

did not lose interest in the Cretaceous or in the work of his former USGS colleagues. Lloyd W. Stephenson, in his seminal 1933 article "The zone of *Exogyra cancellata* traced twenty-five hundred miles", credited Wade with supplying three specimens of the mollusc from Ciudad del Maiz and near Cardenas in the state of San Luis Potosi, Mexico, establishing the southern extent of the zone. Rural eastern Mexico could be a lawless and wild place during the oil boom years of the 1920s and photos of Wade in the field show him armed with a revolver.

While working in Mexico in 1925, Wade suffered a severe degenerative neurological illness that robbed him of his memory. His sister, Lucile Lawrence, recalled that not too long after Bruce had returned to Mexico from a visit home, her father received a call from the Trenton stationmaster saying Bruce had returned. He had been put on the train in Mexico and sent home alone. The family never knew if he had become ill before the trip or if the symptoms of memory loss and deep depression developed during the long train ride. They felt that Bruce's incapacitating illness resulted from overwork in the hot and humid climate.

In their 1961 history of Gibson County,, *Gibson County Past and Present: The first general history of one of West Tennessee's most pivotal counties*, Frederick Culp and R. E. Ross wrote:

His (Wade's) long years of study and work at the same time, his long hitch in the service, and the humid location of his research finally took their hold on this large, strong, energetic fellow. He was in and out of the best hospitals his company could find for a long time, finally accepting the inevitable "he must rest for a long time" the doctors say.

Wade was a patient in southern Veterans Hospitals for many years. Hugh Miser, his old USGS colleague of the 1913 Waynesboro quadrangle survey, visited him regularly. Illness prevented Wade from preparing his the Coon Creek manuscript for publication. Timothy W, Stanton, Chief Paleontologist of the United States Geological Survey, edited the manuscript and assembled the plates into USGS Professional Paper 137, "Fauna of the Ripley Formation on Coon Creek, Tennessee". This major contribution to the geology of Tennessee was published in 1926, a year after Wade's incapacitation by illness.



Figure 20. Photo of Bruce Wade in his Transcontinental Petroleum Company offices in Mexico in 1923. Image courtesy of the Memphis Pink Palace Museum.

The advent of strong tranquilizers apparently improved Wade's health late in life. He wrote a letter in the late 1950s to the Smithsonian requesting a copy of his published Coon Creek monograph. He had never seen it. He also requested information on fossil collecting sites near his hospital in Murfreesboro, Tennessee. The hospital was contacted for permission and the book and information sent. Nothing more was heard of Wade by his colleagues in the USGS. Wade had lived in VA hospitals for 47 years when he died on June 25, 1973, at the Alvin York Veterans Hospital in Murfreesboro, Tennessee. He is buried alongside his parents and brother in the Oakland Cemetery in Trenton, Tennessee.

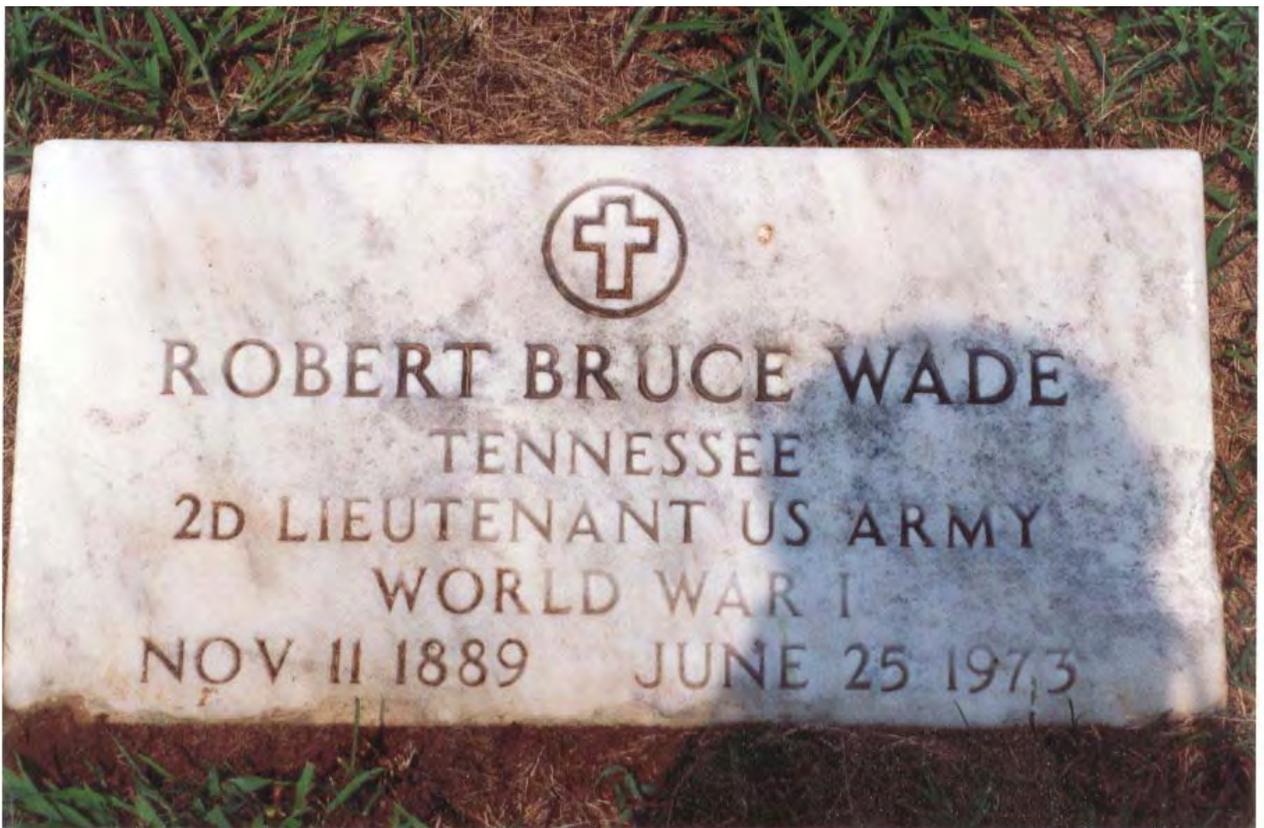


Figure 21. Photo Of Bruce Wade's Grave In Trenton, Tennessee. Photo courtesy of the Memphis Pink Palace Museum.

