C0002 and C0003, and 6 mi NW of Whitehorse, Whitehorse Quad., SW SW NW sec30T16NR26E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

**Hypotype** YPM 32600


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone? Float, exposures on hill slope immediately E of E abutment of stock dam, about 0.5 mi N of Johnson Brothers Ranch house, and 6 mi S of Little Eagle, Little Eagle SE Quad., NW CORNER NE NW sec29T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M.

**Hypotype** YPM 32601


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Upper nicolleti Assemblage Zone. Float accumulation from road widening and grading, concretions, road gutter and new (1964) cut on McLaughlin-Little Eagle Road ("roller-coaster road") on small hill about 4 mi S of Little Eagle, Little Eagle SE Quad., along section line S half of W EDGE SW SW sec9T19NR27E, Corson Co., South Dakota, USA. Collector: Waage, K.M., 1964.

**Hypotype** YPM 32602


**Hypotype** YPM 32842


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies, Protocardia-Oxytoma Assemblage Zone. Float, concretions 5-9, outcrops around S end of second spur to E of ridge with localities C0242-C0244, about 0.33 mi NE of Peabody Locality C0242, S side of Long's Ridge, and 7.1 mi W of Whitehorse, Little Moreau Lake Quad., SW SW NE SW sec14T15NR25E, Dewey Co., South Dakota, USA. Collector: Speden, I.G., 1962.

**Cast of Hypotype** YPM 52550


Late Cretaceous, Maastrichtian, Fox Hills Fm, Moreau River [between Green Grass and area around Thunder Butte Village], Dewey Co., South Dakota, USA.

See also *Hoploscaphites nebrascensis* (Owen).

This specimen was sawed along the dorsal-ventral axis by N.H. Landman.

This includes one specimen and a cast.

This specimen was dissected by N.H. Landman to expose the inner whorls.

This is a cast. The original specimen, USNM 402, is at the Smithsonian Institution.

**Jeletzkytes? sp.**

See undet. Scaphitidae.

**Kingoceras kingi Miller**

**Holotype** YPM 16281


**Paratype** YPM 16282


Late Permian. Bed 2 of Difunta section, conglomerate shale 1000 m N35E of El Indio, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

Knemiceras compressum subcompressum Hyatt
See Ammonites syriacus Von Buch.

Knemiceras syriacum Von Buch
See Ammonites syriacus Von Buch.

Marathonites electraensis Plummer and Scott
See Stacheoceras n. sp.

Marathonites hargisi Böse

HYPOTYPE YPM 12938\(^a\), 12938C, 12939\(^b\), 12941\(^c\)


HYPOTYPE YPM 12938A


HYPOTYPE YPM 12938B


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

\(^a\)This is a lot of approximately 25 specimens.

\(^b\)This is a lot of approximately 10 specimens.

\(^c\)This is a lot of approximately 12 specimens.

Metapronorites pseudotimorensis Miller
See Pronorites pseudotimorensis Miller.

Medicottia burckhardtii Böse

HYPOTYPE YPM 16702


Late Permian. Possibly horizon of bed 11 of Difunta section, limestone layer 3500 to 4300 m N15-20E of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

HYPOTYPE YPM 16703


Late Permian. Near bed 17 of Difunta section, about 50 ft below horizon of Peabody Locality B4835, about 80 m S of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

HYPOTYPE YPM 16704


HYPOTYPE YPM 16705


Late Permian. Possibly horizon of bed 11 of Difunta section, limestone layer 3500 to 4300 m N15-20E of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

HYPOTYPE YPM 16808


Permian, Word Fm. Third limestone, 0.5 mi N of hill 5611, Hess Canyon, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

\(^a\)Discrepancy exists between the locality description on the specimen label and the published locality.

Medicottia costellifera Miller and Furnish

HOLOTYPE YPM 16810


Early Permian, Leonardian, Leonard Fm. Section 14, bed 16, just E of Clay Slide in Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.
Medlicottia milleri Plummer and Scott  

SYNTYPE YPM 15951  

SYNTYPE YPM 25715  

A thorough search of the collections by the curatorial staff in the 1960s and 1990s could not locate this specimen. It is believed to be permanently lost.

Medlicottia n. sp.  

HYPO TYPE YPM 15932  
=Artinskia electraensis Plummer and Scott.  
HYPO TYPE YPM 15949  
=Artinskia electraensis Plummer and Scott.  
HYPO TYPE YPM 31225, 31226  
=Artinskia electraensis Plummer and Scott.

Incorrectly cited as T-8892 on pl.4, f.21.  
Incorrectly cited as T-8893 on pl.4, f.18.
Medlicottia sp.

**Hypotype** YPM 16699


Late Permian. Bed 17 of Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

Medlicottia whitneyi Böse

**Hypotype** YPM 16701


Early Permian. Bed 18 of Malascachas section, *Perrinites* shale 2600 to 2800 m S42E of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Mescalites discoidalis** (Böse)

See *Gonioloboceras?* sp. and *Gonoloboceras discoidale* Böse.

