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Freshwater Mussels of Kansas: Register of Taxa, Synonyms, and Assumed Misidentifications

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The literature on the mussels (Mollusca: Margaritiferidae and Unionidae) of Kansas includes a collection of names of species and subspecies that makes it difficult for even experienced malacologists to decipher which taxa actually were collected. Compounding this problem is the absence of voucher specimens for some of the studies conducted in the state. It is hoped this list will aid those who are conducting research on mussels and want to assess their results relative to earlier accounts.

To accomplish this, the index can be useful in two ways. You can take the currently accepted name of a taxon to check for publications that included that name (listed under the name). Also listed are taxa that represent probable synonyms or assumed misidentifications (under "Synonyms"). Entries for each of these names will provide additional references that referred to the species by these other names. You also can start with the name of a taxon from one of the published references and find that name in the list. This will provide you with a scientific name that is currently recommended. Without checking voucher specimens, it is assumed that the author was referring to this species. Preferred common names are given with entries for the currently accepted scientific names.

This alphabetical list of valid taxa, synonyms, and assumed misidentifications of freshwater mussels in Kansas is drawn from the literature and not an examination of specimens. The primary references used to provide probable synonyms were those by Burch (1975), Cope (1979), Murray and Leonard (1962), and Oesch (1984). R. Angelo (Kansas Department of Health and Environment), W. Busby (Kansas Biological Survey), C. Cope and E. Miller (Kansas Department of Wildlife and Parks), D. Distler and D. Bleam (Wichita State University), D. Mulhern (US Fish and Wildlife Service), and B. Obermeyer (The Nature Conservancy) reviewed the register, and they offered corrections and helpful suggestions. Comments by Call (1885-1887) and Isely (1925) in their publications also were used, as were additional references noted in the list.

Recommended names of species and probable distributions of species in Kansas were taken from the summaries by Turgeon et al. (1988) and Williams et al. (1993), with updates from Campbell and Lydeard (2012) and Serb et al. (2003). Scientific and common names of species assumed to be extant or extirpated members of the Kansas fauna are highlighted in bold print.

Within the list, an equals sign (=) indicates that the first name given is not recognized as a valid taxon and is a synonym of the second name given. In some instances, a misidentification is assumed, with the second (or third) name given likely representing the specimen collected in Kansas. With molecular studies of species, genera, and higher taxa come possible changes in names assigned to Kansas species. Much confusion and debate remain, and this list takes a conservative approach until changes become widely accepted. Thus, subgenera that might be elevated to genera are sometimes listed, and notes of explanation are included with some species. Explanatory comments accompany several entries.

Studies continue to be published on the unionid mussels of Kansas, which prompts electronic revisions to this list. Of particular note is the summary by Angelo et al. (2009) of historical distributions and conservation status of 48 species of freshwater mussels in Kansas. Most species are declining as their aquatic habitats are altered. Also worthy of mention is the guide to Kansas mussels beautifully illustrated by Karen Couch (1997). The color illustrations are an invaluable aid in the identification of species in this group.

Actinonaias carinata (Barnes) = *Actinonaias ligamentina* (Lamarck) or possibly misidentified specimens of *Lampsilis rafinesqueana* Frierson. See comments under *Actinonaias ligamentina*.

- Branson (1966a, 1966c)
- Murray and Leonard (1962)
- Schuster (1979)

Actinonaias ellipsiformis (Conrad) = *Venustaconcha ellipsiformis* (Conrad)

- DuBois (1981)

***Actinonaias ligamentina* (Lamarck), MUCKET**

Might be misidentified specimens of *Lampsilis rafinesqueana* Frierson. Specimens from the Missouri River basin probably are *A. ligamentina*. Specimens from the Neosho/Spring River (Arkansas River) basin could be either species (see Mulhern et al. 2002).

- Angelo et al. (2009)
- Dorsey (2000)
- Liechti and Huggins (1977)
- Mulhern et al. (2002)
- Obermeyer et al. (1995)
- Schuster and DuBois (1979)
- Tiemann (2006)

Synonyms:

Actinonaias carinata (Barnes)
Actinonaias ligamentina carinata (Barnes)
Lampsilis ligamentina (Lamarck)
Lampsilis ligamentina gibba Simpson
Lampsilis powellii (I. Lea)
Lampsilis rafinesqueana Frierson
Unio ligamentina Lamarck
Unio powellii Lea

Actinonaias ligamentina carinata (Barnes) = *A. ligamentina* (Lamarck) or possibly misidentified specimens of *Lampsilis rafinesqueana* Frierson. See comments under *Actinonaias ligamentina*.

- Cope (1985)

***Alasmidonta marginata* Say, ELKTOE**

- Angelo et al. (2009)
- Branson (1966a, 1966c)
- Cope (1979, 1985)
- Distler and Bleam (1987)
- Liechti and Huggins (1977)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)

***Alasmidonta viridis* (Rafinesque), SLIPPERSHELL MUSSEL**

- Angelo et al. (2009)
- Bleam and Distler (1996)
- Obermeyer et al. (1997b)

Amblema costata Rafinesque = *Amblema plicata* (Say)

- Branson (1966a, 1966c)
- Franzen and Leonard (1943)
- Leonard and Leonard (1946)
- Wedel (1959)

Amblema peruviana (Lamarck) = *Amblema plicata* (Say)

- Branson (1966b)

***Amblema plicata* (Say), THREE RIDGE**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- DuBois (1981)
- Hoke (1996, 1997, 2004, 2005)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1978)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller and Mosher (2008)
- Miller et al. (2014)
- Mosher (2007)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Amblema costata Rafinesque
Amblema peruviana (Lamarck)
Crenodonta peruviana (Lamarck)
Quadrula perplicata (Conrad)
Quadrula plicata (Say)
Quadrula undulata (Barnes)
Unio plicata Say
Unio undulatus Barnes

Anodonta arkansasensis I. Lea = probably misidentified specimens of *Strophitus undulatus* (Say). *Villosa arkansasensis* (I. Lea), OUACHITA CREEKSHELL, occurs only in Arkansas and Oklahoma (Williams et al. 1993)

- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)

Anodonta bealii I. Lea = *Pyganodon grandis* (Say)

- Call (1885b, 1885c, 1885d, 1887)

Anodonta danielsii I. Lea = *Pyganodon grandis* (Say)

- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)
- Scammon (1906)

Anodonta decora I. Lea = *Pyganodon grandis* (Say)

- Call (1887)

Anodonta dejecta Lewis = *Pyganodon grandis* (Say)?