Bruce Wade's geological research ended eight decades ago, but his memory has not been lost. Memphis Museums, Inc., the not-for-profit support organization for the Memphis Pink Palace Museum

purchased the Coon Creek site in 1987 and converted it into a modern geological and environmental education center. Thousands of visitors have been told the story of the hard working young man from Trenton, Tennessee, who first described and interpreted the unique and important natural treasure that is the Coon Creek fossil site.

Coon Creek Research After Wade

Prof. Edward W. Berry described fossil Cretaceous plants found at Big Cut in today's Big Hill Pond State Park in "The Flora of the Ripley Formation", United States Geological Survey Professional Paper 136 in 1925.

Willard Berry and Louis Kelley wrote the first description of Coon Creek foraminifera in 1929 in "The Foraminifera of the Ripley Formation on Coon Creek", US National Museum Proceedings 76, Article 19, no. 2816.

Dr. Joseph A. Cushman wrote a scathing critique of Berry and Kelley's work on Coon Creek foraminifera in 1931 called "Preliminary Report on the Foraminifera of Tennessee", Tennessee Division of Geology Bulletin 41.

Wade's USGS mentor, Dr. Lloyd W. Stephenson, revised many of Wade's Coon Creek species in "Larger Invertebrate Fossils of the Navarro Group", an equivalent group in Texas, in 1940 as University of Texas Bulletin 4101.

Walter Berryhill examined Coon Creek microfossils in his 1955 Mississippi State unpublished thesis The micropaleontology and sedimentology of the Cretaceous Coon Creek Tongue Mississippi: Tennessee.

H. P. Granata described crustaceans in Ostracodes from the Coon Creek Tongue of the Upper Cretaceous Ripley Formation of McNairy County, Tennessee, a 1960 University of Missouri unpublished thesis

Dr. Norman Sohl wrote a doctoral dissertation on the Late Cretaceous stratigraphy and snails of Coon Creek and nearby sites in the Mississippi Embayment. He later expanded it into USGS Professional Papers 331-A&B in 1960 and 1964.

Harry L. Moore wrote a very useful update on the taxonomy of Coon Creek fossils and described a Coon Creek Formation crab zone in his 1974 University of Tennessee Knoxville Master's thesis Systematic and Paleoecologic Review of the Coon Creek Fauna.

Dr. Ernie Russell, of Mississippi State University, published in 1975 the results of his extensive field research on the Cretaceous stratigraphy of West Tennessee and the Coon Creek site in "Stratigraphy of the Outcropping Upper Cretaceous, Paleocene and Lower Eocene in Western Tennessee including descriptions of younger Fluvial Deposits ", Tennessee Division of Geology Bulletin 75 and geologically mapped a number of nearby quadrangles.

Dr. Michael Gibson, professor of Geology at the University of Tennessee-Martin, led development of educational programming for teachers at Coon Creek, described the nearby Coon Creek Formation at the Thompson's Farm Site, and served as scientific advisor for Coon Creek Science Center operations. He headed efforts of publish a paleontological and stratigraphic review of the site for a handbook currently in press at the Tennessee Geological Survey.

Toshimasa Maeda wrote Paleoecological analysis of the benthic molluscan fauna from the Upper Campanian Coon Creek Formation in Tennessee, USA, an unpublished manuscript, for the Geological Institute, University of Tokyo.

Dr. Earl Manning and Lynn Harrell described the vertebrates of the Coon Creek Formation at the type locality and the Sawmill Site in Decatur County, Tennessee, in a handbook on Coon Creek in press at the Tennessee Division of Geology.

Additional research on the fossil animals of Coon Creek is being conducted by Dr. Gale Bishop, formerly of the South Dakota School of Mining and Technology (crabs); Dr. Neil Landsden of the American Museum of Natural History (ammonites); Dr. Chuck Compaglia (echinoids); Dr. Sandy Ebersole of the University of Alabama (paleogeography and paleoecology); Beth Rinsberg (gastropods); and Dr. Gordon Bell of the National Park Service (mosasaurs)

The Fossil Farm

Dave Weeks died in 1941, and ownership of the farm passed to his son, Tad. In 1953, Margaret and A. Z. Smith purchased the place from the Week's family. They built a four-bedroom, brick retirement home in 1975. A. Z. added a large barn and put up a mailbox identifying the "Fossil Farm". Paleontologists and amateur fossil hunters came from all over the world and were charged a small fee for the privilege of collecting on one of the country's premier fossil localities Independent Appeal, 1988 . Roy Young, Roger Van Cleef, and Ron Brister, began collecting trips for the Pink Palace Museum in 1971.

The Coon Creek Science Center

Farm maintenance had become a burden by the mid-1980s. The Smiths approached the State of Tennessee about buying the unique site to preserve its fossil treasures. Negotiations with the state broke down when officials refused to recognize the value of the fossils in determining the purchase price. Tom Miller and Roy Young of the Pink Palace learned of the situation and with the support of curator Ron Brister they approached Museum System Director Doug Noble. Concerned about preserving the site, developing it for educational uses and building a respectable collection for the Museum, they urged Noble to acquire the property. Noble had visited the site with Young and Brister on several earlier collecting trips and was enthusiastic about acquiring Coon Creek for use as a science and nature center.

Noble presented a proposal to purchase the site to the Pink Palace's private support group, Memphis Museums, Inc. After a detailed study of the feasibility of a private not-for-profit, science center, negotiations for purchase were begun with the Smiths. They were eager to sell the farm to an institution that would protect and interpret its paleontological resources. The Smiths agreed to sell on February 28, 1988, and the property was transferred to Memphis Museums, Inc. for \$200,000. Noble later noted,

A plan quickly emerged to develop physical facilities suitable for use by school groups, teachers, scouting groups, church groups, and researchers.

Programming would center on hands-on learning and would include fossil collecting, identification, cleaning, and preparation of the specimens, and studies of paleo-environments and stratigraphy. Visual astronomy programs would take advantage of the rural area's magnificent nighttime skies, which are unobscured by light pollution. Environmental programming was developed utilizing open field habitat, the creek, the woodlands, and five artificial ponds.

