

## THE LAND SNAILS OF ALABAMA

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Although the land snails of Alabama are better known than those of any other southern state, as the result of Walker's publication (1928), there is still much to be learned. Herbert H. Smith (upon whose collections Walker's publication was largely based) collected quite extensively in the mountains of the northeastern part of the State but relatively little on the Coastal Plain. My own collecting, which is reported here, was most extensive on the Coastal Plain so that it complements the work of Smith.

In the present paper only county records which were not reported by either Walker or Pilsbry (1939-1948) are listed; excepting in those groups where recent research has changed our understanding of the species and their identifications are not reliable.

*BRADYBAENA SIMILARIS* (Férussac). Montgomery, Sumter.

*POLYGYRA VOLVOXIS VOLVOXIS* (Parreyss). Dale

*POLYGYRA PUSTULOIDES* (Bland). Bullock, Butler, Calhoun, Cleburne, Covington, Crenshaw, Dale, Henry, Houston, Lee, Limestone, Lowndes, Marshall, Monroe, Russell.

*POLYGYRA LEPORINA* (Gould). Crenshaw, Dallas, Wilcox.

*POLYGYRA TEXASIANA* (Moricand). Hale, Marengo, Perry.

*POLYGYRA PLICATA* Say. Morgan, Walker.

*POLYGYRA TROOSTIANA* Lea. Lawrence.

*STENOTREMA SPINOSUM* (Lea). Lowndes Montgomery, Morgan.

*STENOTREMA BARBIGERUM* (Redfield). Chilton, Tallapoosa, Winston.

*STENOTREMA CALVESCENS* Hubricht. DeKalb, Jackson.

*STENOTREMA BARBATUM* (Clapp). Montgomery, Wilcox.

*STENOTREMA FLORIDA* Pilsbry. Barbour, Dale.

*STENOTREMA STENOTREMA* (Pfeiffer). Colbert, Marshall, Monroe, Montgomery, Morgan.

*STENOTREMA TURBINELLA* (Clench & Archer). Blount, Chilton, DeKalb, Jefferson, St. Clair, Tuscaloosa.

*STENOTREMA DECEPTUM* (Clapp). Bibb, Marshall, St. Clair.

*STENOTREMA BREVIPILA* (Clapp). Cleburne.

*STENOTREMA MAXILLATUM* (Gould). Bullock, Butler, Crenshaw, Dale, Pike, Russell, Tallapoosa.

In Russell County, Alabama, I collected a series of about twenty specimens which were slightly immature. They showed that the usual interpretation of the homologies of the aperture are erroneous. The 'lamina' within the aperture is the lip. The lip is formed and reflected in the usual way. At this stage it looks much like any other *Stenotrema*. However, it does not stop here. The reflected lip grows forward and becomes much thickened producing what has generally been called the 'lip'.

*STENOTREMA LEAI ALICIAE* (Pilsbry). Chilton, Elmore, Hale, Lamar, Lauderdale, Lawrence, Montgomery, Russell, Wilcox.

*MESODON THYROIDUS* (Say). Butler, Colbert, Coosa, Crenshaw, Cullman, Dale, Henry, Houston, Lawrence, Lowndes, Marengo, Morgan, Russell, Talladega, Tuscaloosa, Walker, Wilcox, Winston.

MESODON CLAUSUS (Say). Butler, Coosa, Hale, Lee, Lowndes, Pike.

MESODON SANUS (Clench & Archer). Marshall,

MESODON NORMALIS (Pilsbry). Cleburne, Winston.

MESODON ZALETUS (Binney). Marshall, Talladega.

MESODON PERIGRAPTUS (Pilsbry). Bullock, Butler, Coffee, Lee, Lowndes, Macon, Monroe, Perry, Pike, Russell, Washington.

MESODON FUGELI (Shuttleworth). Cleburne, Coffee, Coosa, Pike, Russell.

MESODON INFLECTUS (Say). Autauga, Bullock, Butler, Cleburne, Coffee, Coosa, Covington, Escambia, Henry, Houston, Lamar, Lawrence, Limestone, Lowndes, Marshall, Montgomery, Morgan, Russell, Winston.

All of my material from the vicinity of Mobile is typical *M. inflectus*. In my opinion *M. inflectus mobilensis* (Clapp) is a form which is found occasionally throughout the range of the species and is not worthy of recognition.

*Mesodon approximans* (Clapp) and *Mesodon edentatus* (Sampson) are anatomically distinct from *Mesodon inflectus* (Say):

TRIODOPSIS TRIDENTATA (Say). Cleburne, Morgan, Talladega.