**Metalegoceras jacksoni** (Etheridge)

**Hypotype** YPM 13834


**Hypotype** YPM 25802


Permian. Irwin River Coalfield, Western Australia, Australia. Collector: David, T.E.

**Metalegoceras schucherti** Miller and Furnish

**Paratype** YPM 16778


Early Permian, Leonardian, Leonard Fm. Middle Leonard (760 ft above base), S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Paratype** YPM 16779


Early Permian, Leonardian, Leonard Fm. Middle Leonard, S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: Schuchert, C.

**Metengonoceras acutum** Hyatt

**Hypotype** YPM 593


**Mortonoceras minusculum** Miller

See *Gonioloboceras discoidale* Böse.

**Mortonoceras shoshonense** Meek

**Hypotype** YPM 6423


Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

**Mortonoceras shoshonense crassum** Reeside

**Hypotype** YPM 6409


**Hypotype** YPM 6423A


Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.
Postilla 222

Neogastroplites hassi Reeside and Cobban, var. A

**HYPOTYPE** YPM 20387


**HYPOTYPE** YPM 20388


**HYPOTYPE** YPM 20389


Neopronorlites bakeri Miller and Furnish

**PARATYPE** YPM 15942A–15942D


Early Permian, Wolfcampian, Wolfcamp Fm. Upper Wolfcamp, S of high point on Dugout Mountain, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Pachammatoceras pachu Buckman

**HOLOTYPE** YPM 1473


Early Jurassic, Yeovillian. Charolles (Saone et Loire), France.

*incorrectly cited as YPM 45.*

Pachydiscus (Pachydiscus) egertoni (Forbes)

**HYPOTYPE** YPM 32984

Cobban, W.A. and W.J. Kennedy. 1995. J. Paleont. v.69, suppl.5, p.6, f.4-12,13.

Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Starkville, Oktibbeha Co., Mississippi, USA. Collector: Shropshire, L.H.

Pachydiscus (Pachydiscus) maconensis Cobban and Kennedy

**HOLOTYPE** YPM 32985


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Rotton Limestone, Buncombe Hills, Union Co., Mississippi, USA. Collector: Braun, F.A.

**PARATYPE** YPM 32983


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Starkville, Oktibbeha Co., Mississippi, USA. Collector: Shropshire, L.H.

*This includes one specimen and a cast.*

*Cast is figured; original found, but not in time for publication.*

*incorrectly cited as fig. 4–3-5.*

Paraceltites altudensis (Böse)

**HYPOTYPE** YPM 16285


**HYPOTYPE** YPM 16286


**HYPOTYPE** YPM 16287


Type Catalog of Ammonoidea


HYPOTYPE YPM 16296


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

See also Paralecanites altudensis (Böse).

Paraceltites boeleni Gemmellaro

HYPOTYPE YPM 15215


Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.

Paraceltites ornatus Miller and Furnish

SYNTYPE YPM 16280


Late Permian. About bed 14 of Difunta section, concretionary shale in area of complicated structure SSE of Cerro Prieto Norte, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

SYNTYPE YPM 16804


Permian, Word Fm. Third limestone member, capping mountain N of Leonard Mountain along the line of section 18, SE of hill 5453, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Paraceltites rectangularis Miller

HOLOTYPE YPM 16290


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

See also Paraceltites altudensis (Böse).

Paralecanites altudensis Böse

SYNTYPE YPM 15944

Böse, E. 1917. Texas Univ. Bull. n.1762, pl.178, pl.11, f.28.


SYNTYPE YPM 15948


Early Permian, Leonardian, Leonard Fm. South of the intrusive plug on Captain James' ranch, Altuda Mountain, near Marathon, Brewster Co., Texas, USA.

Paralegoceras rectilaterale Miller

SYNTYPE YPM 12934A


SYNTYPE YPM 12934B


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

**Paraperrinites tardus** (Miller and Furnish)
See *Perrinites hilli tardus* Miller and Furnish.

**Paraprornorites konincki** Gemmellaro

**Synotype** YPM 15213A


**Synotype** YPM 15213B


Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.

**Paraschistoceras reticulatum** (Miller)
See *Schistoceras reticulatum* Miller.

**Peritrochia dunbari** Miller and Furnish

**Synotype** YPM 16814


Early Permian, Leonardian, Leonard Fm. Section 14, bed 16, just E of Clay Slide in Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Synotype** YPM 16815


Early Permian, Leonardian, Leonard Fm. Section 5, bed 8, section S of Altuda Mountain, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Synotype** YPM 16816


Early Permian, Leonardian, Leonard Fm. Middle Leonard, S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: Schuchert, C.

**Synotype** YPM 75588


Early Permian, Leonardian, Leonard Fm. Section 5, bed 8, section S of Altuda Mountain, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Synotype** YPM 75590


Early Permian, Leonardian, Leonard Fm. Middle Leonard, S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: Schuchert, C.

**Synotype** YPM 75591


Early Permian, Leonardian, Leonard Fm. Middle Leonard (760 ft above base), S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

*This is a lot of approximately 20 specimens.