Memphis architect Larry Bronson donated the development of a site master plan. Five cabins, with a capacity of 15 people each, were built in a rustic style to fit in with the forested site. A large 27'x72' building featured a commercial kitchen and combination lecture hall/dining with facilities for 50 visitors. Modern restrooms with flush toilets and hot water showers were especially appreciated after a long day's work. Noble stressed the importance of the site as a facility of the Pink Palace Museum:



Figure 22. Doug Noble, Director of Museums, was instrumental in acquiring and developing the Coon Creek Science Center. Image courtesy of the Memphis Pink Palace Museum.

The Coon Creek Science Center provides a unique adjunct to the Memphis Museums System as a field school experience. It has involved the Pink Palace Museum's planetarium staff, education department, and collections departments in instructional and collecting activities. And it has afforded an opportunity for the Museum System's Lichterman Nature Center to become involved in environmental education and interpretation



Figure 23. The Coon Creek Science Center was established by Memphis Museums, Inc. in 1988. Here Museum staff are shown by the dining hall receiving assignments for 2006 Members Day activities. Image courtesy of the Memphis Pink Palace Museum.

The science center has allowed a high degree of interdepartmental cooperation. The center has provided a remarkable opportunity to add significantly to the Pink Palace Museum's fossil collection. The reference collections now include only the most perfect and complete specimens

including those focusing on stages of growth and development. Those fossils with physical abnormalities reflecting injury or disease are held in the collections as well .

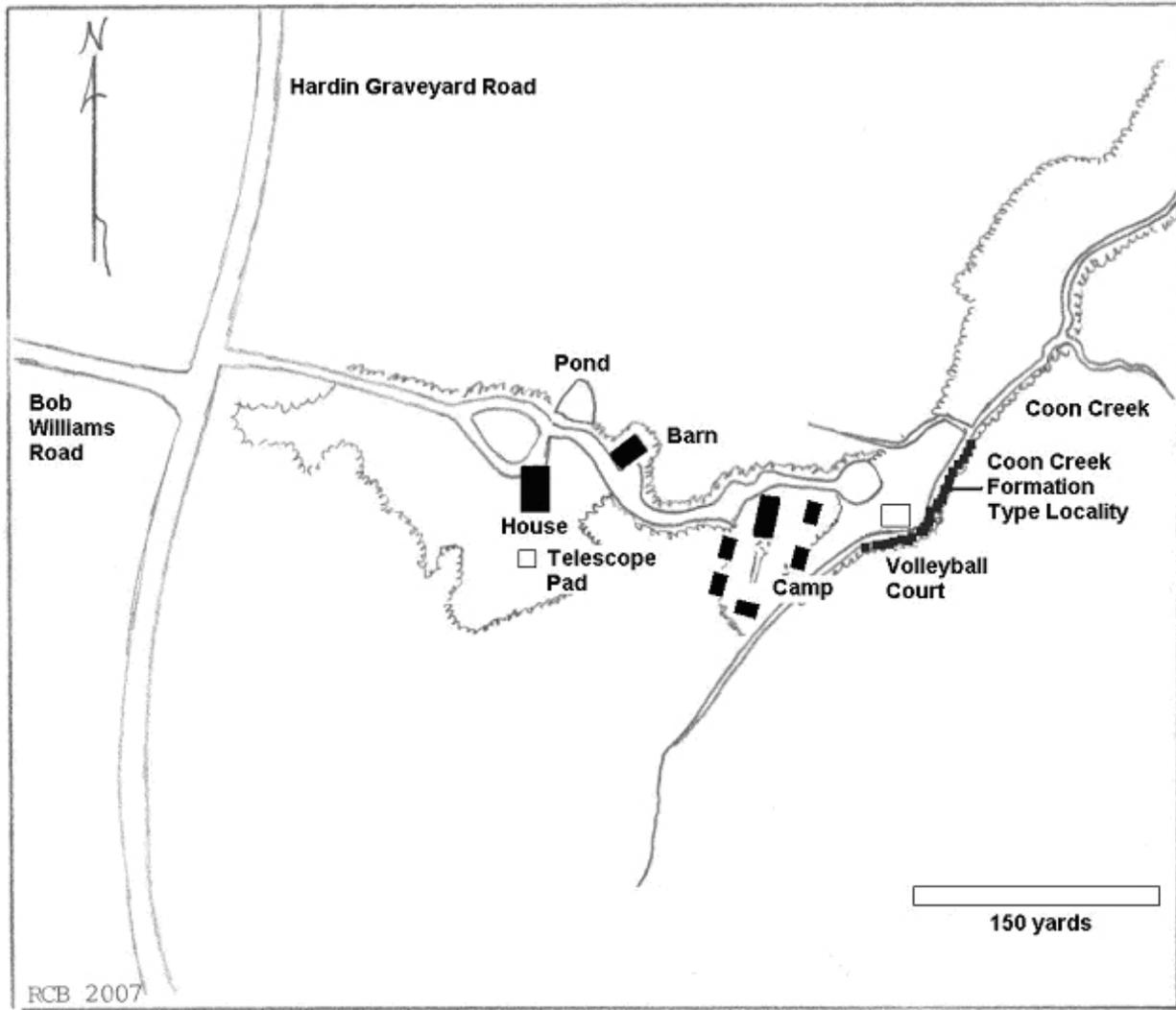


Figure 24. Sketch map of the Coon Creek Science Center. It is located on 240 acres of West Tennessee farmland about 100 miles East of Memphis. The center features a dining hall, three sleeping cabins, a research office, and site office. Image courtesy of the Memphis Pink Palace Museum.

Doug Noble's vision and willingness to take a chance in purchasing and developing Coon Creek were critical in establishing the science center. Noble turned to Education Curator Roger Van Cleef, with a strong background in the biological sciences and museum education, to develop the site's potential. Van Cleef hired Bobby King,

an experienced environmental teacher, as the first site manager. Noble noted "Bobby's experience in the environmental field and as a Boy Scout executive and high school biology teacher will be a definite asset to our program ". King's dedication to Coon Creek rapidly became apparent with student-friendly programming, unique signage, and landscaping. Museum botanist Larry Wilson provided a botanical survey for development of nature trails. Geology instructors Alma Larsen and Pam Riddick produced the core of geology programs still used today. A quarry was opened to provide children with a safe collecting environment and to preserve the original type section of the creek. Planetarium director George Brown and his staff established astronomy programs and worked to build a suitable observatory. Nearby residents were hired to maintain the site, cook, and teach programs. The science center has been fortunate in having a number of local instructors who were consistently eager to learn and teach about the site.