- Call (1887)

Anodonta edentula Say = *Strophitus undulatus* (Say)

- Call (1885d, 1886, 1887) [as: *A. edentulata*]

Anodonta ferrussaciana I. Lea = *Anodontoides ferrussacianus* (I. Lea)

- Call (1885b, 1885c, 1887) [as: *Anodonta ferrussacianus*]

Anodonta grandis Say = *Pyganodon grandis* (Say)

- Branson (1966a, 1966b, 1966c)
- Call (1885b, 1885c, 1885d, 1886, 1887)
- Clark and Gillette (1911)
- Cope (1983a, 1983b, 1985)
- DuBois (1981)
- Eberle, Ernsting, and Tomelleri (1986)
- Franzen and Leonard (1943)
- Isely (1925)
- Leonard and Leonard (1946)
- Leonard (1943)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1966, 1970)
- Murray and Leonard (1962)
- Popenoe (1885)
- Scammon (1906)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Wedel (1959)

Anodonta imbecillis Say = *Utterbackia imbecillis* Say

- Branson (1966c)
- Call (1885d, 1886, 1887)
- Cope (1983a, 1983b, 1985)
- DuBois (1981)
- Eberle, Ernsting, and Tomelleri (1986)
- Hoke (1996)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Murray and Leonard (1962)
- Scammon (1906)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)

Anodonta opaca I. Lea = *Pyganodon grandis* (Say)

- Scammon (1906)

Anodonta ovata I. Lea = *Pyganodon grandis* (Say)

- Call (1885c, 1885d)

Anodonta plana I. Lea = *Pyganodon grandis* (Say)

- Call (1885b, 1885d, 1887)

***Anodonta suborbiculata* Say, FLAT FLOATER**

- Angelo et al. (2009)
- Call (1885c, 1885d)
- Cope (1979, 1983b)
- Liechti and Huggins (1977)
- Murray and Leonard (1962)
- Obermeyer et al. (1997a)
- Scammon (1906)
- Schuster (1978)
- Schuster and DuBois (1979)

***Anodontoides ferrussacianus* (I. Lea), CYLINDRICAL PAPERSHELL**

- Angelo et al. (2009)
- Bergman et al. (2000)
- Cope (1979)
- Dorsey (2000)
- Eberle, Ernsting, and Tomelleri (1986)
- Hoke (1996, 1997, 2004, 2005)
- Karlin et al. (2017)
- Pilger and Gido (2012)
- Scammon (1906)
- Schuster and DuBois (1979)
- Sowards et al. (2016)
- Tiemann (2006)

Synonyms:

Anodonta ferrussaciana I. Lea

***Arcidens confragosus* (Say), ROCK-POCKETBOOK**

- Angelo et al. (2009)
- Cope (1979)
- Hoke (1996)
- Mulhern et al. (2002)
- Murray and Leonard (1962)
- Obermeyer et al. (1995)
- Wolf and Stark (2008)

Carunculina parva (Barnes) = *Toxolasma parvus* (Barnes)

- Branson (1966c)
- DuBois (1981)
- Eberle, Ernsting, and Tomelleri (1986)
- Franzen and Leonard (1943)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Murray and Leonard (1962)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Wedel (1959)

Crenodonta peruviana (Lamarck) [+ subspecies] = *Amblema plicata* (Say)

- Branson (1966c)
- Murray and Leonard (1962)

***Cumberlandia monodonta* (Say), SPECTACLECASE**

- Angelo et al. (2009)
- Mulhern et al. (2002)
- Wolf and Stark (2008)

***Cyclonaias tuberculata* (Rafinesque), PURPLE WARTYBACK**

NOTE: This species probably belongs in the genus *Quadrula* or in the genus *Rotundaria*, if *Quadrula* is divided.

- Angelo et al. (2009)
- Mulhern et al. (2002)
- Wolf and Stark (2008)

Note on synonyms: Murray and Leonard (1962) and Oesch (1984) listed *Unio tuberculata* Barnes as a synonym of *Tritogonia verrucosa* Rafinesque.

***Cyprogenia aberti* (Conrad), WESTERN FANSHELL**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Branson (1966b)
- Combes and Edds (2005)
- Cope (1979, 1983a, 1985)
- Liechti and Huggins (1977)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Scammon (1906) [as: *C. alberti*]
- Schuster (1979)
- Serb (2006)
- Serb and Barnhart (2008)
- Wolf and Stark (2008)

Synonyms:

Unio aberti Conrad

Unio popenoi Call

Dysnomia triquetra (Rafinesque) = *Epioblasma triquetra* (Rafinesque)

- Murray and Leonard (1962)

***Ellipsaria lineolata* (Rafinesque), BUTTERFLY**

- Angelo et al. (2009)
- Bleam et al. (1998)
- Cope (1979)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Mulhern et al. (2002)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Wolf and Stark (2008)

Synonyms:

Plagiola lineolata (Rafinesque)

Plagiola securis (Lea)

Unio securis Lea

***Elliptio (Euryنيا) dilatata* (Rafinesque), SPIKE**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Branson (1966a, 1966b, 1966c) [as: *E. dilatatus*]
- Combes and Edds (2005)
- Cope (1983a, 1985)
- DuBois (1981)
- Liechti and Huggins (1977) [as: *E. dilatatus*]
- Murray and Leonard (1962) [as: *E. dilatatus*]
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Schuster (1979) [as: *E. dilatatus*]
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Wedel (1959) [as: *E. dilatatus*]
- Wolf and Stark (2008)

Synonyms:

Unio gibbosus Barnes

***Epioblasma triquetra* (Rafinesque), SNUFFBOX**

- Angelo et al. (2009)
- Tiemann (2006)

Synonyms:

Dysnomia triquetra (Rafinesque)

Plagiola triquetra (Rafinesque)

Truncilla triquetra Rafinesque

Fusconaia ebena (I. Lea) = *Reginaia ebenus* (I. Lea)

***Fusconaia flava* (Rafinesque), WABASH PIGTOE**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Branson (1966a, 1966b, 1966c)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Franzen and Leonard (1943)
- Hoke (1996, 1997, 2004, 2005)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Quadrula rubiginosa (I. Lea)

Quadrula trigona (I. Lea)

Unio negatus I. Lea

Unio rubiginosa I. Lea

Unio trigonus I. Lea

***Fusconaia ozarkensis* (Call), OZARK PIGTOE**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Cope (1985)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b) [as: *Fusconaia* spp. represents the *Fusconaia flava* (Rafinesque, 1820) and *F. ozarkensis* (Call, 1887) complex.]