TRIODOPSIS VULGATUS Pilsbry var. Marshall, Morgan, Talladega.

TRIODOPSIS VANNOSTRANDI (Bland). Butler, Conecuh, Covington, Crenshaw, Geneva, Henry, Houston, Monroe.

TRIODOPSIS HOPETONENSIS (Shuttleworth). Baldwin, Blount, Chilton, Choctaw, Covington, Dale, Elmore, Etowah, Houston, Jackson, Jefferson, Lamar, Montgomery, Perry, Pike, Russell, Sumter, Talladega, Tuscaloosa, Wilcox.

TRIODOPSIS ALABAMENSIS (Pilsbry). Autauga, Coffee, Coosa, Crenshaw, DeKalb.

TRIODOPSIS DENOTATA (Férussac). Morgan.

TRIODOPSIS CAROLINIENSIS (Leal). Wilcox.

TRIODOPSIS FOSTERI (F.C. Baker). Dale, Russell.

TRIODOPSIS ALBOLABRIS (Say). Marshall, Morgan.

TRIODOPSIS MAJOR (Binney). Bibb, Clay, Coosa, DeKalb, Jackson, Marshall, Pike, St. Clair, Walker.

*Triodopsis major* (Binney) and *T. alleni* (Wetherby) - which includes *T. albolabris fuscolabris* (Pilsbry) - are anatomically distinct from *T. albolabris* (Say).

BULIMULUS DEALBATUS DEALBATUS (Say). Franklin.

RUMINA DECOLLATA (Linné). Dallas, Montgomery, Perry, Pike.

OPEAS PYRGULA Schmacker & Boettger. Adams, Dallas, Houston, Macon, Mobile, Montgomery.

EUGLANDINA ROSEA (Férussac). Coffee, Covington, Henry, Sumter, Washington.

HAPLOTREMA CONCAVUM (Say). Barbour, Chilton, Colbert, Coosa, Henry, Lowndes, Morgan, Winston.

EUCONULUS CHERSINUS CHERSINUS (Say). Autauga, Butler, Cleburne, Colbert, Covington, Crenshaw, Dale, Geneva, Henry, Houston, Lowndes, Lamar, Marshall, Mobile, Monroe, Pickens, Pike, Russell, Talladega.

GUPPYA STERKII (Dall). Cherokee, Cleburne, Dale, Lowndes.

GLYPHYALINIA CUMBERLANDIANA (Clapp). Blount, Calhoun, Cleburne, Shelby.

GLYPHYALINIA CIRCUMSTRIATA (Taylor). Butler, Clay, Covington, Dale, Lawrence.

GLYPHYALINIA LEWISIANA (Clapp). Macon, Pike, Tallapoosa.

GLYPHYALINIA INDENTATA (Say). Autauga, Blount, Bullock, Butler, Choctaw, Clay, Cleburne, Coffee, Colbert, Coosa, Covington, Crenshaw, Dale, Elmore, Franklin, Geneva, Henry, Houston, Lamar, Lauderdale, Lawrence, Lee, Lowndes, Macon, Marengo, Marshall, Monroe, Montgomery, Pike, Russell, Tallapoosa, Tuscaloosa, Winston.

GLYPHYALINIA CRYPTOMPHALA (Clapp). Calhoun, Cherokee, Cleburne, Franklin, Jackson, Marshall, Monroe, Morgan.

GLYPHYALINIA SOLIDA (H.B. Baker). Autauga, Baldwin, Butler, Calhoun, Clarke, Clay, Cleburne, Conecuh, Covington, Coosa, Crenshaw, Geneva, Greene, Jefferson, Lamar, Lauderdale, Lowndes, Marshall, Monroe, Perry, Pike, Randolph, St. Clair, Talladega, Tuscaloosa, Washington, Wilcox.

GLYPHYALINIA PRAECOX (H. B. Baker). Choctaw, Clay, Cleburne, Colbert, Cullman, DeKalb, Elmore, Jefferson, Limestone, Lowndes, Madison, Marshall, Morgan, St. Clair, Talladega, Tuscaloosa.

GLYPHYALINIA N. SP. Choctaw, Dallas, Greene, Sumter. An undescribed species related to *G. praecox* (H.B. Baker).

GLYPHYALINIA SCULPTILIS (Bland). Blount, Cullman, Lamar, St. Clair, Walker.

MESOMPHIX ANURUS Hubricht. Blount, Calhoun, Cherokee, Cleburne, Cullman, DeKalb, Jackson, Lawrence, Madison, Marshall, Morgan, St. Clair, Shelby, Talladega, Tuscaloosa, Walker.