Collections staff Roy Young, Ron Brister, Margaret McNutt, and Mary Montgomery, assisted by Tom Miller, Nancy Albonetti, Mike Karam, Joyce Godfrey and Phyllis Whittington, began building the Museum's Coon Creek reference and research collection. Young's painstaking cleaning, preservation, and preparation of the fossils resulted in exquisitely beautiful specimens. The fossils they collected were incorporated into a 1987 "Geology" exhibit at the Pink Palace.

Coon Creek Science Center began formal programs on September 1, with a Grand Opening on September 17, 1989. Tennessee Conservation Commissioner Elbert Gill helped Noble and Memphis Museums, Inc. officials cut the ribbon allowing over 1,100 excited visitors access to the famed fossils.

Noble's belief in the importance Coon Creek was later affirmed by famed paleontologist and popular science writer Stephen J. Gould, who remarked that Coon Creek was one of the twelve most important fossils sites in the United States.



Figure 25. Photo of the Mosasaur Dig. Excavators are (left to right) Larry Anderson, George Brown, Ron Brister, and Roy Young. Image courtesy of the Memphis Pink Palace Museum.

Noble commented:

Museums traditionally have constructed buildings to house collections, care for objects, and make them available to the public. The acquisition of the

Coon Creek Science Center has allowed the Memphis Museum System to engage in education, conservation, management, and research at a most unique fossil site. Unlike many sites that are preserved as parks with visitor centers, the programming at the Coon Creek Science Center engages children and adults in the scientific process.

Bibliography

Adams, S. and Adams, K., 1994, *Creatures in the Coon Creek Clay: The Tennessee Conservationist*, v. LX/1, January/February 1994, p. 8-13.

Alexander, Scott, 2002, *Tim Brymn and His Black Devil Orchestra: Red Hot Jazz Archive*, www.redhotjazz.com/blackdevil.html.

American Association of Petroleum Geologists, 1923, Membership application, January 8, 1923, submitted by Bruce Wade with renewal through 1924, American Association of Petroleum Geologists.

Barnes, B., 1989, *A Tennessee Geological Treasure Chest: The Tennessee Magazine*, v. 33/4, April 1989, p. 8-15.

Benrey, R. , 1962, *Ideas for Science Fair Projects*, Arco Publishing Company, p. 84-85.

Berry, E. W., 1916, *The Lower Eocene floras of Southeastern United States*: United States Geological Survey Professional Paper 91.

_____, 1919, *Upper Cretaceous floras of the Eastern Gulf Region in Tennessee, Mississippi, Alabama, and Georgia*: United States Geological Survey Professional Paper 112, 177 p.

_____, 1925, *The flora of the Ripley Formation*: United States Geological Survey Professional Paper 136, 94 p.

_____, 1930, *Revision of the Lower Eocene Wilcox flora of the Southeastern States*: United States Geological Survey *Professional Paper* 156: 196 p.

Berry, W., and Kelley, L., 1929, *The Foraminifera of the Ripley Formation on Coon Creek, Tennessee*: United States National Museum Proc. 76, Art. 19, No. 2816: 20 pages.

Berryhill, Walter, 1955, *The micropaleontology and sedimentology of the Cretaceous Coon Creek tongue Mississippi, Tennessee*. Mississippi State University unpublished thesis.

Brister, R. C., 1994, Bruce Wade: Tennessee's forgotten geologist: *Earth Sciences History*, v. 13/1, p. 47-51.

_____ n. d., *Background Information of Coon Creek*: unpublished manuscript in the files of the Memphis Pink Palace Museum.

Cockerell, T. D. A., 1917, *Some American fossil insects*: United States National Museum Proceedings, v. 51: pages 89-106.

Culp, F. M, and Ross, and R. E., 1961, *Gibson County Past and Present: The first general history of one of West Tennessee's most pivotal counties*: Gibson County Historical Society.

Cushman, J., 1931, *A preliminary report on the Foraminifera of Tennessee*, Tennessee Geological Survey Bulletin 41: 116 pages.

Dickey, D., 1950, *Creek-Bank Bonanza*: Nature Magazine, February 1950, p.69-71.

Dunbar, C. O., 1919, *Stratigraphy and Correlation of the Devonian of West Tennessee*: Tennessee Geological Survey Bulletin 21: 127 p.

Eckert, A. W., 1963, *Coon Creek's Fabulous Fossils*: Science Digest, v. 53/1, p. 47-53.

Gaither, S., 1988, *Museum Board OK's Purchase of Shells Site*: Memphis Commercial Appeal, February 25, 1988.

Glenn, L. C., 1906, *Underground waters of Tennessee and Kentucky west of the Tennessee River and of an adjacent area in Illinois*: United States Geological Survey Water-Supply Paper 164: 173 p.

Granata, H. P. 1960, Ostracodes from the Coon Creek tongue of the Upper Cretaceous Ripley Formation of McNairy County, Tennessee. University of Missouri unpublished thesis.

Hamilton, C. W., 1966, *Early Day Oil Tales of Mexico*: Gulf Publishing Company, Houston, Texas.

Herald-Democrat, 1917a, *Gibson County Boys to Officer's Camp*: Herald-Democrat, August 19, 1917, Trenton, Tennessee.

_____1917b, *Major-General Duvall*: Herald-Democrat, November 29, 1917, Trenton, Tennessee.

Independent Appeal, 1988, *Coon Creek: Museum Buys Local Fossil Beds*: Independent Appeal, Selmer, Tennessee, February 3, 1988.

Independent Appeal, 1989, *Science Center 'Premier Facility*: Independent Appeal, Selmer, Tennessee, August 24, 1989.

Jenkins, O. P., 1915, *Geologic Map of Tennessee*: Tennessee Geological Survey.

Jewell, W. B, and Wilson, Jr., C. W., 1952, *Memorial to Leonidas Chalmers Glenn 1871-1951* : American Association of Petroleum Geologists Bulletin v. 35, p. 1920-1923.

Johns Hopkins University, 1914, Application for Admission to Graduate Courses, October 5, 1914. Wade, Bruce: Application File, The Ferdinand Hamburger, Jr. Archives of the Johns Hopkins University, Records of the Office of Registrar, Record Group Number 13.010.