Lampsilis alatus (Say) = *Potamilus alatus* (Say)

- Scammon (1906) [as: *L. alata*]

Lampsilis anodontoides (I. Lea) = *Lampsilis teres* (Rafinesque)

- Branson (1966a, 1966c)
- Clark and Gillette (1911)
- Franzen and Leonard (1943)
- Isely (1925)
- Leonard and Leonard (1946)
- Miller (1978)
- Murray and Leonard (1962)
- Scammon (1906)
- Wedel (1959)

Lampsilis anodontoides fallaciosa Smith = *Lampsilis teres* (Rafinesque)

- Branson (1966c)
- Murray and Leonard (1962)

***Lampsilis cardium* (Rafinesque), PLAIN POCKETBOOK**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Combes and Edds (2005)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- Hoke (2004, 2005)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Lampsilis ovata Say

Lampsilis ovata ventricosa (Barnes)

Lampsilis ventricosa (Barnes)

Lampsilis ventricosa occidentis (I. Lea)

Lampsilis ventricosa satura (I. Lea)

Unio occidentis I. Lea

Unio satur I. Lea

Unio ventricosus Barnes

Lampsilis ellipsiformis (Conrad) = *Venustaconcha ellipsiformis* (Conrad)

- Scammon (1906)

Lampsilis fallaciosa (Smith) = *Lampsilis teres* (Rafinesque)

- Scammon (1906)
- Wedel (1959)

Lampsilis gracilis (Barnes) = *Leptodea fragilis* (Rafinesque)

- Isely (1925)
- Scammon (1906)

Lampsilis bigginsi (I. Lea) = *Lampsilis abrupta* (Say)

Neither of these species is not documented from Kansas (Williams et al. 1993). See Oesch (1984:218-219). The identity of specimens reported from Kansas is unknown.

- Scammon (1906) [as: *L. bigginsi*]

Lampsilis laevisissima (I. Lea) = *Potamilus obiensis* (Rafinesque)

- Scammon (1906)

Lampsilis leptodon (Rafinesque) = *Leptodea leptodon* (Rafinesque)

- Scammon (1906)

Lampsilis ligamentina (Lamarck) = *Actinonaias ligamentina* (Lamarck) or possibly misidentified specimens of *Lampsilis rafinesqueana* Frierson

See comments under *Actinonaias ligamentina*.

- Isely (1925)
- Scammon (1906)

Lampsilis ligamentina gibba Simpson = *Actinonaias ligamentina* (Lamarck) or possibly misidentified *Lampsilis rafinesqueana* Frierson

- Scammon (1906)

Lampsilis luteolus Simpson = *Lampsilis siliquoidea* (Barnes)

- Branson (1966a, 1966b, 1966c)
- Isely (1925) [as: *L. luteola* (Lamarck)]
- Scammon (1906) [as: *L. luteola* (Lamarck)]

Lampsilis ovata (Say), POCKETBOOK = possibly misidentified specimens of *Lampsilis cardium* (Rafinesque). *Lampsilis ovata* occurs in the northeastern USA, but not in Kansas (Williams et al. 1993).

- Branson (1966a, 1966c)
- Metcalf (1980, 1983)

Lampsilis ovata ventricosa (Barnes) = possibly misidentified specimens of *Lampsilis cardium* (Rafinesque)

- DuBois (1981)
- Liechti and Huggins (1977)
- Miller (1978)
- Murray and Leonard (1962)
- Schuster (1979)
- Schuster and DuBois (1979)

Lampsilis parvus (Barnes) = *Toxolasma parvus* (Barnes)

- Isely (1925) [as: *L. parva*]
- Scammon (1906) [as: *L. parva*]

Lampsilis powelli (I. Lea) = possibly misidentified specimens of *Actinonaias ligamentina* (Lamarck) or *Lampsilis rafinesqueana* Frierson. *Lampsilis powelli* (I. Lea), ARKANSAS FATMUCKET, occurs only in Arkansas (Williams et al. 1993). See comments under *Actinonaias ligamentina*.

- Cope (1985)
- Scammon (1906)

Synonyms:

Unio powellii I. Lea

Lampsilis purpuratus (Lamarck) = *Potamilus purpuratus* (Lamarck)

- Isely (1925) [as: *L. purpurata*]
- Scammon (1906) [as: *L. purpurata*]

Lampsilis radiata luteola (Lamarck) = *Lampsilis siliquoidea* (Barnes)

- Cope (1985)
- Hoke (1996, 1997)
- Liechti and Huggins (1977)

Lampsilis radiata siliquoidea (Barnes) = *Lampsilis siliquoidea* (Barnes)

- Metcalf (1980, 1983)
- Murray and Leonard (1962)
- Schuster (1979)
- Schuster and DuBois (1979)

***Lampsilis rafinesqueana* Frierson, NEOSHO MUCKET**

See discussion by Cope (1979:15-19).

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1979, 1983a, 1985)
- Distler and Bleam (1995)
- Jones et al. (2006)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Wolf and Stark (2008)

Synonyms:

Actinonaias carinata (Barnes)

Actinonaias ligamentina (Lamarck)

Actinonaias ligamentina carinata (Barnes)

Lampsilis ligamentina (Lamarck)

Lampsilis ligamentina gibba Simpson

Lampsilis powelli (I. Lea)

Unio ligamentina Lamarck

Unio powellii Lea

Lampsilis rectus (Lamarck) = *Ligumia recta* (Lamarck)

- Isely (1925) [as: *L. recta*]
- Scammon (1906) [as: *L. recta*]

Lampsilis satur (I. Lea), SANDBANK POCKETBOOK

Lampsilis satur occurs in Arkansas, Oklahoma, and elsewhere, but not in Kansas (Williams et al. 1993). It has been reported from Kansas by the synonyms below, but these specimens are *Lampsilis cardium* (Rafinesque).

Synonyms:

Lampsilis ventricosa satura (I. Lea)

Unio satur I. Lea

***Lampsilis siliquoidea* (Barnes), FATMUCKET**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam and Distler (1996)
- Branson (1966a)
- Combes and Edds (2005)
- Franzen and Leonard (1943)
- Hoke (2004, 2005)
- Leonard and Leonard (1946)
- Miller (1978)
- Miller et al. (2014)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Tiemann (2006)
- Wedel (1959)
- Wolf and Stark (2008)

Synonyms:

Lampsilis luteolus Simpson

Lampsilis radiata luteola (Lamarck)

Lampsilis radiata siliquoidea (Barnes)

Unio luteola Lamarck

Lampsilis subrostratus (Say) = *Ligumia subrostrata* (Say)

- Isely (1925) [as: *L. subrostrata*]
- Scammon (1906) [as: *L. subrostrata*]

***Lampsilis teres* (Rafinesque), YELLOW SANDSHELL**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1983a)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Hoke (1996, 1997, 2004, 2005)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Lampsilis anodontooides (I. Lea)

Lampsilis anodontooides fallaciosa Smith

Lampsilis fallaciosa (Smith)

Lampsilis teres anodontooides (I. Lea)

Unio anodontooides (I. Lea)

Lampsilis teres anodontooides (I. Lea) = *Lampsilis teres* (Rafinesque)

- Cope (1983b, 1985)
- Hoke (1997)

Lampsilis ventricosa (Barnes) = *Lampsilis cardium* (Rafinesque)

- Branson (1966b)
- Cope (1983a, 1985)
- Hoke (1996, 1997)
- Isely (1925)
- Leonard and Leonard (1946)
- Miller (1970)
- Miller (1992)
- Scammon (1906)

Lampsilis ventricosa occidens (I. Lea) = *Lampsilis cardium* (Rafinesque)

- Kivett (1953)
- Wedel (1959)

Lampsilis ventricosa satura (I. Lea) = possibly misidentified specimens of *Lampsilis cardium* (Rafinesque)

Lampsilis satur (I. Lea), SANDBANK POCKETBOOK, does not occur in Kansas (Williams et al. 1993).

