Checklist of North American Late Paleozoic Coral Species (Coelenterata, Anthozoa)

GEOLOGICAL SURVEY BULLETIN 1387

Checklist of North American Late Paleozoic Coral Species (Coelenterata, Anthozoa)

By WILLIAM J. SANDO

GEOLOGICAL SURVEY BULLETIN 1387

A bibliographic compilation through 1973 of coral species described from the Mississippian, Pennsylvanian, and Permian rocks of North America

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1974

UNITED STATES DEPARTMENT OF THE INTERIOR

ROGERS C. B. MORTON, *Secretary*

GEOLOGICAL SURVEY

V. E. McKelvey, *Director*

Library of Congress Cataloging in Publication Data
Sando, William Jasper.
Checklist of North American late Paleozoic coral species (Coelenterata, Anthozoa)
(Geological Survey bulletin; 1387)
Includes bibliography.
Supt. of Docs. no.: I 19.3:1387
1. Anthozoa, Fossil. 2. Paleontology—Paleozoic. 3. Paleontology—North America. I. Title. II. Series: United States. Geological Survey. Bulletin; 1387.
QE75.B9 no. 1387 [QE778] 557.3'08s [563.'.6] 74–23375

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 — Price 70 cents (paper cover)
Stock Number 2401-02576

CONTENTS

CHECKLIST OF NORTH AMERICAN LATE PALEOZOIC CORAL SPECIES (COELENTERATA, ANTHOZOA)

By WILLIAM J. SANDO

ABSTRACT

An objective list of coral species described from the Mississippian, Pennsylvanian, and Permian rocks of North America includes 578 entries, of which four are now known to be from older rocks and four are probably erroneous references to older species. The list includes information on the original references for all species and the geologic age and geographic area from which the species have been described.

INTRODUCTION

This paper presents an objective list of formally named coral species that have been described from rocks of Mississippian, Pennsylvanian, and Permian age in North America through 1973. Comparative species references (cf., aff.) and unnamed species (sp.) are excluded. One nomen nudum (*Texanophyllum skinneri*) is included. The list does not include chaetetids, which I regard as hydrozoans.

The list is arranged alphabetically by species name in the form in which this name was originally published, together with the author, original date of publication, and original generic assignment. Secondary references are indicated for species whose type localities are outside North America. All original and secondary references are included in the bibliography at the end of the paper. Subjective synonymy is omitted; objective synonyms are indicated only for replacement names. Names proposed for varieties, subspecies, and formae are treated as species names.

Age designations have been updated to indicate the latest interpretations. A few species originally described as late Paleozoic whose type specimens were later found to be from older rocks are included with appropriate explanation. The list also includes

a few corals that have been referred to pre-Mississippian species probably erroneously but without published verification of erroneous taxonomic assignment.

Geographic designations are in standard political units for North America (Canada, Mexico, and the United States of America). Each geographic designation includes the original State or Province from which the species was described and other areas from which specimens assigned to the species have been described or illustrated. Geographic extensions of the usage of names are not documented in the bibliography; only references to original descriptions are given. Queried species assignments are included, but comparative species references (cf., aff.) are omitted.

The nucleus for this compilation was the late Paleozoic species synonymy file in the U.S. Geological Survey, (U.S. National Museum) Washington, D.C. This file was begun by G. H. Girty and maintained continuously until about 1957, after which the coverage became sporadic. Other compilations that were useful in searching for and checking species references are Bassler (1950), Branson (1948), Weller (1898), and Wilson (1974).

I am indebted to A. K. Armstrong, E. W. Bamber, J. M. Cocke, C. L. Rowett, E. C. Wilson, and Geoffrey Cotton for checking preliminary versions of the list. Their expertise was valuable in assuring maximum accuracy and completeness for the compilation. I am also grateful to E. L. Yochelson and W. A. Oliver, Jr., for reviewing the final manuscript.

Perfection is rarely, if ever, attained in any work of this kind. I would be grateful if any errors or omissions were called to my attention.

SPECIES LIST

[Miss.: Mississippian: Penn., Pennsylvanian; Perm., Permian]

aages Jeffords 1947, *Stereostylus*
Penn.: Iowa

absitus Jeffords 1947, *Stereostylus*
Penn.: Kansas

acolumnatum Cocke 1970, *Neokoninckophyllum*
Penn.: Kansas, Oklahoma

aculeata Girty 1899, *Syringopora*
Miss.: Alberta, Arizona, Colorado, Montana, New Mexico, Utah, Wyoming

acus Moore and Jeffords 1941, *Leonardophyllum*
Perm.: Texas

acutus White and Whitfield, 1862, *Zaphrentis*
Miss.: Iowa, Missouri

adapertum Moore and Jeffords, 1945, *Lophophyllidium*
Penn.: Texas
adelus Jeffords 1947, *Stereostylus*
Penn.: Texas
adjunctiva White 1880a, *Acervularia*
Miss.: Idaho
adnatus Easton 1945c, *Amplexus*
Miss.: Illinois
agglomerata Grabau in Greene 1901a, *Ceratopora*
Miss.: Indiana
agglomerata Nelson 1962a, *Syringopora*
Miss.: Alberta
aggregatum Simpson 1900, *Schoenophyllum* (equals *Lithostrotion* [*Siphonodendron*] *genevievensis* Easton 1957)
Miss.: Kentucky (Easton, 1957)
alani Cocke and Bowsher 1968, *Sutherlandia*
Penn.: Oklahoma
alaskaensis Armstrong 1970, *Sciophyllum*
Miss.: Alaska
alaskaensis Rowett 1969, *Durhamina*
Perm.: Alaska
alleni Rowley 1901, *Axophyllum*?
Penn.: Missouri
americana Hayasaka 1936, *Lithostrotionella*
Miss.: Alaska, Alberta, California, Illinois, Kentucky, Missouri (The California specimen is probably Permian)
americana Weller, 1909, *Beaumontia*
Miss.: Missouri
americanus Weller 1909, *Cladochonus*
Miss.: Arkansas, Missouri
amesensis Bebout 1966, *Stereostylus*
Penn.: Ohio
amoenum Moore and Jeffords 1945, *Lophotichium*
Penn.: Oklahoma
amplexa Rowley 1901, *Aulopora*
Miss.: Missouri
amsdenensis Branson and Greger 1918, *Zaphrentis*
Miss.: Wyoming
angustifolium Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Arkansas, Oklahoma
anna Beede 1898, *Aulopora*?
Penn.: Kansas
annae Jeffords 1947, *Stereostylus*
Penn.: Kansas
annectans Moore and Jeffords 1945, *Stereocorypha*
Penn.: Texas
aplatus Cummins 1891, *Hadrophyllum*
Penn.: Texas
araneosum Parks 1951, *Faberophyllum*
Miss.: Utah

archimediformis Rowley 1905, *Amplexus*
Miss.: Missouri
arcturusensis Stevens 1967, *Kleopatrina* (*Porfirievella*)
Perm.: Nevada
arcuata Jeffords 1943, *Caninia*
Miss.: New Mexico
arcuata Weller, 1909, *Cyathaxonia*
Miss.: Arkansas, Missouri, Montana
arcuatum Moore and Jeffords 1945, *Neokoninckophyllum*
Penn.: Arizona, Texas
arizelum Crickmay 1955, *Koninckophyllum*
Miss.: Alberta
arkansanum Girty 1910, *Menophyllum*
Miss.: Arkansas, Oklahoma
asarcum Jeffords 1947, *Lophophyllidium*
Penn.: Oklahoma
astraeiforme Warren 1927, *Diphyphyllum*
Miss.: Alaska, Alberta
austini Worthen 1890, *Trachypora*
Penn.: Kansas
avonensis Bell 1929, *Lophophyllum*
Miss.: Nova Scotia
bailliei Nelson 1960, *Lithostrotionella*
Miss.: Alberta
banffense Warren 1927, *Clisiophyllum*?
Miss.: Alberta
banffense Warren 1927, *Lithostrotion*
Miss.: Alaska, Alberta
basaltiforme Haughton *in* M'Clintock 1857, *Lithostrotion*
Perm.: Northwest Territories (Arctic Islands)
basaltiforme Owen 1852, *Lithostrotion*
Miss.: Alabama, Iowa, Kentucky
bassoi Nelson 1962a, *Syringopora*
Miss.: Alberta, British Columbia
beecheri Grabau 1899, *Monilopora*
Miss.: Arkansas, Indiana
belcheri Harker 1960, *Caninia*
Perm.: Northwest Territories (Arctic Islands)
bennetti Beede 1898, *Cladochonus*
Penn.: Kansas
berthiaumi Merriam 1942, *Lithostrotion* (*Lithostrotionella*)
Perm.: Oregon
bicarinatus Easton 1951, *Triplophyllites* (*Triplophyllites*)
Miss.: Indiana
bicostatus Miller 1891, *Amplexus*
Miss.: Missouri
bifidus Weller 1909, *Palaeacis*
Miss.: Missouri, New Mexico
bilateralis Easton 1945b, *Caninia*
Miss.: Montana

billingsi Dawson 1868, *Cyathophyllum*
Miss.: Nova Scotia
birdi Armstrong 1970, *Lithostrotionella*
Miss.: Alaska
blairi Miller 1891, *Amplexus*
Miss.: Indiana, Iowa, Missouri
blairi Miller, 1892, *Microcyclus*
Miss.: Missouri, New Mexico
blandum Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Oklahoma
bollibokkensis Coogan 1960, *Stereostylus*
Perm.: California
bordeni Greene 1900, *Cyathaxonia*
Miss.: Indiana
borealis Stuckenberg 1895, *Lithostrotion* (Chernyshev and Stepanov, 1916)
Perm.: Northwest Territories (Arctic Islands)
bourbonense Cocke 1970, *Dibunophyllum*
Penn.: Kansas
branneri Miller and Gurley 1893, *Michelinia*
Penn.: Illinois
brevifolius Jeffords 1947, *Lophamplexus*
Penn.: Colorado, Kansas, Oklahoma
brevis Weller 1909, *Amplexus*
Miss.: Missouri
brokawi Wilson and Langenheim 1962, *Lithostrotionella*
Perm.: Nevada
brucei Cocke 1966, *Dibunophyllum*
Penn.: Oklahoma
brushensis Bebout 1966, *Stereostylus*
Penn.: Ohio
burlingi Sutherland 1958, *Pseudozaphrentoides*?
Miss.: British Columbia
burlingtonensis Keyes 1942, *Aulopora* (equals *A. gracilis* Keyes, 1894)
Miss.: Iowa, Missouri
buttensis Stevens 1967, *Heritschioides* (*Heritschioides*)
Perm.: Nevada
calcariformis Hall 1882, *Zaphrentis*
Miss.: Alabama, Alberta, Indiana, Kentucky
calceola White and Whitfield 1862, *Lophophyllum*
Miss.: Arizona, Iowa, Missouri, New Mexico
californicus Tischler 1956, *Triplophyllites* (*Triplophyllites*)
Miss.: California
californiense Langenheim and Tischler, 1960, *Enygmophyllum*
Miss.: California
californiense Meek 1864, *Lithostrotion*?
Perm.: California
callosum Moore and Jeffords 1945, *Barytichisma*
Penn.: Arkansas, Oklahoma, Texas
calyculus Miller 1891, *Zaphrentis*
Miss.: Missouri