**Peritrochia ganti** (Smith)

**Synotype** YPM 15957


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 5 mi NE of Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: Plummer, F.B.

**Synotype** YPM 16811


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Synotype** YPM 16813


Early Permian, Wolfcampian, Wolfcamp Fm. *Uddenites* bed, about 0.5 mi W of Peabody Locality B3119, below hill 4815, and NW of Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Synotype** YPM 16822


Pennsylvanian, Gaptank Fm. Upper Gaptank, Wolf Camp, Brewster Co., Texas, USA. Collector: King, R.E.
**Peritrochia sellardsi** Plummer and Scott

**SYNTYPE** YPM 15960A, 15960B


Early Permian, Admiral Fm. 4.5 mi SW of Coleman, type locality, Coleman Co., Texas, USA. Collector: Renfro, M.

**HYPOTYPE** YPM 16818


Early Permian, Wolfcampian, Wolfcamp Fm. Upper Wolfcamp, S of high point on Dugout Mountain, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Perrinites cumminsi** (White)

See **Perrinites** n. sp.

**Perrinites hiii** (Smith)

**HYPOTYPE** YPM 16714


Early Permian. Bed 20 of Malascachas section, directly overlying limestone of bed 21, yellow-brown graywacke 1200 m S61E of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**HYPOTYPE** YPM 16715


Early Permian. Bed 18 of Malascachas section, *Perrinites* shale 2600 to 2800 m S42E of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**HYPOTYPE** YPM 16717


Early Permian. Bed 18 of Malascachas section, *Perrinites* shale 2600 to 2800 m S42E of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**HYPOTYPE** YPM 16718


Early Permian. Beds 25 and 26 of Difunta section, *Perrinites* shale 1600 m S70E of Puerto de Sardinas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Perrinites vidriensis** Bose. HYPOTYPE.


See also **Perrinites hiii hiii** (Smith) and **Perrinites hiii gouldi** Plummer and Scott.

**Perrinites hiii gouldi** Plummer and Scott

**HYPOTYPE** YPM 15959


Early Permian, Blaine Fm. Falls on Salt Croton creek, Stonewall Co., Texas, USA. Collector: Scott, G.
**Perrinites hilli hilli (Smith)**

**Hypotype** YPM 15966


Permian, Blaine Fm. 6 mi W of Quanah, Hardeman Co., Texas, USA.

**Hypotype** YPM 16716


Early Permian, Leonardian, Leonard Fm. Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Hypotype** YPM 16728


Early Permian, Leonardian, Leonard Fm. 1.5 mi NW of Ojo Bonito, Chinati Mountains, Presidio Co., Texas, USA. Collector: King, R.E.

**Hypotype** YPM 16733


Early Permian, Leonardian, Leonard Fm. Section 14, bed 16, just E of Clay Slide in Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Hypotype** YPM 16738


Early Permian, Leonardian, Leonard Fm. Section 5, bed 8, section S of Altuda Mountain, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Hypotype** YPM 15967


Early Permian, Leonardian, Hess Limestone. Uppermost Hess, 1.1 mi SW of Word Ranch house, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

=Cited as Perrinites hilli on pl.34, f.5, although referred to in the text as P. hilli hilli.

**Perrinites hilli tardus** Miller and Furnish

**Syntype** YPM 16758


**Syntype** YPM 16759


**Syntype** YPM 16760


Early Permian, Leonardian, Leonard Fm. “Fossil Hill,” Finlay Dome, N of Finlay, Finlay Mountains, Hudspeth Co., Texas, USA. Collector: Schuchert, C.

**Hypotype** YPM 16730


Early Permian, Leonardian, Leonard Fm. Leonard Fm (860 ft up from base), about 4 mi SW of Iron Mountain, Brewster Co., Texas, USA. Collector: Schuchert, C.

**Perrinites** n. sp.

**Hypotype** YPM 15967


Type Catalog of Ammonoidea

Postilla 222


HYOTYPE YPM 25710


HYOTYPE YPM 25712


HYOTYPE YPM 31227


Early Permian, Wichita Grp, Clyde Fm. About 4 mi S of Electra, Wichita Co., Texas, USA. Collector: Wrather, W.E.

a Cited as 15967A.

b Incorrectly cited as T-9613 on pl.25, f.5.

c Cited as 15967B.

Perrinites vidriensis Böse

See Perrinites hilli (Smith).

Phlycticrioceras oregonense Reeside

HOLOTYPE YPM 6407A


HYOTYPE YPM 6407


Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec8T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

Phylloceras nilssonii (La Verpilliere)

HYOTYPE YPM 1831A


Early Jurassic. Monte Catria, central Apennines, Italy.

aCited as YPM 1831.

**Placenticeras intercalare** Meek

**HYPOTYPE** YPM 1736


**HYPOTYPE** YPM 1737


Late Cretaceous, Montana Grp, Pierre Shale. South Dakota, USA.

**HYPOTYPE** YPM 1838


Late Cretaceous, Pierre Shale. Sage Creek, Pennington Co., South Dakota, USA.