- Scammon (1906)

Synonyms:

Unio satur I. Lea

***Lasmigona complanata* (Barnes), WHITE HEELSPLITTER**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Branson (1966b, 1966c)
- Combes and Edds (2005)
- Cope (1983a, 1983b, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Franzen and Leonard (1943)
- Hoke (1996, 1997, 2004, 2005)
- Karlin et al. (2017)
- Kivett (1953)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1966, 1970, 1978)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Margaritana complanata Barnes

Symphynota complanata (Barnes)

***Lasmigona compressa* (Lea), CREEK HEELSPLITTER**

- Angelo et al. (2009)
- Hoke (1996)

***Lasmigona costata* (Rafinesque), FLUTED-SHELL**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Branson (1966a, 1966c)
- Combes and Edds (2005)
- Cope (1979, 1985)
- Liechti and Huggins (1977)
- Metcalf (1980)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)

Synonyms:

Margaritana rugosa (Barnes)

Symphynota costata (Rafinesque)

***Leptodea fragilis* (Rafinesque), FRAGILE PAPERSHELL**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Branson (1966b, 1966c)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Franzen and Leonard (1943)
- Hoke (1997, 2004, 2005)
- Karlin et al. (2017)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Sowards et al. (2016)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Lampsilis gracilis (Barnes)

Unio gracilis Barnes

Leptodea laevis (I. Lea) = *Potamilus obiensis* (Rafinesque)

- Branson (1966c)
- Murray and Leonard (1962)

Leptodea leptodon (Rafinesque), SCALESHELL

Leptodea leptodon occurs in the eastern USA, including Missouri, Arkansas, and Oklahoma. It has not been confirmed from Kansas (Williams et al. 1993). It has been reported from Kansas by the synonyms given below, but the identity of these specimens is unknown.

Synonyms:

Lampsilis leptodon (Rafinesque)

Unio tenuissimus I. Lea

***Ligumia recta* (Lamarck), BLACK SANDSHELL**

- Angelo and Cringan (2003)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Branson (1966a)
- Combes and Edds (2005)
- Cope (1979, 1985)
- DuBois (1981)
- Hoke (2004, 2005)
- Liechti and Huggins (1977)
- Metcalf (1980)
- Miller (1966, 1970) [as: *Ligumia* cf *L. recta*]
- Miller et al. (2014)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Lampsilis rectus (Lamarck)

Ligumia recta latissima (Rafinesque)

Unio recta Lamarck

Ligumia recta latissima (Rafinesque) = *Ligumia recta* (Lamarck)

- Branson (1966c)
- Murray and Leonard (1962)

***Ligumia subrostrata* (Say), PONDMUSSEL**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam and Distler (1996)
- Branson (1966a, 1966b, 1966c)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Distler and Bleam (1995)
- DuBois (1981)
- Eberle, Ernsting, and Tomelleri (1986)
- Franzen and Leonard (1943)
- Hoke (1996, 1997, 2004, 2005)
- Karlin et al. (2017)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Murray and Leonard (1962)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Sowards et al. (2016)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Lampsilis subrostratus (Say)

Unio subrostratus Say

Unio topekensis I. Lea

Margaritana complanata Barnes = *Lasmigona complanata* (Barnes)

- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)

Margaritana rugosa (Barnes) = *Lasmigona costata* (Rafinesque)

- Call (1886, 1887)
- Popenoe (1885)

Megaloniaias gigantea (Barnes) = *Megaloniaias nervosa* (Rafinesque)

- Liechti and Huggins (1977)
- Murray and Leonard (1962)
- Schuster (1979)
- Schuster and DuBois (1979)

***Megaloniaias nervosa* (Rafinesque), WASHBOARD**

- Angelo et al. (2009)
- Bleam et al. (1998)
- Cope (1983a)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Sherraden-Chance and Edds (2004)
- Vanleeuwen and Arruda (2001)
- Wolf and Stark (2008)

Synonyms:

Megaloniaias gigantea (Barnes)
Quadrula beros (Say)
Unio multiplicatus I. Lea

***Obliquaria reflexa* Rafinesque, THREEHORN**

WARTYBACK

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1983a)
- Dean et al. (2002)
- Isely (1925)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1978) [as: cf. *Obliquaria reflexa*]
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Scammon (1906)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Wedel (1959)
- Wolf and Stark (2008)

Synonyms:

Unio cornutus Barnes

Obovaria ellipsis (I. Lea) = *Obovaria olivaria* (Rafinesque)

- Scammon (1906)

***Obovaria (Pseudoon) olivaria* (Rafinesque),**

HICKORYNUT

- Angelo et al. (2009)
- Bergman et al. (2000)
- Cope (1979)
- Distler and Bleam (1995)
- Hoke (1997, 2004, 2005)
- Kivett (1953)
- Murray and Leonard (1962)
- Wedel (1959)

Synonyms:

Obovaria ellipsis (I. Lea)
Unio ellipsis I. Lea
Unio pealii I. Lea

Plagiola donaciformis (I. Lea) = *Truncilla donaciformis* (I. Lea)

- Baker (1909)
- Isely (1925)
- Scammon (1906)

Plagiola elegans (I. Lea) = *Truncilla truncata* (Rafinesque)

- Isely (1925)
- Scammon (1906)

Plagiola lineolata (Rafinesque) = *Ellipsaria lineolata* (Rafinesque)

- Cope (1983a)
- Murray and Leonard (1962)

Plagiola securis (Lea) = *Ellipsaria lineolata* (Rafinesque)

- Isely (1925)
- Scammon (1906)

Plagiola triquetra (Rafinesque) = *Epioblasma triquetra* (Rafinesque)

- Cope (1979)

Plethobasus cicatricosus (Say), WHITE WARTYBACK

Plethobasus cicatricosus occurs in the Ohio River basin, but not in Kansas (Williams et al. 1993). It has been reported from Kansas by the synonym below, but the identity of these specimens is unknown.