canadensis Castelnau 1843, *Axinura*
(Type specimen is probably a drift specimen derived from Devonian (Ehlers *in* Lang, Smith, and Thomas, 1940). As commonly used it equals *Acrocyathus floriformis* d'Orbigny 1849 (Easton, 1973))
Miss.: Alabama, Illinois, Kentucky, Missouri, Tennessee, Virginia
caneyana Morgan 1924, *Pachypora*
Penn.: Oklahoma
cannonensis Winchell 1869, *Zaphrentis*
Miss.?: Tennessee
captiosis Moore and Jeffords 1945, *Lophamplexus*
Penn.: Oklahoma
capuliformis Rowley 1900, *Zaphrentis*
Miss.: Missouri
carbonaria Mather 1915, *Pachypora*
Penn.: Arkansas, Oklahoma
carbonaria White 1862, *Striatopora*
Miss.: Iowa, Missouri
carinata Girty, 1910, *Palaeacis*
Miss.: Arkansas
carinatus Worthen 1890, *Zaphrentis*
Miss.: Indiana, Iowa, Kentucky
cascadense Warren 1927, *Lophophyllum*?
Miss.: Alberta
cassa Sutherland 1958, *Amplexi-Zaphrentis*
Miss.: British Columbia
cassedayi Milne-Edwards 1860, *Zaphrentis*
Miss.: Indiana, Kentucky, Ohio
castelnaui Hayasaka 1936, *Lithostrotionella*
Miss.: Alabama, California, Georgia, Illinois, Missouri, Virginia, West Virginia
casteri Armstrong 1958, *Zaphriphyllum*
Miss.: New Mexico
cavernosa Miller 1891, *Palaeacis*
Miss.: Indiana
cavum Easton 1944, *Pseudocryptophyllum*
Miss.: Missouri
centralis Milne-Edwards and Haime 1851, *Zaphrentis*
Miss.: Illinois, Iowa, Kentucky, Missouri
centrocylindrica Driscoll and Newton 1969, *Syringopora*
Penn.: Montana
chesterensis Worthen 1890, *Zaphrentis*
Miss.: Illinois, Missouri
chouteauensis Miller 1891, *Zaphrentis*
Miss.: Georgia, Indiana, Missouri
circinatus Easton and Gutschick 1953, *Lithostrotionella*
Miss.: Arizona
circularis Easton 1958, *Triplophyllites* (*Homalophyllites*)
Miss.: New Mexico, Sonora
clathrum Cocke 1970, *Dibunophyllum*
Penn.: Kansas

clavigerum Easton 1962, *Bradyphyllum*
Miss. and Penn.?: Montana
cliffordana Milne-Edwards and Haime 1851, *Zaphrentis*
Miss.: Alabama, Georgia, Illinois, Iowa, Kentucky, Missouri, Ohio
clinatus Greene 1904b, *Zaphrentis*
Miss.: Indiana, Kentucky, Missouri, New Mexico
coaptum Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Arkansas
columbicum Smith 1935, *Waagenophyllum*
Perm.: British Columbia
columnirotata Langenheim and Tischler 1960, *Rylstonia*
Miss.: Arizona, California
compacta Nelson 1962a, *Syringopora*
Miss.: Alberta
complexum Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
compressa Easton 1943b, *Palaeosmilia*
Miss.: Tennessee
compressa Greene 1899a, *Cyathaxonia* (equals *C. venusta* Greene)
Miss.: Indiana
compressa Milne-Edwards 1860, *Zaphrentis*
Miss.: Alabama, Georgia, Indiana, Kentucky, Tennessee, Utah
compressum Jeffords 1942, *Lophophyllidium*
Penn.: Texas
compressum Meek and Worthen 1860, *Sphenopoterium*
Miss.: Illinois
confertum Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
confluens Easton 1958, *Lithostrotionella*
Miss.: Arizona, New Mexico, Sonora
conica Easton 1944, *Palaeacis*
Miss.: Missouri
conicum Castelnau 1843, *Cyathophyllum*
Miss.: Illinois
coniforme Jeffords 1947, *Lophophyllidium*
Penn.: Kansas, Missouri, Oklahoma
connorsensis Easton 1960, *Lithostrotion* [*Diphyphyllum*]
Perm.: Nevada
conoideum Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Arkansas, Texas
contortus Easton 1962, *Fasciculiamplexus*
Penn.?: Montana
cooperi Ross and Ross 1962, *Neokoninckophyllum*
Penn.: Texas
coralloides Sowerby 1814, *Amplexus* (Milne-Edwards and Haime, 1851)
Miss.: Illinois, New Mexico
cordillerensis Easton 1958, *Cyathaxonia*
Miss.: Sonora
cordillerensis Easton, 1960, *Lonsdaleia*
Perm.: California, Nevada

corniculum Miller 1891, *Amplexus*
Miss.: Georgia, Missouri, Sonora
cornucopiae Michelin *in* Gervais 1840, *Caninia* (Sloss, 1945)
Miss.: Montana
corrugatus Mather 1915, *Amplexus*
Penn.: Arizona, Arkansas, Oklahoma, Texas
crassa McCoy 1844, *Jania* (Weller, 1909)
Miss.: Missouri
crassiseptatum Moore and Jeffords 1945, *Hapsiphyllum*
Penn.: Oklahoma
crassum Moore and Jeffords 1945, *Barytichisma*
Penn.: Texas
cumberlandica Troost 1840, *Calamopora*
Miss.: Tennessee
cuneata Snider 1915, *Palaeacis*
Miss.: Arkansas, Oklahoma
cuneatum Meek and Worthen 1860, *Sphenopoterium*
Miss.: Indiana
cuneiformis Milne-Edwards 1860, *Palaeacis*
Miss.: Alabama, Indiana
curva Shimer 1926, *Aulopora*
Miss.: Alberta
cylindraceus Worthen 1890, *Zaphrentis*
Miss.: Illinois, Missouri
cylindrica Girty 1908, *Lindstroemia*
Perm.: Texas
cylindrica Scouler *in* McCoy 1844, *Siphonophyllia* (Marcou, 1858)
Miss.: New Mexico
cylindricum Dobrolyubova and Kabakovich 1948, *Axophyllum* (Cocke, 1970)
Penn.: Kansas
cylindricum Girty 1915, *Axophyllum*
Penn.: Missouri
cymba Seebach 1866, *Palaeacis*
Miss.: Iowa
cyndon Rafinesque and Clifford 1820, *Turbinolia*
Miss.: Kentucky, Pennsylvania (Pennsylvania record is probably Pennsylvanian)
cystoides Grabau *in* Greene 1901a, *Romingeria*
Miss.: Indiana
cystosum Cocke 1970, *Neokoninckophyllum*
Penn.: Kansas
dalii Milne-Edwards and Haime 1851, *Zaphrentis*
Miss.: Alberta, Georgia, Illinois, Indiana, Iowa, Missouri
dawsoni Lambe 1899a, *Cyathophyllum*
Miss.: Nova Scotia
deciensis Ross and Ross 1962, *Neokoninckophyllum*
Perm.: Texas
declinis Miller 1891, *Zaphrentis*
Miss.: Indiana
delicata Ross and Ross 1963, *Amplexocarinia*
Penn. and Perm.: Texas

delicatum Bassler, 1937, *Hadrophyllum*
Miss.: Kentucky
deltense Rowett 1969, *Auloclisia*
Perm.: Alaska
deminutivum Easton 1944, *Metriophyllum*
Miss.: Missouri
densa Carruthers 1908, *Zaphrentis* (Davis, 1956)
Miss.: Utah
densum Moore and Jeffords 1945, *Lophotichium*
Penn.: Oklahoma
depressum Meek and Worthen 1866, *Sphenopoterium*
Miss.: Illinois
dibolium Cocke 1970, *Dibunophyllum*
Penn.: Kansas, Oklahoma
dilatata Easton 1960, *Lithostrotion* [*Lithostrotionella*]
Perm.: Nevada
dilatatus Easton 1945c, *Amplexus*
Miss.: Illinois, Utah
dingmanae Nelson 1962a, *Syringopora*
Miss.: Alberta
disseptum Sutherland 1954, *Zaphriphyllum*
Miss.: Northwest Territories
distinctum Jeffords 1942, *Lophophyllidium*
Penn.: Kansas
distinctum Moore and Jeffords 1941, *Leonardophyllum*
Perm.: Texas
distorta Worthen *in* Worthen and Meek 1875, *Cyathaxonia*
Penn.: Illinois, Missouri, Pennsylvania
divergens White 1877, *Favosites*
Miss.: Arizona, Iowa
drummondi Nelson 1962a, *Syringopora*
Miss.: Alberta
dumosa Hyde 1953, *Cladochonus*
Miss.: Ohio
dunbari Moore and Jeffords 1941, *Lophophyllidium*
Perm.: Kansas
dunbari Ross and Ross 1962, *Neokoninckophyllum*
Penn.: Texas
duncanae Hoare 1964, *Acaciapora*
Perm.: Nevada
durhami Langenheim and Tischler 1960, *Meniscophyllum*
Miss.: California
dutroi Armstrong 1972a, *Lithostrotion* (*Siphonodendron*)
Miss.: Alaska
dux Sutherland 1954, *Kakwiphyllum*
Miss.: British Columbia, Nevada
eastoni Langenheim and Tischler 1960, *Ekvasophyllum*
Miss.: California
eastoni Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Arkansas

elegente Cocke 1970, *Dibunophyllum*
Penn.: Kansas
eliasi Moore and Jeffords 1941, *Lophamplexus*
Perm.: Kansas, Oklahoma
elkoensis Hoare 1964, *Caninia*
Perm.: Nevada
elliptica White, 1862, *Zaphrentis*
Miss.: Arizona, Illinois, Iowa, Kentucky, Missouri
elongatum Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
elpasoensis Armstrong 1962, *Koninckophyllum*
Penn.: Texas (A. K. Armstrong, oral commun., 1974)
elyensis Wilson and Langenheim 1962, *Eastonoides*
Perm.: Nevada
enclinotabulatum Sutherland 1958, *Ekvasophyllum*
Miss.: British Columbia
enniskilleni Milne-Edwards and Haime 1851, *Zaphrentis* (Sutherland, 1958)
Miss.: Northwest Territories
enorme Meek and Worthen 1860, *Sphenopoterium*
Miss and Devonian.: Indiana, Iowa, Missouri, New Mexico
enormis Easton 1945b, *Caninia*
Miss.: Montana
eugeneae White 1884, *Michelinia*
Penn.: Arkansas, Illinois, Indiana, Kansas, Missouri, Oklahoma
eumetrium Crickmay 1955, *Allotropiophyllum*
Miss.: Alberta
excavatum Easton 1944, *Clinophyllum*
Miss.: Missouri
excavatum Girty 1899, *Menophyllum*
Miss.: Montana, Utah, Wyoming
excavatum Ulrich 1917, *Menophyllum*
Miss.: Kentucky
excentrica Meek 1873, *Zaphrentis*
Miss.: Montana, Nevada, Utah
excentricus Moore and Jeffords 1945, *Zaphrentoides*
Penn.: Texas
exigua Miller 1891, *Zaphrentis*
Miss.: Illinois, Kentucky, Missouri
exigum Jeffords 1948, *Dibunophyllum*
Penn.: Kansas
exile Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Oklahoma
exilimura Mather 1915, *Michelinia*
Penn.: Oklahoma
expansa White 1880b, *Michilinia*
Miss.: Alberta, Arizona, Iowa, Missouri, Utah
expansum Jeffords 1942, *Lophophyllidium*
Penn.: Kansas, Missouri
expansum White 1876a, *Lophophyllum*
Miss.: Iowa

expansus Easton 1945c, *Amplexus*
Miss.: Oklahoma, Utah
extumidum Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Texas
flaccida Easton 1943b, *Caninia*
Miss.: Alabama
flexuosum Warren 1927, *Lithostrotion* (equals *Diphyphyllum sinuosum* Kelly)
Miss.: Alberta
floriformis Hayasaka 1936, *Lithostrotionella*
Miss.: Alaska
floriformis d'Orbigny 1849, *Acrocyathus*
Miss.: Indiana
fragilis Mather 1915, *Cladochonus*
Penn.: Oklahoma, Texas
fragilis White and St. John 1867, *Amplexus*
Miss.: Arkansas, Iowa, Missouri
ftatateeta McCutcheon and Wilson 1961, *Ptolemaia*
Perm.: Nevada
gabbi Meek 1864, *Clisiophyllum*
Perm.: California
garnettense Cocke 1970, *Geyerophyllum*
Penn.: Kansas
gasperense Butts 1922, *Campophyllum*
Miss.: Alabama, Georgia, Kentucky, Tennessee, Virginia
genevievensis Easton 1957, *Lithostrotion* [*Siphonodendron*]
Miss.: Alberta, British Columbia, Kentucky
geniculatus Worthen 1890, *Amplexus*
Miss.: Illinois, Kentucky, Utah
geometrica Girty 1899, *Aulopora*
Miss.: Alberta, Montana, Wyoming
gibsoni White 1884, *Zaphrentis*
Penn.: Arkansas, Colorado, Indiana, Oklahoma, Texas
girtyi Armstrong 1970, *Faberophyllum*
Miss.: Alaska
girtyi Cocke 1970, *Geyerophyllum*
Penn.: Kansas
girtyi Haack 1914, *Cyathaxonia*
Perm.: Coahuila
girtyi Hayasaka 1936, *Lithostrotionella*
Miss.: California, Illinois, Montana, Utah
girtyi Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
girtyi Moore and Jeffords 1941, *Heritschia*
Perm.: Kansas
glabrum Keyes 1894, *Cyathophyllum*
Miss.: Iowa, Missouri
glans White 1862, *Zaphrentis*
Miss.: Iowa, Missouri
goldcreekensis Hoare 1964, *Caninia*
Perm.: Nevada