**Placenticeras planum** Hyatt

**HYPOTYPE** YPM 34711


Late Cretaceous, Telegraph Creek Fm, Elk Basin Sandstone Mbr, Scaphites hippocrepis 1 Zone. Top surface of uppermost unit of Elk Basin, N-S butte top ridge, E side of basinal cove of anticline, 0.5-0.7 mi due N of Elk Basin Village (abandoned), Elk Basin, Elk Basin Quad., straddles Range line E SIDE SE NE NE sec24T58NR100W, straddles Range line W SIDE SW NW NW sec19T58NR99W, SE SE sec35T9SR100W, Carbon Co., Montana, USA. Collector: Hicks, J.F., 1992.

**Placenticeras pseudoplacenta** Hyatt

**HYPOTYPE** YPM 6413


Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

**Placenticeras spillmani** Hyatt

**SYNTYPE** YPM 27806


Cretaceous. Greensand, Burlington, Burlington Co., New Jersey, USA.

**Placenticeras spillmani?** Hyatt

See Placenticeras spillmani Hyatt.

**Placenticeras whitfieldi** Hyatt

**SYNTYPE** YPM 9293


Late Cretaceous, Montana Grp, Pierre Shale. Badlands, South Dakota, USA. Collector: Clifford, H.C.

**Plummerites incertus** (Böse)

**HOLOTYPE** YPM 16785


Late Pennsylvanian, Gaptank Fm. Bed 1, Wolf Camp section, Wolf Camp, Glass Mountains, Brewster Co., Texas, USA.

**Popanoceras bowmani** (Böse)

**HOLOTYPE** YPM 16819A


Miller, A.K. and W.M. Furnish. 1957. J. Paleont. v.31, n.6, p.1052, tf.1A.

**HOLOTYPE** YPM 16819B


**HOLOTYPE** YPM 16819C


**HOLOTYPE** YPM 16820


**HOLOTYPE** YPM 75587

Permian, Word Fm. Third limestone member, on S side of Road Canyon, W of divide separating the drainage of Gilliland and Hess Canyons, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

* A thorough search of the collections by the curatorial staff in the 1960s and 1990s could not locate this specimen. It is believed to be permanently lost.

**Popanoceras sp.**

**Hypotype** YPM 16821


Early Permian, Leonardian, Hess Limestone. Uppermost Hess, 1.1 mi SW of Word Ranch house, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Preshumardites gaptankensis** (Miller)

See *Gastrioceras gaptankense* Miller.

**Prodromites gorbyi** (Miller)

**Hypotype** YPM 31901


Early Mississippian, Kinderhookian. Rockford, Jackson Co., Indiana, USA.

**Pronorites pseudotimorensis** Miller

**Syntype** YPM 12931


**Syntype** YPM 12931A


**Syntype** YPM 12931B


**Syntype** YPM 12931C


**Properrinites bosei bosei** Plummer and Scott

**Syntype** YPM 15964


Early Permian, Admiral Fm. 5 mi SW of Coleman, Coleman Co., Texas, USA. Collector: Plummer, F.B.

**Properrinites cumminsi** (White)

See *Periinites* n. sp.
Properrinites cumminsi vicinus Miller and Furnish

See *Perrinites* n. sp.

Propinacoceras beyrichi Gemmellaro

**Hypotype** YPM 15219


Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.

Propinacoceras galilaei? Gemmellaro

**Hypotype** YPM 15220


**Hypotype** YPM 15221


Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.

Propinacoceras knighti Miller and Furnish

**Paratype** YPM 16805


Early Permian, Leonardian, Leonard Fm. Middle Leonard, lower *Perrinites* horizon, 0.6 mi E of hill 4910, E of Clay slide, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Paratype** YPM 16806


Early Permian, Leonardian, Leonard Fm. Leonard horizon, Glass Mountains, Texas, USA. Collector: King, R.E.

**Paratype** YPM 16807A–16807E


Early Permian, Leonardian, Leonard Fm. "Fossil Hill," Finlay Dome, N of Finlay, Finlay Mountains, Hudspeth Co., Texas, USA. Collector: King, R.E.

Propinacoceras sp.

**Hypotype** YPM 16697


**Hypotype** YPM 16698A–16698C


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

Prothalassoceras kingorum Miller

**Syntype** YPM 12937^a


**Syntype** YPM 12937A


**Syntype** YPM 12937B^b


**Syntype** YPM 12937C

Miller, A.K. 1930. J. Paleont. v.4, n.4, p.407, pl.39, f.13.^c

Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

**Syntype** YPM 12943


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 2.5 mi S of Arnold Ranch, below Dugout Creek overthrust, N side of hill, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

^aThis is a lot of approximately 25 specimens.

^bA thorough search of the collections by the curatorial staff in the 1960s and 1990s could not locate this specimen. It is believed to be permanently lost.

^cThe figured drawing was made of a specimen probably located in lot 12937, but which cannot be distinguished at this time.

Prouddenites primus Miller

**Syntype** YPM 12932^a


**SYNTYPE YPM 12932A**


**SYNTYPE YPM 12932B**


**SYNTYPE YPM 12932C**


**SYNTYPE YPM 12932D**


**Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 2.5 mi S of Arnold Ranch, below Dugout Creek overthrust, N side of hill, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.**

This is a lot of approximately 25 specimens.