Synonyms:

Pleurobema cicatricosum (Say)

Plethobasus cyphus (Rafinesque), SHEEPNOSE

It is questionable whether this species occurs in Kansas (see Schuster 1979), although Williams et al. (1993) listed Kansas in its distribution. One of the specimens of Scammon (1906), illustrated in Murray and Leonard (1962), is *Quadrula quadrula* (Schuster 1979); the identity of specimens listed by Branson (1966a, 1966c) is unknown. Oesch (1984) showed only one record (pre-1920) from western Missouri.

- Branson (1966a, 1966c) [as: *P. cypha*]
- Cope (1979)
- Liechti and Huggins (1977)
- Murray and Leonard (1962) [= *Quadrula quadrula* (Rafinesque)]
- Scammon (1906) [= *Quadrula quadrula* (Rafinesque)]
- Schuster (1979)
- Schuster and DuBois (1979)

Synonyms:

Pleurobema aesopus (Green)

Pleurobema aesopus (Green) = *Plethobasus cyphus* (Rafinesque)

- Scammon (1906)

Pleurobema cicatricosum (Say) = *Plethobasus cicatricosus* (Say)

- Scammon (1906)

Pleurobema coccineum (Conrad) = *Pleurobema sintoxia* (Rafinesque)

- Bleam et al. (1998)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Wedel (1959)

Pleurobema coccineum solida (Lea) = *Pleurobema sintoxia* (Rafinesque)

- Wedel (1959)

Pleurobema cordatum (Rafinesque), OHIO PIGTOE = misidentified specimens of *Pleurobema sintoxia* (Rafinesque).

Pleurobema cordatum occurs in the eastern USA, but not in Kansas (Williams et al. 1993).

- Branson (1966a, 1966b)
- DuBois (1981)
- Schuster (1979)
- Schuster and DuBois (1979)

Pleurobema cordatum catillus (Conrad) = *Pleurobema sintoxia* (Rafinesque)

- Branson (1966c)
- Liechti and Huggins (1977)
- Miller (1970, 1978)
- Murray and Leonard (1962)

Pleurobema cordatum coccineum (Conrad) = *Pleurobema sintoxia* (Rafinesque)

- Branson (1966c)
- Murray and Leonard (1962)

Pleurobema cordatum pyramidatum (I. Lea) = probably misidentified specimens of *Pleurobema sintoxia* (Rafinesque)

- Branson (1966c)
- Liechti and Huggins (1977)
- Murray and Leonard (1962)

Synonyms:

Quadrula pyramidata (I. Lea)
Unio pyramidatus I. Lea.

***Pleurobema (Sintoxia) sintoxia* (Rafinesque), ROUND PIGTOE**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Pleurobema coccineum (Conrad)
Pleurobema coccineum solida (Lea)
Pleurobema cordatum Rafinesque
Pleurobema cordatum catillus (Conrad)
Pleurobema cordatum coccineum (Conrad)
Pleurobema cordatum pyramidatum (I. Lea)
Quadrula coccinea (Conrad)
Quadrula plena (I. Lea)
Quadrula pyramidata (I. Lea)
Quadrula solida (I. Lea)
Unio coccineus Conrad
Unio plenus I. Lea
Unio pyramidatus I. Lea
Unio solidus I. Lea

Pleurobema pyramidatum (I. Lea), PYRAMID PIGTOE

Pleurobema pyramidatum does not occur in Kansas (Williams et al. 1993). It has been reported from Kansas by the synonyms given below. Specimens from Kansas actually are *Pleurobema sintoxia* (Rafinesque), ROUND PIGTOE.

Synonyms:

Pleurobema cordatum pyramidatum (I. Lea)
Quadrula pyramidata (I. Lea)
Unio pyramidatus I. Lea.

Potamilus alatus (Say), PINK HEELSPLITTER

- Angelo et al. (2009)
- Bergman et al. (2000)
- Combes and Edds (2005)
- Dorsey (2000)
- Hoke (2004, 2005)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Pilger and Gido (2012)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Lampsilis alatus (Say)
Proptera alata (Say)
Proptera alata megaptera (Rafinesque)
Unio alatus Say

Potamilus capax (Green), FAT POCKETBOOK

This species apparently has been misidentified from specimens of *Potamilus purpuratus* in Kansas. See Schuster and DuBois (1979). *Potamilus capax* occurs in Iowa, Missouri, Arkansas, and Oklahoma (Williams et al. 1993).

Synonyms:

Proptera capax (Green)

Potamilus laevisima (I. Lea) = *Potamilus obiensis* (Rafinesque)

- Cope (1983a)

Potamilus obiensis (Rafinesque), PINK PAPERSHELL

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1983b, 1985)
- Distler and Bleam (1995)
- Dorsey (2000)
- Hoke (1996, 1997, 2004, 2005)
- Karlin et al. (2017)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Sherraden-Chance and Edds (2004)
- Sowards et al. (2016)
- Tiemann (2006)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Lampsilis laevisima (I. Lea)
Leptodea laevisima (I. Lea)
Potamilus laevisima (I. Lea)
Proptera laevisima (I. Lea)
Unio laevisimus I. Lea

Potamilus purpuratus (Lamarck), BLEUFER

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Hoke (2005)
- Karlin et al. (2017)
- Miller (1992)
- Miller and Lynott (2006)
- Miller and Mosher (2008)
- Miller et al. (2014)
- Mosher (2007)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Sherraden-Chance and Edds (2004)
- Vanleeuwen and Arruda (2001)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Lampsilis purpuratus (Lamarck)
Proptera capax (Green)
Proptera purpurata (Lamarck)
Unio ater I. Lea
Unio purpurata Lamarck

Proptera alata (Say) = *Potamilus alatus* (Say)

- Branson (1966b)
- DuBois (1981)
- Franzen and Leonard (1943)
- Liechti and Huggins (1977)
- Murray and Leonard (1962)
- Schuster (1979)
- Schuster and DuBois (1979)

Proptera alata megaptera (Rafinesque) = *Potamilus alatus* (Say)

- Wedel (1959)

Proptera capax (Green) = probably misidentified specimens of *Potamilus purpuratus* (Lamarck). See comments under *Potamilus capax*.

- Cope (1979)
- Liechti and Huggins (1977)
- Murray and Leonard (1962)
- Schuster and DuBois (1979)
- Wedel (1959)

Proptera laevis (I. Lea) = *Potamilus obiensis* (Rafinesque)

- DuBois (1981)
- Eberle, Ernsting, and Tomelleri (1986)
- Liechti and Huggins (1977)
- Metcalf (1980)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Wedel (1959)

Proptera purpurata (Lamarck) = *Potamilus purpuratus* (Lamarck)

- Branson (1966c)
- DuBois (1981)
- Leonard and Leonard (1946) [as: *Proptera* cf *purpurata*]
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Murray and Leonard (1962)
- Schuster (1979)
- Schuster and DuBois (1979)
- Wedel (1959)

Ptychobranthus clintonensis Simpson = *Ptychobranthus occidentalis* (Conrad)

- Scammon (1906) [as: *P. clintonense*]

Ptychobranthus fasciolaris (Rafinesque), KIDNEYSHELL = probably misidentified specimens of *Ptychobranthus occidentalis* (Conrad). *Ptychobranthus fasciolaris* occurs in the eastern USA, but not in Kansas (Williams et al. 1993).