gorbyi Miller 1891, *Leptopora*
Miss.: Illinois, Iowa, Missouri, New Mexico
grabaui Greene 1901a, *Enallophyllum*
Miss.: Indiana
gracile Moore and Jeffords 1945, *Neokoninckophyllum*
Penn.: Texas
gracilis Keyes 1894, *Aulopora*
Miss.: Iowa, Missouri
gracilium Hoare 1964, *Bradyphyllum*
Perm.: Nevada
grandis Heritsch 1939, *Petalaxis* (Harker, 1960)
Perm.: Northwest Territories (Arctic Islands)
greenei Rowley *in* Greene 1901b, *Blothrophyllum*
Miss.: Indiana
greeni Rowley 1901, *Coleophyllum*?
Miss.: Missouri
hadrum Jeffords 1947, *Lophophyllidium*
Penn.: Kansas, Oklahoma
hagei Sutherland 1954, *Liardiphyllum*
Miss.: Northwest Territories
haimeanum Ulrich 1917, *Menophyllum*
Miss.: Kentucky
hanseni Wilson and Langenheim 1962, *Caninia*
Perm.: Nevada
hansoni Cocke and Haynes 1973, *Dibunophyllum*
Penn.: Oklahoma
harkeri Nelson 1962b, *Michelinia*
Penn.: Yukon Territory
harkeri Sutherland 1958, *Ekvasophyllum*?
Miss.: British Columbia
harmodites Milne-Edwards and Haime 1851, *Lithostrotion*
(Type specimen is a Silurian coral from Lake Huron region. As commonly used, it equals *Lithostrotion* [*Siphonodendron*] *genevievensis* Easton 1957)
Miss.: Idaho, Kentucky, Tennessee
harveyi White 1862, *Syringopora*
Miss.: Alberta, Arizona, Iowa, Missouri
heckeli Cocke 1970, *Neokoninckophyllum*
Penn.: Kansas
hemisphaerica Hayasaka 1936, *Lithostrotionella*
Miss.: Idaho, Illinois, Kentucky, Missouri, Tennessee, Utah, Virginia, West Virginia
hespere Grove 1935, *Triplophyllum*
Miss.: New Mexico
hessensis Ross and Ross 1962, *Dibunophyllum*
Perm.: Texas
hians Easton 1944, *Rotiphyllum*
Miss.: Missouri, Montana
hillae Wilson and Langenheim 1962, *Heritschioides*
Perm.: Nevada

hudsoni Wilson and Langenheim 1962, *Orionastrea*
Perm.: Nevada
hypatiae Wilson 1963, *Multithecopora*
Penn.: Nevada
hystricosum Cocke 1970, *Dibunophyllum*
Penn.: Kansas
ida Winchell 1865, *Zaphrentis*
Miss.: Indiana, Ohio, Tennessee
idonium Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Oklahoma, Texas
ignekensis Armstrong 1972a, *Lithostrotion* (*Siphonodendron*)
Miss.: Alaska
ignotum Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Oklahoma
illinoisensis Worthen 1890, *Zaphrentis*
Miss.: Illinois, Iowa, Missouri
illipahensis Easton 1960, *Lonsdaleia*
Perm.: Nevada
immota Moore and Jeffords 1945, *Striatopora*
Penn.: Arkansas
improcerum Moore and Jeffords 1945, *Lophotichium*
Penn.: Oklahoma
imulum Moore and Jeffords 1945, *Empodesma*
Penn.: Texas
inauditum Moore and Jeffords 1945, *Dibunophyllum*?
Penn.: Arizona, Oklahoma
inclinatum Parks 1951, *Ekvasophyllum*
Miss.: Utah
inconferta Lonsdale 1845, *Stylastrea* (Salter, 1855)
Perm.: Northwest Territories (Arctic Islands)
inconstans Easton and Gutschick 1953, *Lithostrotion* (*Diphyphyllum*)
Miss.: Arizona, Utah
incrassatum Easton and Gutschick 1953, *Caninophyllum*
Miss.: Arizona, California
indianensis Beede in Cumings and Beede 1906, *Michelinia*
Miss.: Indiana
indifferens Sutherland 1958, *Amplexi-Zaphrentis*
Miss.: Northwest Territories
infundibulum Worthen *in* Worthen and Meek 1875, *Axophyllum*
Penn.: Illinois, Missouri
invaginatum Easton 1958, *Cystelasma*
Miss.: Sonora
iovaensis Worthen 1890, *Anisophyllum*?
Miss.: Iowa
irregularis Cocke and Bowsher 1968, *Sutherlandia*
Penn.: Kansas, Oklahoma
jagoensis Armstrong 1972b, *Corwenia*
Penn.: Alaska
jasperensis Kelly 1942, *Lithostrotionella*
Miss.: Alberta, Nevada

jewetti Cocke 1970, *Geyerophyllum*
Penn.: Kansas
juddi Thomson 1893, *Campophyllum* (Sloss, 1945)
Miss.: Montana
kansasense Miller and Gurley 1893, *Campophyllum*
Penn.: Missouri
kansasense Moore and Jeffords 1941, *Malonophyllum*
Perm.: Kansas
katoi Rowett 1969, *Syringopora*
Perm.: Alaska
kingi Jeffords 1955, *Palaeacis*
Penn.: Texas
kingi Ross and Ross 1962, *Leonardophyllum*
Penn.: Texas
klawockensis Armstrong 1970, *Diphyphyllum*
Miss.: Alaska
knoxi Sutherland 1954, *Canadiphyllum*
Miss.: British Columbia
konincki Milne-Edwards and Haime 1851, *Clisiophyllum* (Armstrong, 1962)
Penn.: Texas (A. K. Armstrong, oral commun., 1974)
kunthi Stuckenberg 1888, *Petalaxis* (Harker, 1960)
Perm.: Northwest Territories (Arctic Islands)
lambarti Harker and McLaren 1950, *Sciophyllum*
Miss.: Alaska, Yukon Territory
lambii Bell 1929, *Dibunophyllum*
Miss.: Nova Scotia
lanceolatus Worthen 1890, *Zaphrentis*
Miss.: Alabama, Illinois, Indiana, Kentucky, Tennessee, Utah
lanesvillense Miller 1891, *Cystelasma*
Miss.: Indiana
languidum Parks 1951, *Faberophyllum*
Miss.: Utah
lanosum Jeffords 1947, *Lophophyllidium*
Penn.: Texas
latebrosa Moore and Jeffords 1945, *Michelinia*
Penn.: Arkansas, Oklahoma, Texas
leathamense Parks 1951, *Faberophyllum*
Miss.: Utah
lenis Jeffords 1947, *Stereostylus*
Penn.: Kansas, Missouri
lepidus Moore and Jeffords 1945, *Pseudozaphrentoides*
Penn.: Texas
leptosphragma Armstrong 1962, *Michelinia*
Miss.: Arizona, New Mexico
linnensis Cocke 1970, *Caninia*
Penn.: Kansas
lisburnensis Armstrong 1972a, *Lithostrotion* (*Siphonodendron*)
Miss.: Alaska
lochmanae Armstrong 1962, *Lithostrotionella*
Miss.: Arizona, New Mexico

longi Rowley 1901, *Aulopora*
Miss.: Missouri
lutarius Jeffords 1947, *Lophamplexus*?
Penn.: Oklahoma
macounii Lambe 1899a, *Lithostrotion*
Miss.: Alaska, British Columbia
macrostoma Römer 1883, *Monilopora*
Miss.: Kentucky
magnificum Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
magnussoni Nelson 1962a, *Syringopora*
Miss.: Alberta
major Easton 1943a, *Lonsdaleia*
Miss.: Arkansas
mamillaris Castelnau 1843, *Astraea*
Miss.: Alabama, California, Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Tennessee, Virginia (California occurrence is probably Permian)
mancus Winchell 1865, *Favosites*?
Miss.: Indiana
mccutcheonae Wilson and Langenheim 1962, *Syringopora*
Perm.: Nevada
mcfarlani Ehlers and Stumm 1953, *Palastraea*
Miss.: Kentucky
mclareni Sutherland 1958, *Lithostrotion* [*Lithostrotionella*] [*Thysanophyllum*]
Miss.: Alaska, British Columbia
meekana Girty 1910, *Michelinia*
Miss.: Arkansas, British Columbia, Oklahoma
merriamorum Langenheim and McCutcheon 1959, *Bayhaium*
Perm.: California
metum Moore and Jeffords 1945, *Lophophyllidium*
Penn.: Arkansas, Oklahoma
micra Kelly 1942, *Lithostrotionella*
Miss.: Alberta
microstylum White, 1880b, *Lithostrotion*
Miss.: Alberta, Iowa, Missouri
milichus Jeffords 1947, *Stereostylus*
Penn.: Kansas
minas Dawson 1868, *Zaphrentis*
Miss.: Nova Scotia
minatoi Rowett 1969, *Sinopora*
Perm.: Alaska
minnewankensis Shimer 1926, *Triplophyllum*
Miss.: Alberta
minor Easton 1943a, *Lonsdaleia*
Miss.: Arkansas
minor Weller 1909, *Cyathaxonia*
Miss.: Arkansas, Missouri, Oklahoma, Texas, Utah
minutum Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma

minutum Simpson 1900, *Meniscophyllum*
Miss.: Missouri
mirabile Moore and Jeffords 1941, *Sochkineophyllum*
Perm.: Kansas
missouriensis Fraunfelter 1965, *Dibunophyllum*
Penn.: Missouri
mokomokensis Easton 1960, *Lithostrotion* [*Lithostrotionella*]
Penn. or Perm.: Nevada
monroense Beede *in* Cumings and Beede 1906, *Syringopora*
Miss.: Indiana
montanensis Easton 1962, *Caninia*
Miss.: Montana
moorei Jeffords 1948, *Dibunophyllum*
Penn.: Colorado, Oklahoma, Texas
moorei Wells 1944, *Striatopora*
Penn.: Texas
moormanensis Stevens 1967, *Heritschioides* (*Eoheritschioides*)
Perm.: Nevada
morrowense Rowett and Sutherland 1964, *Leonardophyllum*
Penn.: Oklahoma
mulleri Wilson and Langeheim 1962, *Sciophyllum*
Perm.: Nevada
multattenuata McChesney 1860, *Syringopora*
Penn.: Illinois, Kansas, Missouri, Nebraska, Nevada, Oklahoma, Utah
multiconum Parks 1951, *Turbophyllum*
Miss.: Utah
multilamellata Hall 1852, *Zaphrentis*
Miss.: Utah
multiradiata Hayasaka 1936, *Lithostrotionella*
Miss.: Idaho, Utah
mundulum Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
murale Jeffords 1942, *Lophophyllidium*
Penn.: Kansas
mutabile Kelly 1942, *Diphyphyllum*
Miss.: Alberta
nasorakensis Armstrong 1972a, *Diphyphyllum*
Miss.: Alaska
nauvooense Bassler 1937, *Hadrophyllum*
Miss.: Illinois
nevadense Meek 1877, *Cyathophyllum* (*Campophyllum*?)
Miss.: Utah
nevadensis Hoare 1964, *Cladochonus*
Perm.: Nevada
nevadaensis Stevens 1967, *Kleopatrina* (*Porfirievella*)
Perm.: Nevada
newelli Jeffords 1942, *Lophophyllidium*
Penn.: Oklahoma
niakensis Armstrong 1972a, *Lithostrotionella*
Miss.: Alaska