**Pseudagathiceras difuntense Miller**

**SYNTYPE YPM 16304**


Late Permian. Between beds 8 and 14 of Malascachas section, possibly bed 12, limestone layer 1200 m S17W of Nora de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**SYNTYPE YPM 16305**


**SYNTYPE YPM 16306**


Late Permian. Bed 17 of Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Pseudagathiceras spinosum Miller**

**HOLOTYPE YPM 16310**


**PARATYPE YPM 16311**


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.
**Pseudogastrioceras haacki** Miller

**SYNTYPE** YPM 16254


Permiann. Higher than the zone of Timorites (?), below El Indio on the trail, Valle de Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**SYNTYPE** YPM 16257


Late Permiann. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Pseudogastrioceras roadense** (Böse)

**HYPOTYPE** YPM 16251


**HYPOTYPE** YPM 16253


Late Permiann. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**HYPOTYPE** YPM 16255


**HYPOTYPE** YPM 16256


Late Permiann. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**HYPOTYPE** YPM 16258


Late Permiann. Beds 5, 6 or 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**HYPOTYPE** YPM 16262


Late Permiann. Bed 17 of Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.
Permian, Word Fm. Second limestone, junction of Road and Gilliland Canyons, Glass Mountains, Brewster Co., Texas, USA. Collector: Schuchert, C.

**Pseudogastrioceras serratum** (Girty)

**Hypotype** YPM 16796


Permian, Word Fm. Second limestone, 0.5 mi N of hill 5611, Hess Canyon, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Pseudophyllites indra** (Forbes)

**Hypotype** YPM 32981


**Hypotype** YPM 32982


Late Cretaceous, Selma Grp, Prairie Bluff Chalk. Starkville, Oktibbeha Co., Mississippi, USA. Collector: Shropshire, L.H.

**Scaphites hippocrepis**

**Hypotype** YPM 34704, 34705


Late Cretaceous, Telegraph Creek Fm, Elk Basin Sandstone Mbr, **Scaphites hippocrepis** 1 Zone. Top surface of uppermost unit of Elk Basin, N-S butte top ridge, E side of basaline cove of anticline, 0.5-0.7 mi due N of Elk Basin Village (abandoned), Elk Basin, Elk Basin Quad., straddles Range line E SIDE SE NE NE sec24T58NR100W, straddles Range line W SIDE SW NW sec19T58NR99W, SE SE sec35T9SR100W, Carbon Co., Montana, USA. Collector: Hicks, J.F., 1992.

**Scaphites ventricosus** Meek and Hayden

**Hypotype** YPM 6419


**Hypotype** YPM 6419A


**Hypotype** YPM 26721


**Hypotype** YPM 26722


Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

a This is a lot of approximately 15 specimens.

b This is a lot of five specimens.

c Incorrectly cited as YPM 6421 on p.6 and in the explanation for pl.3, f.11-18. The horizon given on the specimen label is "800 feet above Torchlight," not "600 feet above base."

d Incorrectly cited as YPM 641 on p.6 and in the explanation for pl.4, f.6-10. The horizon given on the specimen label is "800 feet above Torchlight," not "600 feet above base."

**Scaphites ventricosus depressus** Reeside

**Hypotype** YPM 6414

Reeside, J.B., Jr. 1927. U.S. Geol. Surv. Prof. Pap. n.150-A, p.7, pl.5, f.6-10.a

Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

a Not YPM 6417 as stated on p.6 and in the explanation for pl.5, f.6-10.

**Scaphites ventricosus interjectus** Reeside

**Hypotype** YPM 6416


Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

**Scaphites ventricosus oregonensis** Reeside

**Hypotype** YPM 6411A


**Hypotype** YPM 6411B
Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

Scaphites ventricosus stantoni Reeside

**HYPOTYPE** YPM 6410

**HYPOTYPE** YPM 26720
Reeside, J.B., Jr. 1927. U.S. Geol. Surv. Prof. Pap. n.150-A, p.7, pl.4, f.5-8.\(^a\)
Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.
\(^a\)Incorrectly cited as YPM 6417 in the explanation for pl.4, f.5-8.

Scaphites vermiformis binneyi Reeside

**HOLOTYPE** YPM 6418A
Reeside, J.B., Jr. 1927. U.S. Geol. Surv. Prof. Pap. n.150-A, p.8, pl.6, f.1-6.\(^a\)

**HYPOTYPE** YPM 6418\(^b\)

**HYPOTYPE** YPM 6418B
Reeside, J.B., Jr. 1927. U.S. Geol. Surv. Prof. Pap. n.150-A, p.8, pl.6, f.7-8.\(^c\)

Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.
\(^a\)Incorrectly cited as YPM 6417 in the explanation for pl.6, f.1-6.
\(^b\)This consists of six fragments representing approximately three specimens.
\(^c\)Incorrectly cited as YPM 6417 in the explanation for pl.6, f.7,8.