_____1916, Application for the Degree of Doctor of Philosophy, February 2, 1916, Wade Bruce: Application File, The Ferdinand Hamburger, Jr. Archives of the Johns Hopkins University, Records of the Office of Registrar, Record Group Number 13.010.

Maeda, Toshimasa, 2002, *Paleoecological analysis of the benthic molluscan fauna from the Upper Campanian Coon Creek Formation in Tennessee, USA*: unpublished manuscript, Geological Institute, University of Tokyo.

Marker, J., 1989, *Fossils are Bedrock of Coon Creek*: Commercial Appeal, September 18, 1989.

Miser, H., 1921, *Mineral Resources of the Waynesboro Quadrangle, Tennessee*: Tennessee Geological Survey Bulletin 26: 171 p.

Monroe, W. H., 1964, *Memorial to Lloyd W. Stephenson*: The Geological Society of America Bulletin v. 75/5, p. P79 - P82. New York.

Nelson, W. A., 1919, *Administrative Report of the State Geologist*: Tennessee Geological Survey Bulletin 23: p. 16-17.

Noble, D. R., 1996, *The Story of Coon Creek*: Museum News, v. 75/3, May/June 1996, p. 16-22.

Purdue, A. H. ed. , 1914, *Resources of Tennessee*: v. IV/1, Tennessee Geological Survey: 48 pages.

Reed, M., 1989, *New Fossil Center Draws Crowd of 1,100*: Jackson Sun, September 18, 1989.

Russell, E. E. and Parks, W. S., 1975, *Stratigraphy of the outcropping Upper Cretaceous, Paleocene, and Lower Eocene in Western Tennessee including descriptions of younger Fluvial Deposits*: Tennessee Geological Survey Bulletin, 76: 111 p.

Russell, E. E., Walker, L. G., and Pruitt, G. N., 1975, *Field Trip 1- Fossiliferous Silurian, Devonian, and Cretaceous Formations in the Vicinity of the Tennessee River.* In Stearns, Richard G. ed. "Field Trips in West Tennessee: Nashville: Tennessee Division of Geology Report of Investigations 36, p 8-34.

Safford, J. M., 1869, *Geology of Tennessee*: S. C. Mercer.

Sims, C. C. ed. , 1914, *The Commodore: 1914*: Published by the Fraternities of Vanderbilt University, 397 p, Nashville, Tennessee.

Sohl, N. F. 1960, *Archaeogastropoda, Mesogastropoda, and Stratigraphy of the Ripley, Owl Creek, and Prairie Bluff Formations of Tennessee*. United States Geological Survey Professional Paper 331-A.

Sohl, N. F. 1964, Neogastropoda, Opisthobranchia, and Basommatophora from the Ripley, Owl Creek, and Prairie Bluff Formations. United States Geological Survey Professional Paper 331-B.

Sohl, N. F., 1990, written communication to Ronald C. Brister, August 23, 1990: Bruce Wade Archives, Memphis Pink Palace Museum.

Stephenson, L. W., 1933, *The Zone of Exogyra cancellata traced twenty-five hundred miles*: American Association of Petroleum Geologists Bulletin 17, p. 1351-1361.

Troost, G., 1840, Fifth geological report of the Twenty-third General Assembly of the State of Tennessee, November, 1839. Nashville, Tennessee.

Wade, B., 1914, *The Geology of Perry County and Vicinity*: Tennessee Geological Survey, Resources of Tennessee, v. 4: p. 150-181.

____ 1915, "*McNairy County*": 2 volumes, unpublished field notes on file at the Tennessee Division of Geology. Nashville.

____ 1917a, *A remarkable Upper Cretaceous fauna from Tennessee*: Johns Hopkins University Circular, n.s. , v. 36, pages 73-101.

____ 1917b, *The occurrence sic of the Tuscaloosa Formation as far North as Kentucky*: Johns Hopkins University Circular, n.s. v. 36: p. 102-106.

____ 1917c, *The Gravels of West Tennessee Valley*: Tennessee Geological Survey, Resources of Tennessee 7: p. 55-89.

____ 1917d, *An Upper Cretaceous Fulgar*: American Journal of Science, v. 4/42, p. 293-297.

____ 1917e, *New genera and species of Gastropoda from the Upper Cretaceous*: Proceedings of the Academy of Natural Sciences of Philadelphia. V. 68: p. 455-471.

____ 1917f, *The Gastropoda of the Ripley Formation in Tennessee*: unpublished dissertation, Department of Geology, Johns Hopkins University.

_____ 1918a, *New and little known Gastropoda from the Upper Cretaceous of Tennessee*: Proceedings of the Academy of Natural Sciences of Philadelphia, v. 69: p. 280-304.

_____ 1918b. *New generic names for Upper Cretaceous Gastropoda*: American Journal of Science, v. 4/45, p.354.

_____ 1920a, *Recent studies of the Upper Cretaceous of Tennessee*: Journal of Geology, v. 28, p. 377-394.

_____ 1920b, *Recent studies of the Upper Cretaceous of Tennessee*: Tennessee Geological Survey Bulletin 23, pt. 1, p. 51-64, map.

_____ 1922, *The fossil annelid genus Hamulus Morton, an operculate Serpula*: United States National Museum Proceedings v. 59: p. 41-46.

_____ 1925, Christmas card to his mother from Bruce Wade postmarked Augusta, Georgia. Memphis Pink Palace Museum Bruce Wade Archive.

_____ 1926, *The fauna of the Ripley Formation on Coon Creek, Tennessee*: United States Geological Survey Professional Paper 137, 272 p.

Wagoner, B., 1988, *Wagon Spokes, Coon Creek History*: The Community News, Adamsville, Tennessee, Thursday, September 22, 1988.

Wilson, Jr., C. W., 1981, *State Geological Surveys and State Geologists of Tennessee: A history of the development of the Division of Geology, Department of Conservation*: Tennessee Division of Geology Bulletin 81, p. 20.

Zepp, L., 1999, *Students Dig the Past at Coon Creek*: The Tennessee Conservationist, v. LXV, no. 1, January/February 1999.