nitellus Moore and Jeffords 1945, *Pseudozaphrentoides*
Penn.: Arizona, Oklahoma
northropi Armstrong 1962, *Amplexizaphrentis*
Miss.: Arizona, New Mexico
nunnensis Armstrong 1962, *Hapsiphyllum*
Miss.: New Mexico
obtusum Meek and Worthen 1860, *Sphenopoterium*
Miss.: Illinois, Iowa, Missouri
occidentale Easton 1958, *Rotiphyllum*
Miss.: Sonora
occidentalis Meek 1877, *Syringopora*
Penn. or Perm.: Utah
occidentalis Merriam 1942, *Lithostrotion* (*Lithostrotionella*)
Perm.: Oregon
occidentalis Sando 1963, *Aulina*
Miss.: Arizona
occultum Parks 1951, *Faberophyllum*
Miss.: Utah
ochocoensis Merriam 1942, *Waagenophyllum*
Perm.: Oregon
oculinum Sando 1963, *Lithostrotion* (*Siphonodendron*)
Miss.: Arizona
ohioensis Bebout 1966, *Stereostylus*
Penn.: Ohio
ohioensis Stumm 1969, *Amplexizaphrentis*
Miss.: Ohio
oklahomense Cocke 1966, *Dibunophyllum*
Penn.: Oklahoma
oklahomense Rowett and Sutherland 1964, *Koninckophyllum*
Penn.: Oklahoma
oklahomensis Snider 1915, *Pachypora*
Penn.: Arkansas, Oklahoma
oppelti Greene 1900, *Zaphrentis*
Miss.: Indiana
ordinatus Ross and Ross 1962, *Pseudozaphrentoides*
Penn.: Texas
oregonensis Merriam 1942, *Dibunophyllum*
Miss.: Oregon
oregonensis Merriam 1942, *Lithostrotion* (*Siphonodendron*)
Miss.: Oregon
orientale Thomson 1880, *Thysanophyllum* (Armstrong, 1970b)
Miss.: Alaska
ovale Bassler 1937, *Hadrophyllum*
Miss.: Alabama, Georgia, Kentucky
ovibos Salter 1855, *Zaphrentis*
Perm.: Northwest Territories (Arctic Islands)
packardi Merriam 1942, *Lithostrotion* (*Lithostrotion*)
Miss.: Oregon
palmatus Easton 1944, *Triplophyllites*
Miss.: Illinois

panamintense Langenheim and Tischler 1960, *Clisiophyllum*?
Miss.: California
pandatus Jeffords 1947 *Stereostylus*
Penn.: Kansas
parva Greene 1900, *Cyathaxonia*
Miss.: Indiana
parvum Cocke 1969, *Dibunophyllum*
Penn.: Kansas
parvum Stevens 1967, *Heritschioides* (*Eoheritschioides*)
Perm.: Nevada
patulum Cocke 1970, *Geyerophyllum*
Penn.: Kansas
paucicinctus Easton and Gutschick 1953, *Triplophyllites* (*Homalophyllites*)
Miss.: Arizona, Utah
paucitabulata Moore and Jeffords 1945, *Multithecopora*
Penn.: Texas
pedunculatum Bassler 1937, *Hadrophyllum*
Miss.: Kentucky, Tennessee
pelaeus Jeffords 1947, *Stereostylus*
Penn.: Kansas, Oklahoma
pellaensis Worthen 1890, *Zaphrentis*
Miss.: Iowa, Kentucky
penchiensis Yoh 1927, *Multithecopora* (Nelson, 1962b)
Penn.: Yukon Territory
pennsylvanica Shimer 1926, *Syringopora*
Miss.: Alberta
pennsylvanicum Shimer 1926, *Lithostrotion*
Miss.: Alaska, Alberta
peratrovichensis Armstrong 1970, *Lithostrotionella*
Miss.: Alaska
perelegans Billings 1859, *Syringopora* (Davis, 1956)
(Type specimen is Devonian)
Miss.: Utah
permiana Girty 1908, *Lindstroemia*
Perm.: Texas
perplexum Cocke 1969, *Dibunophyllum*
Penn.: Kansas
perplexum Cocke 1970, *Neokoninckophyllum*
Penn.: Kansas
persimilis Easton and Gutschick 1953, *Triplophyllites* (*Triplophyllites*)
Miss.: Arizona
perversus Jeffords, 1947, *Stereostylus*
Penn.: Kansas, Oklahoma
petilum Cocke 1970, *Neokoninckophyllum*
Penn.: Kansas
petoczi Rowett 1969, *Caninia*
Perm.: Alaska
phainus Jeffords 1947, *Stereostylus*
Penn.: Kansas

phractus Jeffords 1947, *Lophamplexus*
Penn.: Kansas
pictoense Billings *in* Dawson 1868, *Lithostrotion*
Miss.: Nova Scotia
pilata Sutherland 1958, *Amplexi-Zaphrentis*
Miss.: British Columbia
pinnatus Easton 1944, *Hapsiphyllum* (*Homalophyllites*)
Miss.: Missouri
pisgahense Parks 1951, *Faberophyllum*
Miss.: Utah
placenta White 1880b, *Michilinia*?
Miss.: Missouri, Montana, Wyoming
plummeri Jeffords 1947, *Lophophyllidium*
Penn.: Texas
plummeri Wells 1944, *Striatopora*
Penn.: Texas
princeps Easton 1960, *Lithostrotion* [*Thysanophyllum*]
Perm.: Nevada, Utah
princetonensis Ulrich 1917, *Menophyllum*
Miss.: Georgia, Kentucky
princetonensis Ulrich 1905, *Michelinia*
Miss.: Kentucky
problematicum Goldfuss 1826, *Pleurodictyum* (Winchell, 1870)
(Type specimen is Devonian)
Miss.: Ohio
procera Rowley 1901, *Leptopora*
Miss.: Illinois, Missouri
profunda Milne-Edwards and Haime 1851, *Cyathaxonia*
Penn.: Alberta, Arkansas, Colorado, Illinois, Iowa, Kansas, Kentucky, Michigan, Nebraska, Ohio, Oklahoma, Pennsylvania, Texas, West Virginia (Alberta reference is Mississippian)
prolifera McChesney 1860, *Cyathaxonia*
Penn.: Illinois, Indiana, Iowa, Missouri, Ohio, Oklahoma, Texas, Utah
proliferum Hall 1858, *Lithostrotion*
Miss.: Alabama, Georgia, Illinois, Kentucky, Michigan, Tennessee, Utah, Virginia
prona Milne-Edwards 1860, *Zaphrentis*
Miss.: Indiana
prosseri Beede 1898, *Aulopora*
Penn.: Colorado, Kansas, Oklahoma
proteus Sutherland 1958, *Ekvasophyllum*
Miss.: Northwest Territories
quinqueseptatum Ulrich 1905, *Cystelasma*
Miss.: Alabama, Georgia, Kentucky, Virginia
radiatum Jeffords 1942, *Lophophyllidium*
Penn.: Kansas
radicosa Ulrich 1917, *Zaphrentis*
Miss.: Georgia, Kentucky
radicosum Girty 1912, *Lophophyllum*
Penn.: Oklahoma, Texas

radicula Rowley 1900, *Zaphrentis*
Miss.: Missouri
radigerus Rowley 1901, *Amplexus*
Miss.: Missouri
rainbowensis Rowett 1969, *Timania*
Perm.: Alaska
ramosa Rowley 1901, *Leptopora*
Miss.: Illinois, Missouri
ramulosa Goldfuss 1826, *Syringopora* (Lambe, 1899b)
Miss.: Alberta
randolphensis Fraunfelter 1970, *Dibunophyllum*
Penn.: Missouri
readi Merriam 1942, *Campophyllum*?
Miss.: Oregon
referta Moore and Jeffords 1945, *Michelinia*
Penn.: Oklahoma, Texas
reiseri Armstrong 1973, *Lithostrotion*
Miss.: Alaska
religiosa Moore and Jeffords 1945, *Striatopora*
Penn.: Texas
repletum Moore and Jeffords 1945, *Barytichisma*
Penn.: Texas
reticulata Goldfuss 1826, *Syringopora* (Lambe, 1899b)
Miss.(?): British Columbia
retusum Moore and Jeffords 1945, *Hapsiphyllum*
Penn.: Texas
reversa Worthen 1890, *Zaphrentis*
Miss.: Illinois, Missouri, Utah
rockfordensis Miller and Gurley 1897, *Amplexus*?
Miss.: Illinois, Indiana
romingeri Bassler 1937, *Hadrophyllum*
Miss.: Kentucky
rossi Minato and Kato 1965, *Yabeiphyllum*
Penn. or Perm.: Texas
rudis White and St. John 1867, *Axophyllum*
Penn.: Kansas, Illinois, Indiana, Iowa, Missouri
rudyi Nelson 1962a, *Syringopora*
Miss.: Alberta
rugosum Hall 1852, *Faviphyllum*
Miss.: Utah
rugosum Ulrich 1905, *Cystelasma*
Miss.: Indiana, Kentucky
rugosus Weller 1909, *Amplexus*
Miss.: Arkansas, Missouri
sana Moore and Jeffords 1945, *Paracaninia*?
Penn.: Texas
sauridens White 1875, *Lophophyllum*
Penn. :Colorado, New Mexico
schucherti Heritsch 1936b, *Palaeosmilia*
Perm.: Texas

scopulosa Moore and Jeffords 1945, *Michelinia*
Penn.: Arizona, Arkansas, Oklahoma
sedaliense White 1880b, *Chonophyllum*
Miss.: Iowa, Missouri
semimuralis Sando 1963, *Aulina*
Miss.: Arizona
seminolensis Cocke and Bowsher 1968, *Sutherlandia*
Penn.: Oklahoma
septarugosum Moore and Jeffords 1941, *Duplophyllum*
Perm.: Texas
septata Greene 1901a, *Cystelasma*
Miss.: Indiana
shawi Wilson and Langenheim 1962, *Cladochonus*
Perm.: Nevada
shimeri Crickmay 1955, *Lonsdaleia*
Miss.: Alberta, Arizona
simplex Hayasaka 1936, *Lithostrotionella*
Miss.: Utah, Wyoming
simplex Moore and Jeffords 1945, *Neokoninckophyllum*
Penn.: Oklahoma
simulans Moore and Jeffords 1941, *Timorphyllum*
Perm.: Texas
sinuosum Kelly 1942, *Diphyphyllum*
Miss.: Alaska, Alberta
skinneri Heritsch 1937, *Texanophyllum* (nomen nudum)
Perm.: Texas
skinneri Ross and Ross 1962, *Lophophyllidium*
Perm.: Texas
solidum Ross and Ross 1962, *Lophophyllidium*
Penn. and Perm.: Texas
sonoraensis Armstrong 1962, *Amplexizaphrentis*
Miss.: Arizona, New Mexico
sonorense Easton 1958, *Caninophyllum*
Miss.: Sonora
spanius Jeffords 1947, *Lophamplexus*
Penn.: Oklahoma
spatiosus Moore and Jeffords 1945, *Pseudozaphrentoides*
Penn.: Texas
spergenensis Worthen 1890, *Zaphrentis*
Miss.: Illinois, Indiana, Iowa, Missouri
spinosum Jeffords 1947, *Lophophyllidium*
Penn.: Texas
spinulata Girty 1908, *Cladopora*
Perm.: Coahuila, Texas
spinulifera Hall 1858, *Zaphrentis*
Miss.: Illinois, Iowa
spinulosa Milne-Edwards and Haime 1851, *Zaphrentis*
Miss.: Alabama, Arkansas, Georgia, Iowa, Michigan Missouri, Montana, Oklahoma, Virginia