Scaphites vermiformis Meek and Hayden

**HYPOTYPE** YPM 6422

**HYPOTYPE** YPM 6422A

Late Cretaceous, Frontier Fm, Torchlight Sandstone Mbr. 800 ft above Torchlight, Oregon Basin, sec6T51NR100W, Park Co., Wyoming, USA. Collector: Binney, E., Jr., 1925.

Scaphites cf. whitfieldi Cobban

**HYPOTYPE** YPM 37619\(^a\)

**HYPOTYPE** YPM 37620\(^c\)

\(^a\)This is a fragment of the protoconch mounted on an SEM stub.
\(^b\)This specimen is cited as YPM 6240 in the explanation for figure 8D.
\(^c\)This consists of the caecum and prosiphonal attachment sheets mounted on an SEM stub.
\(^d\)This specimen is cited as YPM 6239 in the explanation for figure 14A-D.

Schistoceras missouriense (Miller and Faber)

**HYPOTYPE** YPM 75586\(^a\)

Late Pennsylvanian, Gaptank Fm. Near Gaptank, about 0.25 mi E of edge of Hess Canyon Quad., Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.
\(^a\)This is a lot of six specimens.
Schistoceras reticulatum Miller

HOLOTYPE YPM 12935A


PARATYPE YPM 12935B

Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA.
Collector: King, P.B., King, R.E. and Baker, C.L.

Schistoceras smithi Böse

HYPOTYPE YPM 12936a, 12936B, 12940

HYPOTYPE YPM 12936A

Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA.
Collector: King, P.B., King, R.E. and Baker, C.L.

Schlotheimia lacunoides Quenstedt

HYPOTYPE YPM 2000
Early Jurassic. Lias B, Betzgenrieth, Germany.

Schlotheimia rumpens Oppel

HYPOTYPE YPM 2007

HYPOTYPE YPM 2008

Shumardites uddeni (Böse)

HOLOTYPE YPM 16812
Early Permian, Wolfcampian, Wolfcamp Fm.

Uddenites bed, about 0.5 mi W of Peabody Locality B3119, below hill 4815, and NW of Wolf Camp, Glass Mountains, Brewster Co., Texas, USA.
Collector: King, R.E.

Spathiocaris emersonii Clarke

SYNTYPE? YPM 86

SYNTYPE? YPM 34984

Late Devonian, Portage Grp. Naples, Ontario Co., New York, USA.

Although not cited in Clarke (1882), these specimens are labelled as type in Clarke's handwriting.

Sphenodiscus beecheri Hyatt

PARATYPE YPM 27809


Cretaceous. Greensand, Burlington, Burlington Co., New Jersey, USA.

PARATYPE YPM 27811

Late Cretaceous, Montana Grp, Pierre Shale.
Badlands, South Dakota, USA.
Collector: Clifford, H.C.

*Sphenodiscus lenticularis (Owen)

HYPOTYPE YPM 27805

Late Cretaceous, Fox Hills Fm. Rock Creek, Wyoming, USA.
Collector: Brown, F., 1884.

HYPOTYPE YPM 34985a

**Hypotype** YPM 35096


Late Cretaceous, Maastrichtian, Fox Hills Fm, Timber Lake Mbr. Includes CAZ and *Sphenodiscus* Layer, all collections from float and in sand banks of roadcut of abandoned US Rte 12, RR cut and spillway of Lantry Dam, 1.5 mi WNW of Lantry, Lantry Quad., CENTER SW SW sec4T12NR22E, Dewey Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1940 to 1962.

**Sphenodiscus lenticularis** *mississippiensis* Hyatt

**Hypotype** YPM 27866


**Hypotype** YPM 27867


Late Cretaceous, Ripley Fm. Near top of Ripley, 20 ft below ground surface, fresh roadcut in low bluff on S side of King Creek, on New Albany-Ingomar Road, 3 mi S of New Albany, W SIDE NW sec29T7SR3E, Union Co., Mississippi, USA. Collector: Barton, E.R., 1927.

**Sphenodiscus lobatus** (Tuomey)

**Hypotype** YPM 27812


Late Cretaceous, Selma Grp, Ripley Fm. Buncombe Hills, Union Co., Mississippi, USA. Collector: Braun, F.A.

**Sphenodiscus pleurisepta** (Conrad)

**Hypotype** YPM 27807


**Hypotype** YPM 27817


Late Cretaceous, Selma Grp, Ripley Fm. Buncombe Hills, Union Co., Mississippi, USA. Collector: Braun, F.A.

**Spiroceras calloviense** Morris

**Hypotype** YPM 1854A


Middle Jurassic, Callovian. Sutton, Wiltshire, England, United Kingdom.

This is a hypotype mounted on an SEM stub.

**Stacheoceras gemmellaroi** Miller

**Syntype** YPM 16653


**Syntype** YPM 16654, 16656

**Syntype** YPM 16655

Late Permian. Beds 5, 6 and 7 of Malascachas section, area 1200 m S17W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Stacheoceras gemmellaroi?** Miller

**Syntype** YPM 16657


Late Permian. Bed 2 of Malascachas section, limestone 2000 m S32W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Stacheoceras n. sp.**

**Hypotype** YPM 15962


Early Permian, Wichita Grp, Clyde Fm. About 4 mi S of Electra, Wichita Co., Texas, USA. Collector: Wreather, W.E.