- Branson (1966a, 1966c)
- Murray and Leonard (1962) [as: *P. fasciolaris*]

Ptychobranthus occidentalis (Conrad), OUACHITA

KIDNEYSHELL

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1979, 1983a, 1985)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Schuster (1979)
- Schuster and DuBois (1979)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Ptychobranthus clintonensis Simpson
Ptychobranthus fasciolaris (Rafinesque)
Ptychobranthus phaseolus (Hildreth)
Unio phaseolus Hildreth

Ptychobranthus phaseolus (Hildreth) = *Ptychobranthus occidentalis* (Conrad)

- Isely (1925)
- Scammon (1906)

Pyganodon grandis (Say), GIANT FLOATER

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam and Distler (1996)
- Combes and Edds (2005)
- Distler and Bleam (1995)
- Dorsey (2000)
- Hoke (1997, 2004, 2005)
- Karlin et al. (2017)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Sherraden-Chance and Edds (2004)
- Sowards et al. (2016)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Anodonta bealii I. Lea
Anodonta danielsii I. Lea
Anodonta decora I. Lea
Anodonta dejecta Lewis
Anodonta grandis Say
Anodonta opaca I. Lea
Anodonta ovata I. Lea
Anodonta plana I. Lea

Quadrula asper (I. Lea) = *Quadrula quadrula* (Rafinesque)

- Scammon (1906) [as: *Q. aspera*]

Quadrula coccinea (Conrad) = *Pleurobema sintoxia* (Rafinesque)

- Baker (1909)
- Scammon (1906)

***Quadrula (Theliderma) cylindrica* (Say), RABBITSFOOT**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bleam et al. (1998)
- Cope (1979, 1985)
- Isely (1925)
- Liechti and Huggins (1977)
- Miller et al. (2014)
- Mulhern et al. (2002)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Scammon (1906)
- Schuster (1979)
- Schuster and DuBois (1979)

Synonyms:

Unio cylindricus Say

Quadrula ebenus (I. Lea) = *Fusconaia ebena* (I. Lea)

- Scammon (1906)

***Quadrula (Quadrula) fragosa* (Conrad), WINGED MAPLELEAF**

- Angelo et al. (2009)
- Bleam et al. (1998)
- Cope (1985:39)
- Hoke (1997, 2004, 2005)
- Scammon (1906)

Synonyms:

Unio fragosus Conrad

Quadrula heros (Say) = *Megalonaias nervosa* (Rafinesque)

- Isely (1925)
- Scammon (1906)

Quadrula houstonensis (I. Lea), SMOOTH PIMPLEBACK = possibly misidentified specimens of *Quadrula pustulosa* (I. Lea). *Quadrula houstonensis* occurs only in Texas (Williams et al. 1993). Murray and Leonard (1962) assumed the Kansas specimens were misidentified specimens of *Q. pustulosa*.

- Scammon (1906)

Synonyms:

Unio houstonensis I. Lea

Quadrula lacrymosa (I. Lea) = *Quadrula quadrula* (Rafinesque)

- Baker (1909) [as: *Q. lacrymosa*]
- Clark and Gillette (1911) [as: *Q. lacrymosa*]
- Isely (1925) [as: *Q. lacrymosa*]
- Scammon (1906) [as: *Q. lacrymosa*]

***Quadrula (Theliderma) metanevra* (Rafinesque), MONKEYFACE**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bleam et al. (1998)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Isely (1925)
- Liechti and Huggins (1977)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller and Mosher (2008)
- Miller and Obermeyer (1997)
- Miller et al. (2014)
- Mosher (2007)
- Mulhern et al. (2002)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Scammon (1906)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Spicer et al. (2007)
- Vanleeuwen and Arruda (2001)
- Wolf and Stark (2008)

Synonyms:

Unio metanevrus (Rafinesque)

Quadrula nobilis (Conrad) = *Quadrula quadrula* (Rafinesque)

- Isely (1925) [also as: *Tritogonia nobilis* (Conrad)]

Quadrula (Rotundaria) nodulata (Rafinesque),

WARTYBACK

- Angelo et al. (2009)
- Branson (1966a, 1966c)
- Cope (1979, 1983a, 1985)
- Liechti and Huggins (1977)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Vanleeuwen and Arruda (2001)
- Wolf and Stark (2008)

Synonyms:

Quadrula pustulata (I. Lea)

Unio pustulatus I. Lea

Quadrula perplicata (Conrad) = *Amblema plicata* (Say)

- Scammon (1906)

Quadrula petrina (Gould), TEXAS PIMPLEBACK

Quadrula petrina occurs only in Texas (Williams et al. 1993).

Specimens reported from Kansas are *Quadrula pustulosa* (I. Lea).

Synonyms:

Unio petrinus Gould

Quadrula plena (I. Lea) = *Pleurobema sintoxia* (Rafinesque)?

- Scammon (1906)

Quadrula plicata (Say) = *Amblema plicata* (Say)

- Scammon (1906)

Quadrula pustulata (I. Lea) = *Quadrula nodulata* (Rafinesque)

- Scammon (1906)

***Quadrula (Rotundaria) pustulosa* (I. Lea), PIMPLEBACK**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Baker (1909)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Branson (1966a, 1966c)
- Clark and Gillette (1911)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Franzen and Leonard (1943)
- Hoke (1996, 1997, 2004, 2005)
- Isely (1925)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1978)
- Miller (1992)
- Miller (1993)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Scammon (1906)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Spicer et al. (2007)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Quadrula houstonensis (I. Lea)

Quadrula petrina (Gould)

Quadrula pustulosa prasina (Conrad)

Unio dorfeuillianus I. Lea

Unio houstonensis I. Lea

Unio petrinus Gould

Unio pustulosus I. Lea

Unio schoolcraftii I. Lea

Unio sphaericus I. Lea

Quadrula pustulosa prasina (Conrad) = *Quadrula pustulosa* (I. Lea)

- Wedel (1959)

Quadrula pyramidata (I. Lea) = probably misidentified specimens of *Pleurobema sintoxia* (Rafinesque). See comments under *Pleurobema pyramidatum* (I. Lea), PYRAMID PIGTOE.