MESOMPHIX GLOBOSUS (MacMillan). Autauga, Barbour, Bibb, Blount, Butler, Calhoun, Cherokee, Chilton, Clay, Cleburne, Coffee, Colbert, Conecuh, Crenshaw, Cullman, Dale, Dallas, El-



more, Escambia, Franklin, Greene, Hale, Henry, Houston, Jefferson, Lauderdale, Lawrence, Lee, Lowndes, Mobile, Monroe, Pickens, Pike, Randolph, Russell, St. Clair, Shelby, Talladega, Tallapoosa, Tuscaloosa, Walker, Wilcox.

*MESOMPHIX LATIOR* (Pilsbry). Cleburne, Jackson.

*MESOMPHIX CAPNODES* (W. G. Binney). Clay, Coosa, Cullman, DeKalb, Marshall, Montgomery, Morgan, St. Clair.

*MESOMPHIX PILSBRYI* (Clapp). Coosa, Houston, Lawrence, St. Clair, Talladega.

Pilsbry's figures 167 a-e are not of *Mesomphix vulgatus* (H. B. Baker) but of *Mesomphix pilsbryi* (Clapp).

*VITRINIZONITES LATISSIMUS* (Lewis). Pilsbry's record of this species from Madison County is erroneous according to H. B. Baker. It is very doubtful if this species occurs in Alabama.

*PARAVITREA BIDENS* Hubricht. Cleburne.

*PARAVITREA TANTILLA* Hubricht. Cherokee, Cleburne.

*PARAVITREA CAPSELLA* (Gould). Colbert, Marshall, Morgan.

*PARAVITREA CALCICOLA* H. B. Baker. Cleburne.

*PARAVITREA PILSBRYANA* (Clapp). Bibb.

*PARAVITREA CONECHENSIS* (Clapp). Bullock, Butler, Crenshaw, Dale, Dallas, Henry, Montgomery, Pike, Wilcox.

*HAWAIIA MINUSCULA MINUSCULA* (Binney). Butler, Chilton, Choctaw, Clarke, Crenshaw, Cullman, Dale, Dallas, Geneva, Henry, Jefferson, Lowndes, Macon, Pike.

*GASTRODONTA INTERNA* (Say). Coosa, Lawrence, Lowndes, Morgan, Perry, Wilcox, Winston.

*VENTRIDENS PILSBRYI* Hubricht. Blount, Butler, Calhoun, Clarke, Cleburne, DeKalb, Franklin, Jackson, Lawrence, Marshall, Monroe, Morgan, Perry, Randolph, Wilcox, Winston.

*VENTRIDENS MONODON* Hubricht. Butler, Clark, Conecuh, Crenshaw, Lowndes.

*VENTRIDENS THELOIDES* (Walker & Pilsbry). Bullock, Crenshaw, Dale, Henry, Lee, Pike, Randolph.

*VENTRIDENS LAWAE* (W. G. Binney). Cleburne, Jackson.

*VENTRIDENS LASMODON* (Phillips). St. Clair.

*VENTRIDENS GULARIS* (Say). Bibb, Chilton, Cullman, Dale, Houston, Jackson, Jefferson, Lauderdale, Lee, Madison, Morgan, Randolph, Russell, St. Clair, Talladega, Tallapoosa, Tuscaloosa, Walker.

*VENTRIDENS CERINOIDEUS* (Anthony). Coffee, Conecuh, Dale, Houston, Lee.

*VENTRIDENS DEMISSUS* (Binney). Autauga, Bullock, Chilton, Clarke, Crenshaw, Dale, Hale, Henry, Houston, Lamar, Lowndes, Randolph, Russell.

*VENTRIDENS LIGEFUS* (Say). Colbert, Marshall. I have found this species south of the Tennessee River Valley. Records from farther south appear to be based on *V. demissus*.

*VENTRIDENS INTERTEXTUS* (Binney). Autauga, Butler, Chilton, Choctaw, Coosa, Covington, Crenshaw, Henry, Lawrence, Lee, Monroe, Russell, Wilcox, Winston.

*ZONITOIDES ARBOREUS* (Say) Bibb, Bullock, Butler, Choctaw, Clay, Coosa, Dale, Henry, Houston, Lamar, Lowndes, Madison, Marshall, Morgan, Pickens, Russell.

*STRIATURA MERIDIONALIS* (Pilsbry & Ferriss). Butler, Cherokee, Cleburne, Crenshaw, Dallas, Henry, Lamar, Lowndes, Washington.

*DEROCERAS LAEVE* (Müller). Dallas.

*LIMAX MAXIMUS* (Linné). Jackson. This and other introduced slugs are widely distributed in Alabama, but records are not available.