Incorrectly cited as T-8887.

Stacheoceras rothi Miller and Furnish

**SYNTYPE** YPM 16817A


**SYNTYPE** YPM 16817B


**SYNTYPE** YPM 16817C


**SYNTYPE** YPM 75592a


Early Permian, Leonardian, Hess Limestone. Uppermost Hess, 1.1 mi SW of Word Ranch house, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

This is a lot of approximately 15 specimens.

Stacheoceras toumanskyae Miller and Furnish

**SYNTYPE** YPM 16321


**SYNTYPE** YPM 16322


**SYNTYPE** YPM 16323


**SYNTYPE** YPM 16324


**SYNTYPE** YPM 16325


**SYNTYPE** YPM 16651


**SYNTYPE** YPM 16652A


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelaao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

Strigogoniatus kingi Miller

**SYNTYPE** YPM 16252


**SYNTYPE** YPM 16259a, 16260, 16261A, 16261B, 55029–55036, 55061–55085


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelaao on S to 300 m W of El Indio
**Subkargalites hargisi** (Böse)
See *Marathonites hargisi* Böse.

**Thalassoceras sp.**

**HYPOTYPE** YPM 16786


Early Permian, Leonardian, Leonard Fm. Middle Leonard (760 ft above base), S of Sullivan Peak, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Tornoceras (Tornoceras) aff. mesopleuron** House

**HYPOTYPE** YPM 23855


Devonian. Cherry Valley, Otsego Co., New York, USA.

**Tornoceras (Tornoceras) uniangulare (Conrad)**

See *Tornoceras uniangulare* Conrad.

**Tornoceras (Tornoceras) uniangulare aldanense** House

**HYPOTYPE** YPM 20836


**Tornoceras uniangulare Conrad**

**HYPOTYPE** YPM 20837


**HYPOTYPE** YPM 20839


Middle Devonian, Hamilton Grp. Wende Station [New York Central Railroad], Erie Co., New York, USA.

See also *Tornoceras uniangulare* Conrad.

**Tornoceras uniangulare Conrad**

**HYPOTYPE** YPM 20826


HYPOTYPE  YPM 20827

HYPOTYPE  YPM 20828

HYPOTYPE  YPM 20829

HYPOTYPE  YPM 20830


HYPOTYPE  YPM 20831

HYPOTYPE  YPM 20832

HYPOTYPE  YPM 20833

HYPOTYPE  YPM 20834
Postilla 222

Type Catalog of Ammonoidea


Middle Devonian, Hamilton Grp. Wende Station [New York Central Railroad], Erie Co., New York, USA.

HYPOTYPE YPM 20835


Middle Devonian, Hamilton Grp. Eighteen Mile Creek, New York, USA.

HYPOTYPE YPM 30405


Middle Devonian, Hamilton Grp. Wende Station [New York Central Railroad], Erie Co., New York, USA.

\(^a\)Incorrectly cited as YPM 2043/11 on p.101 and as YPM 20930 on pl.7, f.55.

\(^b\)Incorrectly cited as YPM 30381 in tf.8B.

\(^c\)A thorough search of the collections by the curatorial staff in the 1960s and 1990s could not locate this specimen. It is believed to be permanently lost.

Uddenites harlani? Plummer and Scott

HYPOTYPE YPM 16801


Early Permian, Wolfcampian, Wolfcamp Fm. Section 27, bed 13, Uddenites bed, hill 4752, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Uddenites oweni Miller and Furnish

HOLOTYPE YPM 16800


HYPOTYPE YPM 16802


Early Permian, Leonardian, Gaptank Fm. 5 mi NE of Wolf Camp, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

Uddenites schucherti Böse

HYPOTYPE YPM 12945


Late Pennsylvanian, Gaptank Fm. Upper Gaptank, 4.5 mi S, 15 E of Lenox, Brewster Co., Texas, USA. Collector: King, P.B., King, R.E. and Baker, C.L.

HYPOTYPE YPM 16799


Pennsylvanian, Gaptank Fm. Wolf Camp, Brewster Co., Texas, USA. Collector: King, R.E.

undet. Scaphitidae

HYPOTYPE YPM 23221


Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Little Eagle Lithofacies. Float, several horizons, POAZ to top of TCM, top knob on end of SE-trending spur, and 6 mi NW of Whitehorse, Whitehorse Quad., SE NW NW sec30T16NR26E, Dewey Co., South Dakota, USA. Collector: Waage, K.M., 1957.

HYPOTYPE YPM 34113


HYPOTYPE YPM 34115


HYPOTYPE YPM 34117

Late Cretaceous, Maastrichtian, Fox Hills Fm, Trail City Mbr, Irish Creek Lithofacies, Cucullaea Assemblage Zone. Float, concretion, bluffs on N side of Moreau River, about 0.75 mi SW of confluence of Irish Creek and Moreau River, and 5 mi E of Thunder Butte Village, Dupree NE Quad., CENTER sec32T15NR21E, Ziebach Co., South Dakota, USA. Collector: Waage, K.M. and Speden, I.G., 1962.