- Isely (1925)
- Scammon (1906)

Synonyms:

Pleurobema cordatum pyramidatum (I. Lea)
Unio pyramidatus I. Lea

***Quadrula (Quadrula) quadrula* (Rafinesque),**

MAPLELEAF

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam et al. (1998)
- Branson (1966a, 1966b, 1966c)
- Combes and Edds (2005)
- Cope (1983a, 1983b, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Eberle, Ernsting, and Tomelleri (1986)
- Franzen and Leonard (1943)
- Hoke (1996, 1997, 2004, 2005)
- Karlin et al. (2017)
- Kivett (1953)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1966, 1970, 1978)
- Miller (1992)
- Miller and Lynott (2006)
- Miller and Mosher (2008)
- Miller et al. (2014)
- Mosher (2007)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Sowards et al. (2016)
- Spicer et al. (2007)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Plethobasus cyphus (Rafinesque)
Quadrula asper (I. Lea)
Quadrula fragosa (Conrad)
Quadrula lacrymosa (I. Lea)
Quadrula nobilis (Conrad)
Quadrula speciosa (I. Lea)
Unio asperrimus I. Lea
Unio fragosus Conrad
Unio lacrymosus I. Lea

Quadrula rubiginosa (I. Lea) = *Fusconaia flava* (Rafinesque)

- Baker (1909)
- Isely (1925)
- Scammon (1906)

Quadrula solida (I. Lea) = *Pleurobema sintoxia* (Rafinesque)

- Scammon (1906)

Quadrula speciosa (I. Lea) = *Quadrula quadrula* (Rafinesque)

- Scammon (1906)

Quadrula trigona (I. Lea) = *Fusconaia flava* (Rafinesque)

- Scammon (1906)

Quadrula undulata (Barnes) [and subspecies] = *Amblema plicata* (Say)

- Baker (1909)
- Isely (1925)
- Scammon (1906)

Reginaia ebenus (I. Lea) [= *Fusconaia ebena*], EBONYSHELL

This species has been reported from the eastern USA, including Oklahoma, Arkansas, and Missouri. It has not been documented as occurring in Kansas (Williams et al. 1993). It has been reported from Kansas by the synonyms given below, but the identity of these specimens is unknown.

Synonyms:

- *Quadrula ebenus* (I. Lea)
- *Quadrula plena* (I. Lea)
- *Unio ebana* I. Lea
- *Unio plenus* I. Lea

Strophitus edentulus (Barnes) = *Strophitus undulatus* (Say)

- Isely (1925)
- Scammon (1906)

Strophitus rugosus (Swainson) = *Strophitus undulatus* (Say)

- Branson (1966a, 1966b, 1966c)
- Franzen and Leonard (1943)
- Miller (1970)
- Murray and Leonard (1962)
- Wedel (1959)

***Strophitus undulatus* (Say), CREEPER**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam and Distler (1996)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Hoke (1996, 1997, 2004, 2005)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Tiemann (2006)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Anodonta arkansasensis I. Lea

Anodonta edentula Say

Strophitus edentulus (Barnes)

Strophitus rugosus (Swainson)

Symphynota complanata (Barnes) = *Lasmigona complanata* (Barnes)

- Clark and Gillette (1911)
- Isely (1925)
- Scammon (1906)

Symphynota costata (Rafinesque) = *Lasmigona costata* (Rafinesque)

- Scammon (1906)

***Toxolasma lividus* (Rafinesque), PURPLE LILLIPUT**

- Obermeyer et al. (1997b)

***Toxolasma parvus* (Barnes), LILLIPUT**

- Angelo et al. (2009)
- Bergman et al. (2000)
- Combes and Edds (2005)
- Cope (1983b, 1985)
- Distler and Bleam (1995)
- Dorsey (2000)
- Hoke (1996, 1997, 2004, 2005)
- Karlin et al. (2017)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Sowards et al. (2016)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Carunculina parva (Barnes)

Lampsilis parvus (Barnes)

Unio parvus Barnes

Tritogonia tuberculata (Barnes) = *Tritogonia verrucosa* (Rafinesque)

- Clark and Gillette (1911)
- Isely (1925)
- Scammon (1906)

Synonyms:

Unio tuberculata (Barnes)

***Tritogonia verrucosa* (Rafinesque), PISTOLGRIP**

NOTE: This taxon is closely related to the genus *Quadrula*, and *Tritogonia* is sometimes considered a subgenus of *Quadrula*.

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bergman et al. (2000)
- Branson (1966a, 1966b, 1966c)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Franzen and Leonard (1943)
- Hoke (1997, 2004, 2005)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Tritogonia tuberculata (Barnes)

Unio tuberculata Barnes

***Truncilla donaciformis* (I. Lea), FAWNSFOOT**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Bleam et al. (1998)
- Branson (1966c)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Dean et al. (2002)
- Distler and Bleam (1995)
- Franzen and Leonard (1943)
- Hoke (1997, 2005)
- Liechti and Huggins (1977)
- Metcalf (1980)
- Miller (1992)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer (1997)
- Obermeyer (1998)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1979)
- Schuster and DuBois (1979)
- Sherraden-Chance and Edds (2004)
- Tiemann (2006)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Plagiola donaciformis (I. Lea)

Unio donaciformis (I. Lea)

Unio zigzag I. Lea

Truncilla triquetra Rafinesque = *Epioblasma triquetra* (Rafinesque)

- Scammon (1906)

***Truncilla truncata* Rafinesque, DEERTOES**

- Angelo et al. (2009)
- Bleam et al. (1998)
- Branson (1966c)
- Combes and Edds (2005)
- Cope (1983a, 1985)
- Hoke (1996, 2004, 2005)
- Leonard and Leonard (1946)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller and Lynott (2006)
- Miller et al. (2014)
- Murray and Leonard (1962)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Schuster (1979)
- Schuster and DuBois (1979)
- Tiemann (2006)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Plagiola elegans (I. Lea)

Unio elegans I. Lea

Unio aberti Conrad = *Cyprogenia aberti* (Conrad)

- Call (1887)

Unio alatus Say = *Potamilus alatus* (Say)

- Call (1885b, 1885d, 1887)
- Popenoe (1885)

Unio anodontooides (I. Lea) = *Lampsilis teres* (Rafinesque)

- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)

Unio asperimus I. Lea = *Quadrula quadrula* (Rafinesque)

- Call (1885d, 1887)
- Popenoe (1885)

Unio ater I. Lea = *Potamilus purpuratus* (Lamarck)

- Popenoe (1885)

Unio camptodon Say = *Uniomermis tetralasmus* (Say)

- Call (1885b, 1885c, 1885d, 1887)

Unio coccineus Conrad = *Pleurobema sintoxia* (Rafinesque)

- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)

Unio cornutus Barnes = *Obliquaria reflexa* Rafinesque

- Call (1885c, 1885d, 1886, 1887)
- Popenoe (1885)