*LEHMANNIA POIRIERI* (Mabille). Montgomery, Perry.

*ANGUISPIRA ALTERNATA* (Say). Cleburne.

*ANGUISPIRA STRONGYLODES* (Pfeiffer). Calhoun, Cherokee, Coosa, Henry, Montgomery, Russell, Sumter.

*ANGUISPIRA MACNEILLI* Walker. Butler, Choctaw, Dallas, Monroe, Washington.

*ANGUISPIRA JESSICA* MacMillan. Madison.

*ANGUISPIRA SMITHI* Walker. Marshall, Morgan, Tallapoosa.

*ANGUISPIRA COLUMBA* (Clapp). Jackson.

*ANGUISPIRA CUMBERLANDIANA* (Lea). Marshall.

*DISCUS PATULUS PATULUS* (Deshayes). Butler, Cleburne, Colbert, Henry, Lawrence, Lowndes, Marshall, Montgomery, Morgan.

*DISCUS NIGRIMONTANUS* (Pilsbry). Jackson.

*DISCUS BRYANTI* (Harper). Pilsbry's record of this species from Jackson County is erroneous according to H. B. Baker.

*HELICODISCUS FIMBRIATUS* Wetherby. Jackson.

*HELICODISCUS NOTIUS NOTIUS* Hubricht. Bibb, Blount, Bullock, Chilton, Choctaw, Clay, Cleburne, Coosa, Jackson, Jefferson, Lauderdale, Marshall, Montgomery, Morgan, Randolph, Sumter, Tallapoosa, Tuscaloosa, Wilcox, Winston.

*HELICODISCUS PARALLELUS* (Say). Autauga, Coffee, Covington, Dale, Dallas, Geneva, Hale, Henry, Houston, Limestone, Lowndes, Pike, Russell, Walker.

*HELICODISCUS HADENOECUS* Hubricht. Madison.

*HELICODISCUS ALDRICHIANA* (Clapp). DeKalb.

*PUNCTUM MINUTISSIMUM* Lea. Butler, Cherokee, Chilton, Coffee, Colbert, Crenshaw, Lowndes, Pickens, Wilcox.

*PUNCTUM BLANDIANUM* (Pilsbry). Bibb, Cleburne, Etowah, Jackson.

*PHILOMYCUS CAROLINIANUS* (Bosc). Baldwin, Bibb, Butler, Chilton, Choctaw, Conecuh, Covington, Crenshaw, Cullman, Dallas, Elmore, Etowah, Jackson, Lawrence, Madison, Mobile, Montgomery, Morgan, Perry, Pickens, St. Clair, Talladega, Tuscaloosa, Washington, Wilcox.

*PALLIFERA MUTABILIS* Hubricht. Barbour, Cleburne, Covington, Jackson, Houston, Lowndes, Monroe, Montgomery, Wilcox.

*PALLIFERA FOSTERI* (F. C. Baker). Butler, Cleburne, Crenshaw, DeKalb, Lamar. This species becomes sexually mature in midwinter when bad weather often makes collecting impossible, so that it is difficult to obtain mature specimens. The one that I found in Alabama appears to be this species rather than *P. megaphallica* Grimm. However, *fosteri*-like slugs on the Coastal Plain and Piedmont are found from Mississippi to Connecticut. It is possible that *P. megaphallica* is only a variant of *P. fosteri*.

*SUCCINEA URBANA* Hubricht. Clarke, Greene, Hale, Marengo, Montgomery, Sumter.

*SUCCINEA CONCORDIALIS* Lea (S. *unicolor* Tryon). Baldwin, Covington, Dale, Geneva, Mobile.

*SUCCINEA GREERI* Tryon. Choctaw, Greene.

*SUCCINEA INDIANA* Pilsbry. Crenshaw, Dallas.

*SUCCINEA GROSVENORI* Lea. Dallas, Marengo, Perry, Wilcox.

*SUCCINEA WITTERI* Shimek. Dallas.

*CATINELLA VERMETA* (Say). Conecuh, Covington, Crenshaw, Jackson, Lowndes, Marengo, Montgomery, Pike.

*CATINELLA TEXANA* Hubricht. Clarke, Dallas, Hale, Lowndes, Marengo, Montgomery, Perry, Sumter, Washington.

*CATINELLA OKLAHOMARUM* (Webb). Butler, Jackson, Lamar, Macon, Montgomery.

*CATINELLA PUGILATOR* Hubricht. Pike.

*STROBILOPS LABYRINTHICA* (Say). Blount, Bullock, Cherokee, Chilton, Clay, Cleburne, Franklin, Lee.