APPENDIX A
COMMON AND IMPORTANT COON CREEK FOSSILS

Phylum Mollusca- Class Pelecypoda: Clams, Scallops and Oysters

Cucullaea vulgaris Morton
Nucula percrassa Conrad
Striarca (Barabtia) saffordi Gabb
Gervillia (Gervilliopsis) ensiformis Conrad
Pterotrigonia (Trigonia) thoracica Morton
Crassatella (Crassatellites) vadosus Morton
Granocardium (Cardium) dumosum Conrad
Corbula crassiplica Gabb
Pulvinites argentea Conrad
Chlamys (Pecten) burlingtonensis Gabb
Neithea (Pecten) quinquecostata Sowerby
Paranomia scabra Morton
Anomia argentaria Morton
Aegostrea (Ostrea) falcata Morton
Ostrea bryani Gabb
Exogyra costata Say
Exogyra cancellata Stephenson
Pycnodonte (Gryphaea) vesicularis Lamarck
Tenea parilis Conrad
Aphrodina tippana Conrad
Cyprimeria alta Conrad
Liopistha inflata Whitfield
Etea carolinensis Conrad
Periplomya (Periploma) applicata Conrad
Asculacardium (Clavagella) armata

Phylum Mollusca- Class Gastropoda: Snails

Ornopsis glenni Wade
Gyroides spillmani Gabb/ *Gyroides major* Wade
Paladmete cancellaria Conrad
Longoconcha tennesseensis Wade
Cyprtorhytis nobilis Wade
Pyropsis perornatus Wade
Pugnellus densatus Conrad
Laxispira lumbricalis Gabb
Turritella tippana Conrad
Anteglosia tennesseensis Wade
Calliomphalus argenteus Wade
Nudivagus simplicus Wade
Drilluta communis Wade
Cerithium weeksi Wade
Gracilia calcaris Wade
Arrhoges (Latiala) lobata Wade
Mathalda ripleyana Wade
Ecphora proquadricostata Wade
Sargana stantoni Weller
Drilluta distans Conrad
Lupira variabilis Wade
Aceton pistilliformis Sohl
Parietiplicatum conicum Wade

APPENDIX A
COMMON AND IMPORTANT COON CREEK FOSSILS

Phylum Mollusca- Class Gastropoda: Snails continued

Ringiculum pulchella Shumard
Creonella triplicata
Napulus reesidei Sohl
Beretra gracillis Wade
Fusimilis proxima Wade
Remnita anomalocostata Wade
Longoconcha (Volutoderma) protracta Dall
Liopeplum subjugosum Gabb
Liopeplum canalis Conrad
Pyropsis spinosus Wade
Seila meeki Wade
Colombellini americana Wade
Morea marylandica Gardner
Schizobasis depressa Wade
Stantonella subnosa Wade
Bellifusus curvicostatus Wade
Caviola acuta Wade
Amuletum (Amuleta) fasciolatum Wade
Cylindrotruncatum demersum Sohl
Hydrotribulus nodosus Wade
Graphidula cancellata Wade
Remera stephensoni Harbison

Phylum Mollusca- Class Scaphopoda: Tooth Shells

Dentalium intercalatum Wade
Cadulus obnutus Conrad

Phylum Mollusca- Class Cephalopoda: Squids, Octopi, Ammonites, and Nautili

Eutrephoceras dekayi Morton
Baculites claviformis Stephenson
Baculites undatus Stephenson
Solenoceras reesidei Stephenson
Solenoceras texanum Shumard
Jeletkytes (Scaphites) nodosus Owen
Nostoceras helicinum Shumard
Nostoceras approximans Conrad
Didynoceras navarroense Shumard

Phylum: Moss Animals

Phylum Arthropoda- Class Crustacea: Shrimps, Crabs and Lobsters

Avitelmessus grapsoides Rathbun
Hoploparia
Callianassa
Dakoticancer overana Rathbun

APPENDIX A
COMMON AND IMPORTANT COON CREEK FOSSILS

Phylum Cnidaria-Class Anthozoa: Corals

Microbacia cribaria Stephenson

Microbacia hilgardi Stephenson

Phylum Annelida: Segmented Worms

Hamulus onyx Morton

Serpula

Phylum Echinodermata- Class Echinoidea: Sea Urchins

Hemiaster slocumii Lambert

Phylum Chordata –Class Chondrichthes: Sharks and Rays

cf. *Cretoxyrhindae*

Squalicorax prostodontas

Squatina hassei

Ischyrhiza mira

Phylum Chordata- Class Chondrichthyes Bony Fishes

Anomaeodus robustus

Saurodon sp.

Enchodus gladiolus

Phylum Chordata- Class Reptilia: Turtles

Tochelys weeksi

Phylum Chordata- Class Reptilia: Mosasaurs

Plioplatecarpus sp.

Mosasaurus maximus

Prognathodon sp.

Phylum Chordata- Class Reptilia: Plesiosaurs

Plesiosauria incerta cedis

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS PELECYPODA

ORDER PRIONODESMACEA

Family Nuculidae

Nucula percrassa Conrad 1856
Nucula amica Gardner 1916
Nucula microconcentrica Wade 1926

Family Ledidae

Nuculana (Leda) australis Wade 1926
Nuculana (Leda) whitfieldi Gardner 1916
Yoldia longifrons Conrad 1860
Yoldia multiconcentrica Wade 1926

Family Parallelodontidae

Nemodon eufalensis Gabb 1860
Nemodon stantoni Gardner 1916
Nemodon grandis Wade 1926
Idonearca (Cucullaea) vulgaris Morton 1830
Idonearca (Cucullaea) littlei Gabb 1877

Family Limopsidae

Limopsis prebrevis Wade 1926
Limopsis weeksi Wade 1926

Family Arcidae

Arca macnairyensis Wade 1926
Arca semicirculata Wade 1926
Arca pergracillis Wade 1926
Striarca (Barbatia) fractura Wade 1926
Striarca (Barbatia) cochlearis Wade 1926
Striarca (Barbatia) saffordi Gabb 1860
Postligata crenata Wade 1926
Glycimeris subcrenata Wade 1926
Glycimeris microsulci Wade 1926
Glycimeris lacertosa Wade 196

Family Pernidae

Inoceramus sagensis Owen 1852
Inoceramus proximus Toumey 1854
Isognomon (Pedalion) periridescens Wade 1926
Gervillia (Gervilliopsis) ensiformis Conrad 1858

Family Pteriidae

Pteria percompressa Wade 1926
Pteria petrosa Conrad 1853

Family ?