spissata Moore and Jeffords 1945, *Michelinia*
Penn.: Arkansas, Oklahoma
spissata Moore and Jeffords 1945, *Stereocorypha*
Penn.: Oklahoma
stansburyii Hall 1852, *Zaphrentis*
Miss.: Idaho, New Mexico, Utah
stelcki Nelson 1960, *Lithostrotionella*
Miss.: Alberta, British Columbia
stokesi Milne-Edwards and Haime 1851, *Lithostrotion*
(Originally described as Carboniferous from Manitoba.
Type specimen is a drift specimen derived from Devonian (Easton and Oliver, 1973))
striatissimus Easton 1946, *Cladochonus*
Miss.: Missouri
striatum Rowett 1969, *Cryptophyllum*
Penn.: Alaska
striatus Easton 1944, *Cladochonus* (equals *C. striatissimus* Easton, 1946)
Miss.: Missouri
strimplei Cocke and Molinary 1973, *Neokoninckophyllum*
Penn.: Oklahoma
stuarti Nelson 1962b, *Favosites*?
Perm.: Yukon Territory
sturgeoni Bebout 1966, *Stereostylus*
Penn.: Ohio
subcaespitosum Meek 1873, *Cyathophyllum*
Miss.: Idaho, Nevada
subcrassus Easton and Gutschick 1953, *Triplophyllites* (*Homalophyllites*)
Miss.: Arizona, Utah
subcylindrica Mather 1915, *Michelinia*
Penn.: Oklahoma
sublaeve Meek 1864, *Lithostrotion*
Perm.: California
subramosa Ulrich 1905, *Michelinia*
Miss.: Georgia, Kentucky
subramosum Easton 1958, *Pleurodictyum*
Miss.: Sonora
succinctus Armstrong 1970, *Lithostrotion* (*Siphonodendron*)
Miss.: Alaska
summitensis Rowett 1969, *Heritschioides*
Perm.: Alaska
surcularia Girty 1899, *Syringopora*
Miss.: Alberta, Arizona, Colorado, Iowa, Montana, New Mexico, Utah, Wyoming
sutherlandi Armstrong 1962, *Vesiculophyllum*
Miss.: New Mexico
sutherlandi Rowett 1969, *Durhamina*
Perm.: Alaska
tabularia Hoare 1964, *Cornwallia*
Perm.: Nevada
tabulata Hayasaka 1936, *Lithostrotionella*
Miss.: Idaho

tabulatum Beede *in* Cumings and Beede 1906, *Cystelasma*
Miss.: Indiana
talonatum Easton 1943a, *Koninckophyllum*
Miss.: Arkansas
tantilla Miller 1891, *Zaphrentis*
Miss.: Colorado, Illinois, Iowa, Missouri
taylori Sutherland 1958, *Amplexi-Zaphrentis*
Miss.: British Columbia, Northwest Territories
tenella Miller 1891, *Zaphrentis*
Miss.: Missouri, Sonora
tennesseense Miller and Gurley 1895, *Hadrophyllum*
Miss.: Alabama, Tennessee
tennesseensis Easton 1943b, *Caninia*
Miss.: Tennessee
tenuicula Moore and Jeffords 1945, *Michelinia*
Penn.: Oklahoma
teres Girty 1899, *Clisiophyllum*
Miss.: Arizona, New Mexico, Wyoming
tergidus Ross and Ross 1962, *Stereostylus*
Perm.: Texas
testata Moore and Jeffords 1945, *Palaeacis*
Penn.: Texas
texanum Heritsch 1936a, *Waagenophyllum*
Perm.: Texas
texanum Moore and Jeffords 1945, *Rodophyllum*
Penn.: Texas
texanum Okulitch and Albritton 1937, *Malonophyllum*
Perm.: Texas
texanum Shumard 1859, *Campophyllum*?
Perm.: Texas
texasensis Moore and Jeffords 1945, *Cladochonus*
Penn.: Oklahoma, Texas
torquium Owen 1852, *Campophyllum*
Penn.: Alberta, Arizona, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Missouri, Nebraska, Nevada, Oklahoma
trachyporoides Wells 1944, *Striatopora*
Penn.: Texas
trigonalis Easton 1945a, *Kinkaidia*
Miss.: Arkansas, Illinois
trojana Easton 1960, *Caninia*
Penn.: Nevada
tschernyschewi Minato 1960, *Ipciphyllum*
Perm.: Northwest Territories (Arctic Islands)
tubifera Easton 1958, *Syringopora*
Miss.: Sonora
tubifera Hayasaka 1936 *Lithostrotionella*
Miss.: Montana
tubulata Girty 1908, *Cladopora*?
Perm.: Texas
tumida Easton 1962, *Longiclava*
Miss.: Montana

tumidum Moore and Jeffords 1945, *Hapsiphyllum*
Penn.: Texas
tumulus Salter 1855, *Clisiophyllum*
Perm.: Northwest Territories (Arctic Islands)
turbinata Billings 1859, "*Favosites*" (Allen and Lester, 1954)
(Type specimen is Devonian)
Miss.: Georgia
turbineum Parks 1951, *Ekvasophyllum*
Miss.: Utah
tushanense Chi 1931, *Koninckophyllum* (Cocke, 1970)
Penn.: Kansas, Oklahoma
typa Winchell 1863, *Leptopora*
Miss.: Illinois, Iowa, Missouri, New Mexico
typicum Sando 1961, *Ankhelasma*
Miss.: Utah
uddeni Ross and Ross 1963, *Dibunophyllum*
Penn.: Texas
ulius Jeffords 1947, *Lophamplexus*
Penn.: Kansas, Missouri
ulrichanum Girty 1903, *Menophyllum*
Miss.: Arizona, Colorado
ulrichi Worthen 1890, *Zaphrentis*
Miss.: Kentucky
umbonata Seebach 1866, *Palaeacis*
Miss.: Iowa
vagus Jeffords 1947, *Lophamplexus*
Penn.: Kansas, Oklahoma
valeriae Newell 1935, *Dibunophyllum*
Penn.: Kansas, Oklahoma
vallum Hoare 1966, *Bayhaium*
Perm.: Nevada
vallum Ross and Ross 1962, *Lophophyllidium*
Penn.: Texas
valmeyerensis Weller 1909, *Favosites*
Miss.: Missouri, Ohio
variabile Cocke 1970, *Neokoninckophyllum*
Penn.: Kansas
variabilis Easton 1943a, *Caninostrotion*
Miss.: Arkansas, Illinois
varsoviensis Worthen 1890, *Zaphrentis*
Miss.: Illinois, Iowa
venosum Armstrong 1970, *Diphyphyllum*
Miss.: Alaska
venusta Greene 1904b, *Cyathaxonia*
Miss.: Indiana
venusta Moore and Jeffords 1945, *Acaciapora*
Penn.: Texas
vermicularis Rowley 1901, *Amplexus*
Miss.: Missouri
verneuilanum Milne-Edwards and Haime 1851, *Baryphyllum*
Miss.: Tennessee

verneuilanum Milne-Edwards and Haime 1851, *Trochophyllum*
Miss.: Kentucky
verticillata Goldfuss 1826, *Syringopora* (Davis, 1956)
(Type specimen is Silurian)
Miss.: Utah
verticillatum Barbour 1911, *Craterophyllum*
Penn.: Nebraska
veryi Greene 1904a, *Lithodrumus*
Miss.: Kentucky
vescum Moore and Jeffords 1945, *Lophotichium*
Penn.: Arkansas, Oklahoma
vesicularis Hayasaka 1936, *Lithostrotionella*
Miss.: Alaska
vesiculosum Easton 1958, *Rotiphyllum*
Miss.: Sonora
vidriensis Ross and Ross 1962, *Lophophyllidium*
Perm.: Texas
virginica Butts 1941, *Syringopora*
Miss.: Alberta, British Columbia, Georgia, Virginia
wahooensis Armstrong 1972b, *Lithostrotionella*
Penn.: Alaska
walcotti Moore and Jeffords 1945, *Palaeacis*
Penn.: Texas
wannensis Newell 1935, *Zaphrentis*
Penn.: Oklahoma
wardi Howell 1945, *Gymnophyllum*
Penn.: Oklahoma
warreni Nelson 1960, *Lithostrotion*
Miss.: Alaska, Alberta
washburni Merriam 1942, *Waagenophyllum*
Perm.: Oregon
welleri Grove 1935, *Triplophyllum*
Miss.: Missouri
westii Beede 1898, *Amplexus*
Penn.: Kansas, Missouri
wewokanum Jeffords 1947, *Lophophyllidium*
Penn.: Oklahoma
whitfieldi White 1874, *Favosites* (equals *F. divergens* White)
Miss.: Arizona
whitneyi Meek 1877, *Lithostrotion*
Miss.: Alberta, Utah
whitneyi White 1875, *Lithostrotion*
Penn.(?): Nevada
williamsi Armstrong 1970, *Faberophyllum*
Miss.: Alaska
williamsi Greene 1899b, *Michelinia*
Miss.: Indiana
wilsonae Sutherland 1958, *Paracaninia*?
Miss.: Northwest Territories
wilsoni Minato and Kato 1965, *Kleopatrina* (*Kleopatrina*)
Perm.: Nevada

wimani Heritsch 1939, *Roemeripora* (Harker, 1960)
Perm.: Northwest Territories (Arctic Islands)
winchelli Rowley 1900, *Cyathaxonia*
Miss.: Missouri
winchelli White 1879, *Leptopora*
(Originally described as from Carboniferous of Utah.
Type specimen is a coral of Ordovician or Silurian age (Sando, 1965))
woodi Wilson and Langenheim 1962, *Heritschioides*
Perm.: Nevada
wortheni Weller 1909, *Zaphrentis* (equals *Triplophyllum welleri* Grove)
Miss.: Iowa, Kentucky, Missouri
yandelli Milne-Edwards and Haime 1851, *Amplexus*
Devonian and Miss.(?): Missouri
zaphrentiformis Greene 1901a, *Bordenia*
Miss.: Indiana, Kentucky
zaphrentiformis White 1876b, *Amplexus*
Penn.: Colorado, Utah

REFERENCES CITED

Allen, A. T., Jr., and Lester, J. G., 1954, Contributions to the paleontology of northwest Georgia: Georgia Geol. Survey Bull. 62, 166 p., 42 pls.

Armstrong, A. K., 1958, The Mississippian of west-central New Mexico: New Mexico Bur. Mines and Mineral Resources Mem. 5, 32 p., 6 pls., 21 figs.

——— 1962, Stratigraphy and paleontology of the Mississippian System in southwestern New Mexico and adjacent southeastern Arizona: New Mexico Bur. Mines and Mineral Resources Mem. 8, 99 p., 12 pls., 41 figs.

——— 1970, Mississippian rugose corals, Peratrovich Formation, west coast, Prince of Wales Island, southeastern Alaska: U.S. Geol. Survey Prof. Paper 534, 44 p., 13 pls., 30 figs.

——— 1972a, Biostratigraphy of Mississippian lithostrotionoid corals, Lisburne Group, arctic Alaska: U.S. Geol. Survey Prof. Paper 743–A, 28 p., 9 pls., 25 figs.

——— 1972b, Pennsylvanian carbonates, paleoecology, and rugose colonial corals, north flank, eastern Brooks Range, arctic Alaska: U.S. Geol. Survey Prof. Paper 747, 21 p., 8 pls., 16 figs.

——— 1973, *Lithostrotion reiseri* n. sp., a cerioid coral from Meramec-age beds, Lisburne Group, arctic Alaska: U.S. Geol. Survey Jour. Research, v. 1, no. 2, p. 137–145, 10 figs.

Barbour, E. H., 1911, A new Carboniferous coral, *Craterophyllum verticillatum*: Nebraska Geol. Survey, v. 4, pt. 3, p. 38–49, 4 pls.

Bassler, R. S., 1937, The Paleozoic rugose coral family Paleocyclidae: Jour. Paleontology, v. 11, no. 3, p. 189–201, pls. 30–32.

——— 1950, Faunal lists and descriptions of Paleozoic corals: Geol. Soc. America Mem. 44, 315 p., 20 pls.

Bebout, D. G., 1966, Upper Pennsylvanian Conemaugh corals from Ohio: Kansas Univ. Paleont. Contr., Paper 6, 7 p., 3 pls., 2 figs.

Beede, J. W., 1898, New corals from the Kansas Carboniferous: Kansas Univ. Quart., v. 7, no. 1, ser. A, p. 16–18.

Bell, W. A., 1929, Horton-Windsor district, Nova Scotia: Canada Geol. Survey Mem. 155, 268 p., 36 pls., 14 figs.