*STROBILOPS TEXASIANA* Pilsbry & Ferriss. Autauga, Butler, Coffee, Covington, Dale, Escambia, Geneva, Greene, Henry, Houston, Jackson, Lowndes, Madison, Monroe, Perry, Pike, St. Clair.

*STROBILOPS AENEA* Pilsbry. Barbour, Bullock, Butler, Colbert, Coosa, Dale, DeKalb, Lawrence, Lowndes, Montgomery, Russell, Sumter, Talladega, Tallapoosa.

*GASTROCOPTA ARMIFERA* (Say). Lowndes

*GASTROCOPTA CONTRACTA* (Say). Bibb, Butler, Cherokee, Choctaw, Cleburne, Coffee, Crenshaw, Dale, Lowndes, St. Clair.

*Gastrocopta contracta climeana* (Sterki) which is found on the Gulf Coastal Plain should be reduced to a form. Typical *G. contracta* occurs in the same area and intergrades are frequent.

*GASTROCOPTA PENTODON* (Say). Butler, Cherokee, Chilton, Choctaw, Cleburne, Covington, Crenshaw, Dale, Dallas, Henry, Lowndes, Pickens.

*GASTROCOPTA TAPPANIANA* (C. B. Adams). Lowndes, Pickens, St. Clair.

*GASTROCOPTA CORTICARIA* (Say). Cherokee, Colbert, Morgan.

*GASTROCOPTA PROCERA PROCERA* (Gould). Chilton, Colbert.

*FUPOIDES ALBILABRIS* (C. B. Adams). Chilton, Clarke, Crenshaw, Hale, Jefferson.

*VERTIGO MILIUM* (Gould). Butler, Coffee, Conecuh, Chilton, Clarke, Crenshaw, Dale, Dallas, Jefferson, Hale, Houston.

*VERTIGO OSCARIANA* Sterki. Barbour, Butler, Cherokee, Montgomery.

*VERTIGO FUGOSULA* Sterki. Baldwin, Greene, Montgomery.

*VERTIGO ORALIS* Sterki. Covington, Dale, Dallas, Escambia, Greene, Henry, Montgomery, Pickens, Talladega.

*VERTIGO ALABAMENSIS CONEQUHENSIS* Clapp. Chilton, Geneva.

*VERTIGO OVATA* Say. Pickens.

*VERTIGO TESKEYAE* Hubricht. Baldwin, Covington, Crenshaw, Dallas, Escambia, Montgomery.

*FUPISOMA DIOSCORICOLA* (C. B. Adams). Barbour, Conecuh, Lowndes, Pike.

*FUPISOMA MINUS* Pilsbry. Dale, Russell, Wilcox.

*FUPISOMA MACNEILLI* (Clapp). Montgomery.

*CIONELLA MORSEANA* Doherty. Cleburne.

*CARYCHIUM EXILE* H. C. Lea. Bibb, Blount, Butler, Clay, Cleburne, Colbert, Coosa, Dallas, Etowah, Lowndes, Marshall, Morgan, Russell.

*CARYCHIUM CLAPPI* Hubricht. Chilton, Jackson, Jefferson, Madison, Marshall, Morgan, Tallapoosa, Wilcox.

*CARYCHIUM FLORIDANUM* Pilsbry. Chilton, Cof-



fee, Conecuh, Crenshaw, Dale, Geneva, Houston, Lowndes, Monroe, Montgomery, Pike, Tuscaloosa, Wilcox.

*CARYCHIUM NANNODES* Clapp. Jackson.

*VAGINULUS* SP. Baldwin, Mobile.

*HELICINA ORBICULATA ORBICULATA* (Say). Bibb, Colbert, Dallas, Hale, Henry, Lawrence Lowndes, Marshall, Morgan, Russell, Tallapoosa.

*POMATIOPSIS LAPIDARIA* (Say). Bibb, Blount, Choctaw, Clarke, Colbert, Conecuh, Covington, Crenshaw, Dallas, Greene, Hale, Jackson, Lowndes, Madison, Marshall, Mobile, Montgomery, Pike, St. Clair, Sumter, Talladega, Tuscaloosa, Walker, Washington, Wilcox.

## LITERATURE CITED

PILSERY, Henry A. (1939-1948) Land Mollusca of North America (North of Mexico). -- Acad. Nat. Sci. Phila., Monographs No. 3, vols. 1-2, 2215 pp.

WALKER, Bryant (1928) The Terrestrial Shell-bearing Mollusca of Alabama. -- Univ Michigan, Mus. Zool., Misc. Publ. No. 18, 180 pp.

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