Pulvinites argentea Conrad 1858
Inoperna carolinensis Conrad 1875

Family Ostreidae

Ostrea plumosa Morton 1833
Ostrea tecticosta Gabb 1860
Ostrea monmouthensis Weller 1907
Agerostrea (Ostrea) falcata Morton 1827
Ostrea macnairyensis Wade 1926
Ostrea penegemma Wade 1926
Ostrea bryani Gabb 1877
Exogyra costata Say 1820
Exogyra cancellata Stephenson 1914

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS PELECYPODA

ORDER PRIONODESMACEA

Family Ostreidae continued

Pycnodonte (Gryphaea) vesicularis Lamarck 1806

Pterotrigonia (Trigonia) thoracica Morton 1834

Trigonia eufalensis Gabb 1860

Family Pectinidae

Neithea (Pecten) burlingtonensis Gabb 1860

Neithea (Pecten) quinquecostatus Sowerby 1814

Neithea (Pecten) quinquenarius Conrad 1853

Chalamys (Pecten) argillensis Conrad 1860

Pecten simplicus Conrad 1860

Lima reticulata Forbes 1845

Lima wodsi Wade 1926

Family Anomiidae

Paranomia scabra Morton 1834

Anomia argentaria Morton 1833

Anomia perlineata Wade 1926

Anomia tellinoides Morton 1833

Family Mytilidae

Lithophaga conchafodensis Gardner 1916

Lithophaga ripleyana Gabb 1862

Crenella serica Conrad 1860

Crenella elegantula Meek and Hayden 1862

Family Dreissensia

Dreissena (Dreissensia) tippiana Conrad 1858

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS PELECYPODA

ORDER ANOMALODESMACEA

Family Pholadomyacidae

Pholadomya occidentalis Morton 1833

Pholadomya conradi Gardner 1916

Family Anatinidae

Anatimya lata Whitfield 1885

Periplomya elliptica Gabb 1862

Family Periplomatidae

Periplomya applicata Conrad 1858

Clavagella armata Morton 1834

Family Poromyacidae

Liopistha protexta Conrad 1853

Liopistha inflata Whitfield 1885

Family Pleurophoridae

Arctica (*Cyprina*) *incerta* Wade 1926

Veniella conradi Morton 1833

Family Astartidae

Vetericardia subangulata Wade 1926

Vetericardia gregaria Meek and Hayden 1856

Vetericardia subcircula Wade 1926

Vetericardia crenalirata Conrad 1860

Family Crassatellitidae

Crassatella (*Crassatellites*) *vadosus* Morton 1834

Crassatella (*Crassatellites*) *luteus* Conrad 1860

Family Crassatellitidae continued

Crassatellina carolinensis Conrad

Etea carolinensis Conrad 1875

Scambula perplana Conrad 1869

Family Caprinidae

Caprinella coraloidea Hall and Meek 1854

Family Unicardiidae

Unicardium concentricum Wade 1926

Family Lucinidae

Lucina ripleyana Wade 1926

Family Diplodontidae

Tenea parilis Conrad 1860

Family Cardiidae

Cardium dumosum Conrad 1871

Cardium tenuistriatum Whitfield 1885

Cardium kummeli Weller 1907

Granocardium (*Cardium*) *stantoni* Wade 1926

Protocardia parahillana Wade 1926

Family Isocardiidae

Isocardia conradi Gabb 1860

Cyclina parva Gardner 1916

Cyclina magna Wade 1926

Meretrix cretacea Conrad 1871

Meretrix eufalensis Conrad 1860

Aphrodina tippiana Conrad 1858

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS PELECYPODA

ORDER ANOMALODESMACEA continued

Family Veneridae

Legumen planulatum Conrad 1853

Cyprimeria alta Conrad 1875

Icanotia pulchra Wade 1926

Family Veneridae

Tellina multiconcentrica Wade 1926

Tellinimera eborea Conrad 1860

Aenona euflanesis Conrad 1860

Linearia ornatissima Weller 1907

Lineria (Liothyris) metastriata Conrad 1860

Lineria (Liothyris) carolinensis Conrad 1875

Family Solendiae

Leptosolen biplica Conrad 1858

Family Mactridae

Cymbophora gracilis Meek and Hayden 1860

Family Corbulidae

Corbula crassiplica Gabb 1860

Corbula monmouthensis Gardner 1916

Corbula paracrassa Wade 1926

Corbula williardi Wade 1926

Caestocorbula (Corbulamella) suffalciata Wade 1926

Family Pholadidae

Martesia truncata Wade 1926

Martesia procurva Wade 1926

Family Saxicavidae

Panope decisa Conrad 1853

Family Gastrochaenidae

Kummelia (Gastrochaena) americana Gabb 1860

Family Teredinidae

Teredo rectus Wade 1926

Family Weeksiidae

Weeksia amplificata Wade

Family Acmaeidae

Acmaea galea Sohl

Family Angariidae

Calliomphalus americanis Wade

Calliomphalus lanolateralus Argentus Wade

Calliomphalus argenteus Spinosis Sohl

Calliomphalus decoris Sohl

Calliomphalus conati Sohl

Calliomphalus augustus Sohl

Family Turbinidae

Urceolabrum tuberculatum Wade

Family Skeneidae

Teinostoma prenanum Wade

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS PELECYPODA

ORDER MESOGASTROPODA

- Family Architectonicidae
 - Pseudomalaxis ripleyana* Wade
 - Pseudomalaxis pilsbyri* Harbison
- Family Vermetidae
 - Laxispira lumbricalis* Gabb
- Family Turritellidae
 - Turritella trilira* Conrad
 - Turritella macnairyensis* Wade
 - Turritella tippana* Conrad
 - Turritella vertebroides* Morton
- Family Thiaridae
 - Melanatria cretacea* Wade
- Family Procerithiinae
 - Nudivagus simplicus* Wade
- Family Cerithiidae
 - Cerithium weeksi* Wade
 - Cerithium nodoliratum* Wade
 - Cerithium semirugatum* Wade
- Family Cerithiopsiidae
 - Seila meeki* Wade
 - Seila quadrilirata* Wade
- Family Littorinidae
 - Lemniscolittorina Berryi* Wade
- Family Rissoidae
 - Anteglossia tennesseensis* Wade
- Family Rissoidae
 - Anteglossia subornata* Wade
 - Turboella costata* Wade
- Family Trichotropidae
 - Trichotropis imperfecta* Wade
 - Astandes densatus* Wade
- Family Capulidae
 - Capulus monroei* Shol
 - Capulus corrugatus* Wade
 - Thylacus cretaceus* Conrad
- Family Xenophoridae
 - Xenopora leprosa* Morton
- Family Aporrhaidae
 - Graciliala calcaris* Wade
- Family Capulidae
 - Drepanochilus quadriliratus* Wade
 - Arrhoges Latiala lobata* Wade
 - Anchura substriata* Wade
 - Anchura convexa* Wade
 - Pterocerella poinsettiformis* Stephenson
- Family Colombellinidae
 - Colombellina? americana* Wade
- Family Strombidae
 - Pugnellus densatus* Conrad
 - Pugnellus gymnarus* Abnormalis Wade