Billings, Elkanah, 1859, On the fossil corals of the Devonian rocks of Canada west: Canadian Jour. Industry, Science, and Art, new ser., v. 4, p. 97–140, 29 figs.

Branson, C. C., 1948, Bibliographic index of Permian invertebrates: Geol. Soc. America Mem. 26, 1049 p.

Branson, E. B., and Greger, D. K., 1918, Amsden Formation of the east slope of the Wind River Mountains of Wyoming and its fauna: Geol. Soc. America Bull., v. 29, no. 6, p. 309–326, pls. 18, 19.

Butts, Charles, 1917, Descriptions and correlation of the Mississippian formations of western Kentucky: Frankfort, Ky., Kentucky Geol. Survey, 119 p.

——— 1922, The Mississippian series of eastern Kentucky; a regional interpretation of the stratigraphic relations of the Subcarboniferous group based on new and detailed field examinations: Kentucky Geol. Survey, ser. 6, v. 7, 188 p., 81 pls., 7 figs.

——— 1941, Geology of the Appalachian Valley in Virginia. Pt. 2, Fossil plates and descriptions: Virginia Geol. Survey Bull. 52, pt. 2, 271 p., 135 pls.

Carruthers, R. G., 1908, A revision of some Carboniferous corals: Geol. Mag., Dec. 5, v. 5, p. 20–31, 63–74, 158–171, pls. 4–6.

Castelnau, Francis de, 1843, Essai sur le système silurien de l'Amérique septentrionale: Paris, 56 p., 27 pls.

Chernyshev, T., and Stepanov, P., 1916, Obercarbonfauna von König Oscars und Heibergs Land: Norske Vidensk.-Acad., Oslo, Rept. 2d Norwegian Arctic Exped. in *Fram*, 1898–1902, v. 4 (no. 34), 67 p., 15 pls.

Chi, Y. S., 1931, Weiningian (Middle Carboniferous) corals of China: Palaeont. Sinica, ser. B., v. 12, fasc. 5, 70 p., 5 pl.

Cocke, J. M., 1966, Studies of Pennsylvanian corals in Oklahoma. Pt. 2, New species of *Dibunophyllum* from the Dewey Formation: Oklahoma Geol. Survey Circ. 72, p. 35–56, 1 pl., 2 figs.

——— 1969, Taxonomic and environmental study of two dibunophyllid coral species from Upper Pennsylvanian rocks of Kansas: Kansas Univ. Paleont. Contr., Paper 44, 11 p., 5 figs.

——— 1970, Dissepimental rugose corals of Upper Pennsylvanian (Missourian) rocks of Kansas: Kansas Univ. Paleont. Contr., Art. 54 (Coelenterata 4), 67 p., 8 pls., 11 figs.

Cocke, J. M., and Bowsher, A. L., 1968, New tabulate genus *Sutherlandia* (Coelenterata, Anthozoa) from Pennsylvanian of Oklahoma and Kansas: Kansas Univ. Paleont. Contr. Paper 33, 8 p., 3 figs.

Cocke, J. M., and Haynes, L. D., 1973, *Dibunophyllum and Neokoninckophyllum* from the Upper Pennsylvanian Lost City Limestone in Oklahoma: Jour. Paleontology, v. 47, no. 2, p. 244–250, 1 pl., 1 fig.

Cocke, J. M., and Molinary, John, 1973, *Dibunophyllum* and *Neokoninckophyllum* from the Wann Formation (Missourian) in northeastern Oklahoma: Jour. Paleontology, v. 47, no. 4, p. 657–662, 1 pl., 2 figs.

Coogan, A. H., 1960, Stratigraphy and paleontology of the Permian Nosoni and Dekkas Formations (Bollibokka Group): California Univ. Pub. Geol. Sci., v. 36, no. 5, p. 243–316, 6 pls., 23 figs.

Crickmay, C. H., 1955, The Minnewanka section of the Mississippian: Calgary, Alberta, Imperial Oil Co., 15 p., 2 pls., 3 charts.

Cumings, E. R., and Beede, J. W., 1906, Fauna of the Salem Limestone of Indiana; Introduction: Indiana Dept. Geology and Nat. Resources Ann. Rept. 30, p. 1189–1201.

Cummins, W. F., 1891, Report on the geology of northwestern Texas: Texas Geol. Survey Ann. Rept. 2, p. 357–552.

Davis, D. E., 1956, A taxonomic study of the Mississippian corals of central Utah: Brigham Young Univ. Research Studies, Geology ser., v. 3, no. 5, 49, p., 4 pls., 3 figs.

Dawson, J. W., 1868, Fossils of the Carboniferous limestone, *in* Dawson, J. W., Acadian Geology, 2d ed.: London, p. 285–314.

Dobrolyubova, T., and Kabakovich, N., 1948, Nekotorye predstaviteli Rugosa srednego i verkhnego karbona Podmoskovskogo basseina [Some representatives of the Rugosa from the Middle and Upper Carboniferous of the Moscow basin]: Akad. Nauk SSSR, Paleontologicheskogo Inst. Trudy, v. 14, no. 2, 37 p., 16 pls.

Driscoll, E. G., and Newton, G. B., 1969, A new species of the coral *Syringopora* from the Tensleep Formation (Pennsylvanian) of Montana: Jour. Paleontology, v. 43, no. 2, p. 531–534, 5 figs.

Easton, W. H., 1943a, The fauna of the Pitkin formation of Arkansas: Jour. Paleontology, v. 17, no. 2, p. 125–154, pls. 21–24, fig. 1.

——— 1943b, New Chester corals from Alabama and Tennessee: Jour. Paleontology, v. 17, no. 3, p. 276–280, pl. 46, 1 fig.

——— 1944, Corals from the Chouteau and related formations of the Mississippi Valley region: Illinois State Geol. Survey Rept. Inv. 97, 93 p., 17 pls.

——— 1945a, Kinkaid corals from Illinois: Jour. Paleontology, v. 19, no. 4, p. 383–389, 8 figs.

——— 1945b, Corals from the Otter Formation (Mississippian) of Montana: Jour. Paleontology, v. 19, no. 5, p. 522–528, 10 figs.

——— 1945c, Amplexoid corals from the Chester of Illinois and Arkansas: Jour. Paleontology, v. 19, no. 6, p. 625–632, pls. 85–87, 1 fig.

——— 1946, *Cladochonus striatissimus* Easton, new name for *Cladochonus striatus* Easton, 1944: Jour Paleontology, v. 20, no. 4, p. 393.

——— 1951, Mississippian cuneate corals: Jour. Paleontology, v. 25, no. 3, p. 380–404, pls. 59–61, 14 figs.

——— 1957, On the tetracoral *Lithostrotion harmodites* Milne-Edwards and Haime: Jour. Paleontology, v. 31, no. 3, p. 616–622, pls. 71.

——— 1958, Mississippian corals from northwestern Sonora, Mexico, *in* Easton, W. H., and others, Mississippian fauna in northwestern Sonora, Mexico: Smithsonian Misc. Collns., v. 119, no. 3, p. 1–40, 2 pls., 3 figs.

——— 1960, Permian corals from Nevada and California: Jour. Paleontology, v. 34, no. 3, p. 570–583, 18 figs.

——— 1962, Carboniferous formations and faunas of central Montana: U.S. Geol. Survey Prof. Paper 348, 126 p., 14 pls., 1 fig.

——— 1973, On the tetracorals *Acrocyathus* and *Lithostrotionella* and their septal morphology: Jour. Paleontology, v. 47, no. 1, p. 121–135, 1 pl.

Easton, W. H., and Gutschick, R. C., 1953, Corals from the Redwall Lime-

stone (Mississippian) of Arizona: Southern California Acad. Sciences Bull. 52, pt. 1, p. 1–27, 3 pls., 2 figs.

Easton, W. H., and Oliver, W. A., Jr., 1973, The Devonian tetracoral *Acinophyllum stokesi* (Milne-Edwards and Haime), 1851: Jour. Paleontology, v. 47, no. 5, p. 915–918, 1 pl.

Ehlers, G. M., and Stumm, E. C., 1953, A new species of the tetracoral genus *Palastraea* from the Mississippian of Kentucky: Michigan Acad. Science, Art, and Letters Paper 1952, v. 38, p. 383–385, 1 pl.

Fraunfelter, G. H., 1965, A new Pennsylvanian dibunophyllid coral from Missouri: Missouri Div. Geol. Survey and Water Resources Rept. Inv. 32, 8 p., 1 fig.

——— 1970, Dibunophyllid corals from the Houx Limestone (Pennsylvanian) in north central Missouri: Illinois Acad. Sci. Trans., v. 63, no. 3, p. 319–323, 6 figs.

Gervais, Paul, 1840, Astrée, Astraea: Dictionnaire des Sciences naturelle, Suppl. v. 1, p. 481–487.

Girty, G. H., 1899, Devonian and Carboniferous fossils [of the Yellowstone National Park]: U.S. Geol. Survey Mon. 32, pt. 2, p. 479–599, pls. 66–71.

——— 1903, The Carboniferous formations and faunas of Colorado: U.S. Geol. Survey Prof. Paper 16, 546 p., 10 pls.

——— 1908, The Guadalupian fauna: U.S. Geol. Survey Prof. Paper 58, 651 p., 31 pls.

——— 1910, New genera and species of Carboniferous fossils from the Fayetteville shale of Arkansas: New York Acad. Sci. Annals, v. 20, no. 3, pt. 2, p. 189–238.

——— 1912, On some new genera and species of Pennsylvanian fossils from the Wewoka Formation of Oklahoma: New York Acad. Sci. Annals, v. 21, p. 119–156. ["In August 1911 some 50 preprints of this paper were issued by the author, but such preprints do not constitute valid publication," Knight (1941, p. 392).]

——— 1915, Invertebrate paleontology [of the Pennsylvanian of Missouri]: Missouri Bur. Geology and Mines, ser. 2, v. 13, p. 263–376, pls. 27–32.

Goldfuss, G. A., 1826, Petrefacta Germaniae. Part 1: Düsseldorf, p. 1–76, pls. 1–25.

Grabau, A. W., 1899, Moniloporidae, a new family of Palaeozoic corals: Boston Soc. Nat. History Proc., v. 28, p. 409–424, 4 pls.

Greene, G. K., 1899a, Contribution to Indiana palaeontology, v. 1, pt. 2: New Albany, Ind., p. 8–16, pls. 4–6.

——— 1899b, Contribution to Indiana palaeontology, v. 1, pt. 3: New Albany, Ind., p. 17–25, pls. 7–9.

——— 1900, Contribution to Indiana palaeontology, v. 1, pt. 5, New Albany, Ind., p. 34–41, pls. 13–15.

——— 1901a, Contribution to Indiana palaeontology, v. 1, pt. 7: New Albany, Ind., p. 50–61, pls. 19–21.

——— 1901b, Contribution to Indiana palaeontology, v. 1, pt. 8: New Albany, Ind., p. 62–74, pls. 22–24.

——— 1904a, Contribution to Indiana palaeontology, v. 1, pt. 17: New Albany, Ind., p. 168–175, pls. 49–51.

——— 1904b, Contribution to Indiana palaeontology, v. 1, pt. 19: New Albany., p. 185–192, pls. 55–57.

Grove, B. H., 1935, Studies in Paleozoic corals: Pt. 3, A revision of some Mississippian zaprentids: Am. Midland Naturalist, v. 16, no. 3, p. 337–378, pls. 8, 13, 4 figs.

Haack, W., 1914, Über eine marine Permfauna aus Nordmexiko nebst Bemerkungen über Devon daselbst: Deutsche Geol. Gesell. Zeitschr. v. 66, no. 4, p. 482–504, 2 figs., pls. 38, 39.

Hall, James, 1852, Geology and paleontology, *in* Stansbury, Howard, Exploration and survey of the valley of the Great Salt Lake of Utah, including a reconnaissance of a new route through the Rocky Mountains: U.S. 32nd. Cong., spec. sess., Senate Exec. Doc. 3, p. 399–414, 4 pls.

——— 1858, Paleontology, v. 1, pt. 2 *of* Hall, James and Whitney, J. D., Report on the geological survey of the State of Iowa: [Albany, N. Y.], p. 473–724, pls. 1–29.