This specimen is a thin section.

This is a ammonitella on an SEM stub.

Cited as Hoploscaphites sp. or Jeletzkytes sp.

This is a juvenile specimen mounted on an SEM stub.

**Waagenoceras dieneri dieneri** Böse

HYPOTYPE YPM 16823A


HYPOTYPE YPM 16823B


Permian, Word Fm. Third limestone, section 17, top of hill S of junction of Road and Gilliland Canyons, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

**Waagenoceras dieneri girtyi** Miller and Furnish

HOLOTYPE YPM 16666


Late Permian. Bed 10 of Difunta section, concretionary shale 1300 m N42W of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**PARATYPE? YPM 16662**


Late Permian. Beds 5, 6 and 7 of Malascachas section, area 1200 m S17W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**PARATYPE? YPM 16663**


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**PARATYPE? YPM 16664**


Late Permian. Beds 5 and 7 of Malascachas section, area 1200 m S17W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**PARATYPE? YPM 16665**


Late Permian. Bed 2 of Difunta section, limestone lenses 25 m E of El Indio, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**PARATYPE? YPM 16667**


Late Permian. Bed 10 of Difunta section, concretionary shale 1300 m N42W of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Early Permian, Leonardian, Leonard Fm. Section 14, top of bed 12, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.


Late Permian. Bed 10 of Difunta section, concretionary shale 1300 m N42W of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Bed 10 of La Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta in the Valle de Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Limestone bed 4 of Malascachas section, area 1300 m S18W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Beds 5, 6 or 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Bed 2 of Malascachas section, limestone layer 2000 m S47W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Bed 17 of Difunta section, limestone 1300 m S05W of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Bed 17 of Difunta section, limestone 1300 m S05W of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.


Late Permian. Bed 17 of Difunta section, limestone 1300 m S05W of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

Late Permian. Bed 10 of La Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta in the Valle de Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Hypotype? YPM 54953–54986**


Late Permian. Bed 17 of Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Hypotype? YPM 54990–55007**


Late Permian. Bed 2 of Malascachas section, limestone layer 2000 m S47W of Noria de Malascachas, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype on pl.32, f.7,8.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype on pl.32, f.4.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype on pl.34, f.5,6.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype on pl.34, f.3,4.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype on pl.34, f.1,2.

Although Miller and Furnish (1940a) did not refer to this specimen as part of the type series, Miller (1944) refers to it as a paratype on pl.9.

Labeled as unfigured hypotype by A.K. Miller, but not cited by Miller and Furnish (1940).

Labeled as figured specimen by A.K. Miller, but not cited by Miller and Furnish (1940a).

Labeled as unfigured syntype by A.K. Miller, but not cited by Miller and Furnish (1940a).

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**Waagenoceras dieneri karpinskyi** Miller

**Syntype YPM 16675**


**Syntype YPM 16676**


Late Permian. About bed 14 of Difunta section, concretionary shale in area of complicated structure SSE of Cerro Prieto Norte, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Syntype YPM 16677**


Late Permian. Beds 5 and 7 of Difunta section, concretionary shale, collection made along strike from Cerro Wencelao on S to 300 m W of El Indio on N, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Waagenoceras guadalupense (Girty)**

**Hypotype YPM 16658**


Late Permian. About bed 14 of Difunta section, concretionary shale in area of complicated structure SSE of Cerro Prieto Norte, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Hypotype YPM 16661**


Late Permian. Near bed 17 of Difunta section, about 50 ft below horizon of Peabody Locality B4835, about 80 m S of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Waagenoceras guadalupense smithi** Miller and Furnish

**Syntype YPM 16659**


Late Permian. Beds 5, 6 and 7 of Malascachas section, area 1200 m S17W of Noria de Malascachas,
NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**SYNTYPE** YPM 16660


Late Permian. Bed 17 of Difunta section, alternating shale and graywacke 60 m N35 E of La Difunta, NW of Las Delicias, Coahuila State, Mexico. Collector: King, R.E.

**Waagenoceras mojsisovici** Gemmellaro

**HYPOTYPE** YPM 15228


Permian, Sosio Beds. Calcare Compatto, Palermo, Sicily, Italy.

**Wiedeyoceras lineolatum** Miller

See Gonioloboceras? sp.

**Wiedeyoceras nodomarginatum** Miller

See Gonioloboceras? sp.

**Xenodiscites waageni** Miller and Furnish

**HOLOTYPE** YPM 16283


**PARATYPE?** YPM 16284


Early Permian, Leonardian, Leonard Fm. Section 12, bed 1, Glass Mountains, Brewster Co., Texas, USA. Collector: King, R.E.

aThis specimen is cited as a paratype on pl.22, f.9, but is not part of the Miller and Furnish (1940) type series.

**Acknowledgements**

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Literature Cited


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The Authors

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