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS PELECYPODA

ORDER MESOGASTROPODA

Family Naticidae

Gyrodes major Wade

Gyrodes americanus Wade

Gyrodes spillmani Gabb

Euspira rectilabrum

Amaurellina stephensoni Wade

Family Ampullinidae

Pseudoamaura lirata Wade

Ampullena umbilica Wade

(Ampullina) potens Wade

Family Cymatiidae

Charonia? univaricosum Wade

Tintorium pagodiiforme Sohl

Family Mathildidae

Mathilda ripleyana Wade

Promathilda clathrobaculus cretacea Wade

Gegania parabella Wade

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS GASTROPODA

ORDER NEOGASTROPODA

Family Mathildidae

Ecphora proquadricosta Wade
Sargana stantoni Weller
Morea corsicanesis coonensis Sohl
Morea rotunda Sohl
Paramorea lirata Wade
Schizobasis depressa Wade
Schizobasas immersa Wade

Family Mathildidae

Latiaxis serratus Wade
Lowenstamia liratus Wade

Family Buccinidae

Stantonella subnodosa Wade
Buccinopsis crassa Wade
Odontobasis? australis Wade

Family Melongenidae

Protobusycon cretaceum Wade
Lomirosa cretecea Wade
Pyrifusus subliratus Wade
Pyrifusus ejundicus Sohl
Rhombopsis? orientalis Wade
Deussenia? microstriata Wade

Family Fasciolaridae

Bellifusus curvicostatus Wade
Bellifusus angulicostatus Sohl
Drilluta communis Wade
Drilluta major Wade
Paleopsphaea pergracilis Wade
Graphidula cancellata Wade
Grapidula obscura Wade
Ornopsis glenni Wade
Ornopsis Ripleyella elevata Wade
Ornopsis Pornosis digressa Wade
Hercorhyncus tennesseensis Wade
Hercorhyncus bicarinatus Wade
Boltenella excellens Wade
Euthriofusus? mesozoicus Wade
Euthriofusus convexus Wade
Remera stephensoni Harbison
Woodsella typica Wade
Anomalofusus substiatus Wade

Cryptorhytis? nobilis Wade

Family Xancindae

Lupira variabilis Wade
Xancus (Lupira) turbinea Sohl
Pyropsis proxima Wade

Pyropsis spinosus Wade

Pyropsis interstiatus Wade

Pyropsis perornatus Wade

Napulus reesidei Sohl

APPENDIX B
COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS GASTROPODA

ORDER NEOGASTROPODA

Family Olividae

- Ptychosuca inornata Gabb
- Hydrotribulus nodosus Wade
- Fulgerca attenuata Wade

Family Mitridae

- Mitridomus ripleyana Wade

Family Volutidae

- Longoconcha tennesensis Wade
- Volutomorpha mutabilis Wade
- Volutomorpha gigantia Wade
- (Volutomorpha) aspera Dall
- Liopeplum leioderma Conrad
- Parvivoluta concinna Wade
- Tectaplica simplicia Wade
- Parafus callilateris Wade
- Parafus coloratus Wade

Family Cancellariidae

- Mataxa elegans Wade
- Caveola acuta Wade

Family Paladmetidae

- Paladmete cancellaria Conrad
- Paladmete gardnerae Wade

Family Turridae

- Amuletum macnairyensis Wade
- Amuletum fasciolatum Wade
- Remnita biacuminata Wade
- Remnita anomaloco stata Wade
- Bereta gracilis Wade
- Beretra speciosa Shol
- Fusimilis proxima Wade
- Cryptocinus? macnairyensis Wade

APPENDIX B

COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA**CLASS GASTROPODA****SUBCLASS OPISTHOBRANCHIA****ORDER CEPHALASPIDEA**

Family Acteonidae

Acteon pistilliformis Sohl
 Eoacteon percultus Sohl
 Eoacton ellipticus Wade
 Nonacteonina orientalis Wade
 Troostella substriatus Wade
 Troostella perimpressa Wade
 Tornatellaea cretacea Wade
 Tornatellaea globulosa Wade
 Parietiplicatum conicum Wade

Family Ringicula

Ringicula pulchella Shumard
 Oligoptycha americana Wade

Family Scaphandridae

Scaphander? rarus Wade

SUBCLASS OPISTHOBRANCHIA**ORDER CEPHALASPIDEA**

Family Acteocinidae

Cylichna incisa Stephenson
 Cylichna intermissa Sohl
 Cylichna intermissa curta Sohl
 Cylichna pesumata Sohl
 Cylindrotruncatum demersum Sohl
 Goniocylinchna bisculptura Wade

Family Eulimidae

Eulima persimplica Wade
 Eulima laevigata Wade
 Eulima? clara Wade

Family Pyramidellidae

Creonella triplicata Wade
 Creonella subangulata Sohl
 Lacrimiforma secunda Wade

Family Epitoniidae

Acirsa (Hemiacirsa)cretacea Wade
 Acirsa americana Wade
 Acirsa (Plesioacirsa) microstiata Wade
 Belliscala cFamily B. rockensis Stephenson
 Striaticostatium pondi Stephenson
 Opalia fistulosa Sohl
 Opalia (Pliciscala) wadei Sohl
 Aciculiscala acuta Sohl

APPENDIX B

COON CREEK MOLLUSCAN CLASSIFICATION

PHYLUM MOLLUSCA

CLASS GASTROPODA

SUBCLASS OPISTHOBRANCHIA

ORDER BASOMMATOPHORA

Family Siphonariacea

Siphonaria wieseri Wade