——— 1882, Descriptions of fossil corals from the Niagara and Upper Helderberg Groups: Albany, N. Y., 59 p. [Advance printing. Published in 1884 as New York State Mus. Nat. History Ann. Rept. 35, p. 407–464.]

Harker, Peter, 1960, Corals, brachiopods, and molluscs of Grinnel Peninsula, *in* Harker, Peter, and Thorsteinsson, Raymond, Permian rocks and faunas of Grinnell Peninsula, Arctic Archipelago: Canada Geol. Survey Mem. 309, p. 39–89, pls. 11–25, 5 figs.

Harker, Peter, and McLaren, D. J., 1950, *Sciophyllum*, a new rugose coral from the Canadian Arctic: Canada Geol. Survey Bull. 15, p. 29–34, pl. 4, fig. 3.

Hayasaka, Ichirô, 1936, On some North American species of *Lithostrotionella*: Taihoku Imp. Univ. Mem., v. 13, no. 5, Geol. No. 12, p. 47–73, 8 pls.

Heritsch, F., 1936a, A new species of *Waagenophyllum* from the Permian of the Glass Mountains, Texas: Am. Jour. Sci., 5th ser., v. 31, no. 182 p. 144–148, 1 fig.

——— 1936b, A new rugose coral from the lower Permian of Texas, with remarks on the stratigraphic significance of certain Permian coral genera: Am. Jour. Sci., 5th ser., v. 32, no. 188, p. 134–144, 2 pls.

———1937, Die rugosen Korallen und die Stratigraphie der Performation: Geol. Gesell. Wien Mitt., Bd., 29, p. 307–328.

——— 1939, Die Korallen des Jungpaläozoikums von Spitzbergen: Arkiv Zoologie, Bd. 31A, h. 3, no. 16, 138 p., 21 pls.

Hoare, R. D., 1964, Permian corals from northern Nevada: Jour. Paleontology, v. 38, no. 3, p. 496–504, 3 pls.

——— 1966, New name for *Cornwallia* Hoare, 1964, and a new species of *Bayhaium* from northern Nevada: Jour. Paleontology, v. 40, no. 1, p. 148–150, 1 pl.

Howell, B. F., 1945, New Pennsylvanian paleocyclid coral from Oklahoma: Wagner Free Inst. Sci. Bull., v. 20, no. 1, p. 1–4, 1 pl.

Hyde, J. E., 1953, The Mississippian formations of central and southern Ohio: Ohio Div. Geol. Survey Bull. 51, 355 p.

Jeffords, R. M., 1942, Lophophyllid corals from lower Pennsylvanian rocks of Kansas and Oklahoma: Kansas State Geol. Survey Bull. 41, pt. 5, p. 185–260, figs. 1, 2, pls. 1–8.

——— 1943, *Caninia* from the Lower Carboniferous of New Mexico: Jour. Paleontology, v. 17, no. 6, p. 545–549, 7 figs.

——— 1947, Coelenterata; Pennsylvanian lophophyllidid corals: Kansas Univ. Paleont. Contr. 1, art. 1, p. 1–84, pls. 1–28, figs. 1–9.

——— 1948, New Pennsylvanian dibunophyllid corals: Jour. Paleontology, v. 22, no. 5, p. 617–623, 11 figs.

——— 1955, Mississippian corals from New Mexico and a related Pennsylvanian species: Kansas Univ. Paleont. Contr. [no. 16], Coelenterata, art. 3, 12 p., 2 pls., 3 figs.

Kelly, W. A., 1942, Lithostrotiontidae in the Rocky Mountains: Jour. Paleontology, v. 16, no. 3, p. 351–361, pls. 50, 51, 1 fig.

Keyes, C. R., 1894, Paleontology of Missouri, pt. 1: Missouri Geol. Survey, v. 4, 271 p., 32 pls.

——— 1942, *Aulopora gracilis* in synonymy: Pan-Am. Geologist, v. 77, no. 4, p. 312–313.

Knight, J. B., 1941, Paleozoic gastropod genotypes: Geol. Soc. America Spec. Paper 32, 510 p., 96 pls., 32 figs.

Lambe, L. M., 1899a, On some species of Canadian Palaeozoic corals: Ottawa Naturalist, v. 12, p. 217–226, 237–258.

——— 1899b, A revision of the genera and species of Canadian Palaeozoic corals; the Madreporaria perforata and the Alcyonaria: Canada Geol. Survey Contrib. Canadian Palaeontology, v. 4, pt. 1, p. 1–96, pls. 1–5.

Lang, W. D., Smith, Stanley, and Thomas, H. D., 1940, Index of Palaeozoic coral genera: London, British Museum (Nat. History), 231 p.

Langenheim, R. L., Jr., and McCutcheon, V. A., 1959, *Bayhaium merriamorum*, a new Permian tabulate coral from California: Jour. Paleontology, v. 33, no. 1, p. 99–102, 1 pl.

Langenheim, R. L., Jr., and Tischler, Herbert, 1960, Mississippian and Devonian paleontology and stratigraphy, Quartz Spring area, Inyo County, California: California Univ. Pubs. Geol. Sci., v. 38, no. 2, p. 89–150, pls. 14, 15, 18 figs.

Lonsdale, W., 1845, Description of some characteristic Palaeozoic corals of Russia, *in* Murchison, R. L., Verneuil, Edouard, and Keyserling, Alexander, Geology of European Russia and Ural Mountains * * * v. 1, Geology: London, John Murray, p. 591–634.

Marcou, Jules, 1858, Geology of North America; with two reports on the prairies of Arkansas and Texas, the Rocky Mountains of New Mexico, and the Sierra Nevada of California: Zurich, 144 p., 9 pls., map.

Mather, K. F., 1915, The fauna of the Morrow Group of Arkansas and Oklahoma: Denison Univ. Sci. Lab. Bull., v. 18, p. 59–284.

McChesney, J. H., 1859, [1860] Descriptions of new species of fossils from the Paleozoic rocks of the Western States: *Extract from* Chicago Acad. Sci. Trans., v. 1, 76 p. [Pub. in 1867 as Chicago Acad. Sci. Trans., v. 1, p. 1–57.]

M'Clintock, F. L., 1857, Reminiscences of arctic ice-travel in search of Sir John Franklin and his companions: Royal Dublin Soc. Jour., 1856–57, v. 1, p. 183–250, pls. 5–11.

M'Coy, Frederick, 1844, A synopsis of the characters of the Carboniferous Limestone fossils of Ireland: Dublin, 207 p., 29 pls.

McCutcheon, V. A., and Wilson, E. C., 1961, *Ptolemaia*, a new colonial rugose coral from the Lower Permian of eastern Nevada and western Russia: Jour. Paleontology, v. 35, no. 5, p. 1020–1028, 1 pl., 3 figs.

Meek, F. B., 1864, Description of the Carboniferous fossils: California Geol. Survey, Palaeontology, v. 1, sec. 1, p. 1–16, pls. 1, 2.

——— 1873, Preliminary paleontological report consisting of lists and descriptions of fossils with remarks on the ages of the rocks in which they were found, etc.: U.S. Geol. Survey of the Territories (Hayden) Ann. Rept. 6, p. 429–518, figs. 52, 53.

——— 1877, Part 1, Paleontology: U.S. Geol. Explor. Fortieth Parallel (King), v. 4, p. 1–197, pls., 1–17.

Meek, F. B., and Worthen, A. H., 1860, Descriptions of new Carboniferous fossils from Illinois and other Western States: Acad. Nat. Sci. Philadelphia Proc. 1860, p. 447–472.

——— 1966, Descriptions of invertebrates from the Carboniferous System: Illinois Geol. Survey, v. 2, p. 143–411, pls. 14–20, 23–32.

Merriam, C. W., 1942, Carboniferous and Permian corals from central Oregon: Jour. Paleontology, v. 16, no. 3, p. 372–381, 4 pls.

Miller, S. A., 1891, Palaeontology: Indiana Dept. Geology and Nat. Resources Ann. Rept. 17, 103 p., 20 pls. [Advance printing. Pub. 1892 as Ann. Rept. 17, p. 611–705.]

——— 1892, Palaeontology: Indiana Dept. Geology and Nat. Resources Ann. Rept. 18, 79 p., 12 pls. [Advance printing. Pub. 1894 as Ann. Rept. 18, p. 257–356.]

Miller, S. A., and Gurley, W. F. E., 1893, Description of some new species of invertebrates from the Palaeozoic rocks of Illinois and adjacent states: Illinois State Mus. Nat. History Bull. 3, 81 p., 8 pls.

——— 1895, New and interesting species of Paleozoic fossils: Illinois State Mus. Nat. History Bull. 7, 89 p., 5 pls.

——— 1897, New species of crinoids, cephalopods, and other Paleozoic fossils: Illinois State Mus. Nat. History Bull. 12, 69 p., 5 pls.

Milne-Edwards, H., 1860, Histoire naturelle des coralliaires ou polypes proprement dits: Paris, v. 3, 560 p.

Milne-Edwards, H., and Haime, J., 1851, Monographie des polypiers fossiles des terraines palaeozoiques: Mus. Natl. Histoire Nat., Paris, Archives, v. 5, 502, p., 20 pls.

Minato, Masao, 1960, Eine permische Koralle von König Oscarsland in nordwestlichen Ellesmereland: Stockholm Univ. Stockholm Contr. Geology, v. 6, p. 25–38, 1 pl.

Minato, Masao, and Kato, Makoto, 1965, Durhaminidae (tetracoral): Hokkaido Univ. Fac. Sci. Jour., Ser. 4, Geology and Mineralogy, v. 13, no. 1, p. 13–86, pls. 1–5, figs. 1–24.

Moore, R. C., and Jeffords, R. M., 1941, New Permian corals from Kansas, Oklahoma, and Texas: Kansas Geol. Survey Bull. 38, pt. 3, p. 65–120, pls. 1–8.

——— 1945, Description of Lower Pennsylvanian corals from Texas and adjacent States: Texas Univ. Pub. 4401, p. 77–208, figs. 1–214, pl. 14.

Morgan, G. D., 1924, Geology of the Stonewall quadrangle, Oklahoma: Oklahoma Bur. Geology Bull. 2, 248 p., 53 pls., 1 fig.

Nelson, S. J., 1960, Mississippian lithostrotionid zones of the southern Canadian Rocky Mountains: Jour. Paleontology, v. 34, no. 1, p. 107–126, pls. 21–25, 3 figs.

——— 1962a, Analysis of Mississippian *Syringopora* from the southern

Canadian Rocky Mountains: Jour. Paleontology, v. 36, no. 3, p. 442–460, pls. 71–75, 7 figs.

——— 1962b, Permo-Carboniferous tabulate corals from western Canada: Jour. Paleontology, v. 36, no. 5, p. 953–964.

Newell, N. D., 1935, Some Mid-Pennsylvanian invertebrates from Kansas and Oklahoma. II, Stromatoporoidea, Anthozoa, and Gastropoda: Jour. Paleontology, v. 9, no. 4, p. 341–355, pls. 33–36.

Okulitch, V. J., and Albritton, C. C., Jr., 1937, *Malonophyllum*, a new tetracoral from the Permian of Texas: Jour. Paleontology, v. 11, no. 1, p. 24–25, 1 pl.

Orbigny, Alcide d', 1849, Note sur des polypiers fossiles: Paris, Victor Masson, 12 p.

Owen, D. D., 1852, Report of a geological survey of Wisconsin, Iowa, and Minnesota, and incidentally of a portion of Nebraska Territory made under instructions from the United States Treasury Department: Philadelphia, 638 p., 15 pls.

Parks, J. M., Jr., 1951, Corals from the Brazer formation (Mississippian) of northern Utah: Jour. Paleontology, v. 25, no. 2, p. 171–186, pls. 29–33, 3 figs.

Rafinesque, C. S., and Clifford, J. D., 1820, Prodrome d'une monographie des turbinolies fossiles du Kentuky (dans l'Améríq. septentr.): Ann. Gen. Sci. phys., [Brussels], v. 5, p. 231–235.

Römer, C. F. von, 1883, Lethaea geognostica * * *. Theil 1. Lethaea Palaeozoica: Stuttgart, Germany, E. Schweizerbart, Bd. 1, pt. 2, text p. 113–544.

Ross, C. A., and Ross, J. P., 1962, Pennsylvanian, Permian rugose corals, Glass Mountains, Texas: Jour. Paleontology, v. 36, no. 6, p. 1163–1188, pls. 160–163, 11 figs.

Ross, J. P., and Ross, C. A., 1963, Late Paleozoic rugose corals, Glass Mountains, Texas: Jour. Paleontology, v. 37, no. 2, p. 409–420, pls. 48–50, 2 figs.

Rowett, C. L., 1969, Upper Paleozoic stratigraphy and corals from the east-central Alaska Range, Alaska: Arctic Inst. North America Tech. Paper 23, 120 p., 13 pls., 20 figs.

Rowett, C. L., and Sutherland, P. K., 1964, Biostratigraphy and rugose corals of the Lower Pennsylvanian Wapanucka Formation in Oklahoma: Oklahoma Geol. Suvey Bull. 104, 124 p., 9 pls., 13 figs.

Rowley, R. R., 1900, Descriptions of new species of fossils from the Devonian and Subcarboniferous rocks of Missouri: Am. Geologist, v. 25, no. 5, p. 261–723, pl. 5.

——— 1901, Two new genera and some new species of fossils from the Upper Paleozoic rocks of Missouri: Am. Geologist, v. 27, no. 6, p. 343–355, pl. 28.

——— 1905, Missouri paleontology: Am. Geologist, v. 35, no. 4, p. 301–311, pl. 21.

——— 1908, The geology of Pike County: Missouri Bur. Geology and Mines, ser. 2, v. 8, 122 p., 20 pls., 13 figs.

Salter, J. W., 1855, Account of the arctic Carboniferous fossils, *in* Belcher, Edward, The last of the arctic voyages * * *: London, L. Reeve, v. 2, p. 377–389.

Sando, W. J., 1961, Morphology and ontogeny of *Ankhelasma*, a new Mississippian coral genus: Jour. Paleontology, v. 35, no. 1, p. 65–81, pls. 17, 18, 13 figs.

——— 1963, New species of colonial rugose corals from the Mississippian of northern Arizona: Jour. Paleontology, v. 37, no. 5, p. 1074–1079, 1 fig., pls. 145, 146.

——— 1965, Revision of some Paleozoic coral species from the western United States: U.S. Geol. Survey Prof. Paper 503–E, p. E1–E38, 15 pls., 7 figs.

Seebach, Karl von, 1866, Die Zoantharia perforata der palaeozoischen periode: Deutsche Geol. Gesell. Zeitschr., v. 18, p. 304–310, pl. 4.

Shimer, H. W., 1926, Upper Paleozoic faunas of the Lake Minnewanka section, near Banff, Alberta: Canada Geol. Survey Bull. 42, p. 1–84, pls. 1–8, fig. 1.

Shumard, B. F., 1859, Notice of fossils from the Permian strata of Texas and New Mexico, obtained by the United States expedition under Capt. John Pope for boring artesian wells along the 32nd parallel, with descriptions of new species from these strata and the Coal Measures of that region: Acad. Science St. Louis Trans., v. 1, p. 387–402, pl. 1.

Simpson, G. B., 1900, Preliminary description of new genera of Paleozoic rugose corals: New York State Mus. Bull., v. 8, no. 39, p. 199–222, 45 figs.

Sloss, L. L., 1945, Corals from the post-Osage Mississippian of Montana: Jour. Paleontology, v. 19, no. 3, p. 309–314, pl. 48.

Smith, Stanley, 1935, Two anthracolithic corals from British Columbia and related species from the Tethys: Jour. Paleontology, v. 9, no. 1, p. 30–42, pls. 8, 9.

Snider, L. C., 1915, The paleontology of the Chester group in Oklahoma: Oklahoma Geol. Survey Bull. 24, pt. 2, p. 67–122, pls. 3–7, chart 1.

Sowerby, James, 1814, The mineral conchology of Great Britain: London, v. 1, p. 153–168, pls. 68–73.

Stevens, C. H., 1967, Leonardian (Permian) compound corals of Nevada: Jour. Paleontology, v. 41, no. 2, p. 423–431, 3 pls., 3 figs.

Stuckenberg, A. A., 1888, Anthozoen und Bryozoen des oberen mittelrussichen Kohlenkalks: Russia Geol. Komitet Trudy, v. 5, no. 4, 54 p., 4 pls.

——— 1895, Korallen and Bryozoen der Steinkohlenablagerungen des Ural und des Timan: Russia Geol. Komitet Trudy, v. 10, no. 3, 244 p., 24 pls.

Stumm, E. C., 1969, Revision of R. P., Whitfield's types of rugose and tabulate corals in the Museum of Paleontology, University of California, and in the United States National Museum: Bulls. Am. Paleontology, v. 56, no. 250, p. 235–254, pls. 10–13.

Sutherland, P. K., 1954, New genera of Carboniferous tetracorals from western Canada: Geol. Mag., v. 91, no. 5, p. 361–371, pls. 9, 10.

——— 1958, Carboniferous stratigraphy and rugose coral faunas of northeastern British Columbia: Canada Geol. Survey Mem. 295, 177 p., 33 pls., 4 figs.

Thomson, James, 1880, Contributions to our knowledge of the rugose corals

from the Carboniferous limestone of Scotland: Philos. Soc. Glasgow Proc., v. 12, p. 225–261, pls. 1–3.

——— 1893, On the genera *Calophyllum* and *Campophyllum*: Royal Irish Acad. Proc., v. 3, p. 667–758, pls. 15–21.

Tischler, Herbert, 1956, A new Mississippian tetracoral from Death Valley, California: Jour. Paleontology, v. 30, no. 1, p. 110–112, pl. 25.

Troost, Gerard, 1840, Organic remains discovered in the State of Tennessee, *in* Fifth Geological Report to the 23rd General Assembly of Tennessee: Nashville, Tenn., p. 45–75.

Ulrich, E. O., 1905, Geology and general relations, *in* Ulrich, E. O., and Smith, W. S. T., The lead, zinc, and fluorspar deposits of western Kentucky: U.S. Geol. Survey Prof. Paper 36, pt. 1, p. 7–105, pls. 1–7.

——— 1917, The formations of the Chester series in western Kentucky and their correlates elsewhere: Kentucky Geol. Survey, 272 p., 11 pls.

Warren, P. S., 1927, Banff area, Alberta: Canada Geol. Survey Mem. 153, 94 p., 3 pls., 1 fig.

Weller, S., 1898, A bibliographic index of North American Carboniferous invertebrates: U.S. Geol. Survey Bull. 153, 653 p.

——— 1909, Kinderhook faunal studies. V, The fauna of the Fern Glen Formation: Geol. Soc. America Bull., v. 20, p. 265–332, pls. 10–15.

Wells, J. W., 1944, New tabulate corals from the Pennsylvanian of Texas: Jour. Paleontology, v. 18, no. 3, p. 259–262, pls. 40, 41.

White, C. A., 1862, Description of new species of fossils from the Devonian and Carboniferous rocks of the Mississippi Valley: Boston Soc. Nat. History Proc., v. 9, p. 8–33.

——— 1874, Preliminary report upon invertebrate fossils collected by the expeditions of 1871, 1872, and 1873, with descriptions of new species: Washington, D.C., U.S. Geog. Surveys West of One Hundredth Meridian (Wheeler); 27 p.

——— 1875, Report upon the invertebrate fossils collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona, by parties of the expeditions of 1871, 1872, 1873, and 1874: U.S. Geog. Surveys West of One Hundredth Meridian (Wheeler) Report, v. 4, pt. 1, 219 p., 21 pls. [preprint of White's report published along with pt. 2 in 1877].

——— 1876a, Description of new species of fossils from the Paleozoic rocks of Iowa: Acad. Nat. Sciences Philadelphia Proc., v. 28, p. 27–34.

——— 1876b, Invertebrate paleontology of the Plateau province, together with notice of a few species from localities beyond its limits in Colorado, *in* Powell, J. W., Report on the geology of the eastern portion of the Uinta Mountains and a region of country adjacent thereto: Washington, D.C., U.S. Geol. and Geog. Survey of the Territories, p. 74–135.

——— 1877, Report upon the invertebrate fossils collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona, by parties of the expeditions of 1871, 1872, 1873, and 1874: U.S. Geog. Surveys West of One Hundredth Meridian (Wheeler) Report, v. 4, pt. 1, 219 p., 21 pls.

——— 1879, Paleontological papers no. 11; Remarks upon certain Carboniferous fossils from Colorado, Arizona, Idaho, Utah, and Wyoming,

and certain Cretaceous corals from Colorado, together with descriptions of new forms: U.S. Geol. and Geog. Survey of the Territories (Hayden), Bull., v. 5, p. 209–221.

——— 1880a, Descriptions of new species of Carboniferous invertebrate fossils: U.S. Natl. Mus. Proc., v. 2, p. 252–260, 1 pl.

——— 1880b, Contributions to invertebrate paleontology no. 8: Fossils from the Carboniferous rocks of the interior States: U.S. Geol. and Geog. Survey of the Territories (Hayden), 12th Ann. Rept., pt. 1, p. 155–171, pls. 39–42. [Advance printing. Regular publication, 1883.]

——— 1884, The fossils of the Indiana rocks, no. 3: Indiana Dept. Geology and Nat. History Ann. Rept. 13, p. 107–180, pls. 23–39.

White, C. A., and St. John, O. H., 1867, Descriptions of new Subcarboniferous and Coal Measures fossils collected upon the geological survey of Iowa; together with a notice of new generic characters observed in two species of brachiopods: Chicago Acad. Sci. Trans., v. 1, pt. 1, p. 115–127.

White, C. A., and Whitfield, R. P., 1862, Observations upon the rocks of the Mississippi Valley which have been referred to the Chemung Group of New York, together with descriptions of new species of fossils from the same horizon at Burlington, Iowa: Boston Soc. Nat. History Proc., v. 8, p. 289–306.

Wilson, E. C., 1963, The tabulate coral *Multithecopora* Yoh from the *Chaetetes-Profusulinella* faunizone in eastern Nevada: Jour. Paleontology, v. 37, no. 1, p. 157–163, 2 pls.

——— 1974, Bibliographic index of North American Permian rugose and tabulate coral species: Jour. Paleontology, v. 48, no. 3, p. 598–606.

Wilson, E. C., and Langenheim, R. L., Jr., 1962, Rugose and tabulate corals from Permian rocks in the Ely quadrangle, White Pine County, Nevada: Jour. Paleontology, v. 36, no. 3, p. 495–520, pls. 86–89, 4 figs.

Winchell, Alexander, 1863, Descriptions of fossils from the yellow sandstones lying beneath the "Burlington Limestone" at Burlington, Iowa: Acad. Nat. Sci. Philadelphia Proc. 1863, p. 2–25.

——— 1865, Descriptions of some new species of fossils, from the Marshall Group of Michigan, and its supposed equivalent in other states; with notes on some fossils of the same age previously described: Acad. Nat. Sci. Philadelphia Proc. 1865, p. 109–133.

——— 1869, Notes on fossils from Tennessee, collected from strata immediately overlying the black shale and transmitted for examination by Dr. J. M. Safford, *in* Safford, J. M., Geology of Tennessee: Nashville, Tenn., p. 439–446.

——— 1870, Notices and descriptions of fossils from the Marshall Group of the Western States, with notes on fossils from other formations: Am. Philos. Soc. Proc., v. 11, p. 245–260.

Worthen, A. H., 1890, Description of fossil invertebrates: Illinois Geol. Survey, v. 8, pt. 2, sec. 1, p. 69–154, pls. 9–14, 18–28.

Worthen, A. H., and Meek, F. B., 1875, Descriptions of invertebrates: Illinois Geol. Survey, v. 6, p. 489–532, pls. 23–33.

Yoh, S. S., 1927, On a new genus of syringoporoid coral from the Carboniferous of Chihli and Fengtien Provinces: Geol. Soc. China Bull., v. 5, no. 3–4, p. 291–293, 1 pl.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974 O—585–469/34