Unio cylindricus Say = *Quadrula cylindrica* (Say)

- Call (1885b, 1885d)
- Popenoe (1885)

Unio donaciformis (I. Lea) = *Truncilla donaciformis* (I. Lea)

- Call (1885b, 1885c, 1886, 1887)
- Popenoe (1885)

Unio dorfeuilleanus I. Lea = *Quadrula pustulosa* (I. Lea)

- Call (1885b)

Unio ebena I. Lea = *Fusconia ebena* (I. Lea)

- Call (1885b, 1885d) [as: *U. ebenus*]

- Unio elegans* I. Lea = *Truncilla truncata* Rafinesque
- Call (1885b, 1885c, 1885d, 1886, 1887)
 - Popenoe (1885)
- Unio ellipsis* I. Lea = *Obovaria olivaria* (Rafinesque)
- Call (1885b)
 - Popenoe (1885)
- Unio fragosus* Conrad = *Quadrula fragosa* (Conrad)
- Call (1885c, 1885d, 1886, 1887)
 - Popenoe (1885)
- Unio gibbosus* Barnes = *Elliptio dilatata* (Rafinesque)
- Call (1885c, 1885d, 1886, 1887)
 - Isely (1925)
 - Popenoe (1885)
- Unio gracilis* Barnes = *Leptodea fragilis* (Rafinesque)
- Call (1885b, 1885c, 1885d, 1886, 1887)
 - Popenoe (1885)
- Unio houstonensis* I. Lea = probably misidentified specimens of *Quadrula pustulosa* (I. Lea). See comments under *Quadrula houstonensis* (I. Lea), SMOOTH PIMPLEBACK.
- Call (1885c)
- Synonyms:**
- Quadrula houstonensis* (I. Lea)
- Unio lacrymosus* I. Lea = *Quadrula quadrula* (Rafinesque)
- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. lacrymosus*]
- Unio laevisimus* I. Lea = *Potamilus obiensis* (Rafinesque)
- Call (1885b, 1885d, 1886, 1887)
 - Popenoe (1885)
- Unio ligamentina* Lamarck = *Actinonaias ligamentina* (Lamarck) or possibly misidentified specimens of *Lampsilis rafinesqueana* Frierson. See comments under *Actinonaias ligamentina*.
- Call (1885, 1885d, 1886, 1887) [as: *U. ligamentinus*]
 - Popenoe (1885) [as: *U. ligamentinus*]
- Unio luteola* Lamarck = *Lampsilis siliquoidea* (Barnes)
- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. luteolus*]
 - Popenoe (1885) [as: *U. luteolus*]
- Unio metanevrus* (Rafinesque) = *Quadrula metanevra* (Rafinesque)
- Call (1885c, 1885d, 1886, 1887)
 - Popenoe (1885)
- Unio multiplicatus* I. Lea = *Megalonaias nervosa* (Rafinesque)
- Call (1886, 1887)
 - Popenoe (1885)
- Unio negatus* I. Lea = *Fusconaia flava* (Rafinesque)
- Call (1887)
- Unio occidens* I. Lea = *Lampsilis cardium* (Rafinesque)
- Call (1885c, 1885d, 1887)
- Unio parvus* Barnes = *Toxolasma parvus* (Barnes)
- Call (1885b, 1885c, 1885d, 1887)
 - Popenoe (1885)
- Unio pealii* I. Lea = *Obovaria olivaria* (Rafinesque)
- Call (1885b, 1885c, 1886)
- Unio petrinus* Gould = possibly misidentified specimens of *Quadrula pustulosa* (I. Lea). *Quadrula petrina* (Gould), TEXAS PIMPLEBACK, occurs only in Texas (Williams et al. 1993).
- Call (1885c, 1885d, 1886)
- Unio phaseolus* Hildreth = *Ptychobranthus occidentalis* (Conrad)
- Call (1885c, 1885d, 1886)
 - Popenoe (1885)
- Unio plenus* I. Lea = *Pleurobema sintoxia* (Rafinesque)?
- Call (1885d)
- Unio plicata* Say = *Amblema plicata* (Say)
- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. plicatus*]
- Unio popenoi* Call = *Cyprogenia aberti* (Conrad)
- Call (1885a, 1885b, 1886, 1887)
 - Popenoe (1885)
- Unio powellii* I. Lea = *Actinonaias ligamentina* (Lamarck) or = possibly misidentified specimens of *Lampsilis rafinesqueana* Frierson. *Lampsilis powelli* (I. Lea), ARKANSAS FATMUCKET, occurs only in Arkansas (Williams et al. 1993). See comments under *Actinonaias ligamentina*.
- Call (1887)
- Synonyms:**
- Lampsilis powelli* (I. Lea)
- Unio purpurata* Lamarck = *Potamilus purpuratus* (Lamarck)
- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. purpuratus*]
- Unio pustulatus* I. Lea = *Quadrula nodulata* (Rafinesque)
- Call (1885d, 1886, 1887)
- Unio pustulosus* I. Lea = *Quadrula pustulosa* (I. Lea)
- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)
- Unio pyramidatus* I. Lea = possibly misidentified specimens of *Pleurobema sintoxia* (Rafinesque). *Pleurobema pyramidatum* (I. Lea), PYRAMID PIGTOE, does not occur in Kansas (Williams et al. 1993).
- Call (1885c)
- Synonyms:**
- Pleurobema cordatum pyramidatum* (I. Lea)
- Quadrula pyramidata* (I. Lea)
- Unio recta* Lamarck = *Ligumia recta* (Lamarck)
- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. rectus*]
 - Popenoe (1885) [as: *U. rectus*]
- Unio rubiginosa* I. Lea = *Fusconaia flava* (Rafinesque)
- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. rubiginosus*]
 - Popenoe (1885) [as: *U. rubiginosus*]
- Unio satur* I. Lea = possibly misidentified specimens of *Lampsilis cardium* (Rafinesque). *Lampsilis satur* (I. Lea), SANDBANK POCKETBOOK, does not occur in Kansas (Williams et al. 1993).
- Call (1886) [= *Unio occidens*]
- Synonyms:**
- Lampsilis ventricosa satura* (I. Lea)
- Unio schoolcraftii* I. Lea = *Quadrula pustulosa* (I. Lea)
- Call (1887)
- Unio securis* Lea = *Ellipsaria lineolata* (Rafinesque)
- Call (1885c, 1887)
 - Popenoe (1885)
- Unio solidus* I. Lea = *Pleurobema sintoxia* (Rafinesque)
- Call (1885c, 1886, 1887)
 - Popenoe (1885)
- Unio spatulatus* I. Lea = *Venustaconcha ellipsiformis* (Conrad)
- Call (1886)
- Unio sphaericus* I. Lea = *Quadrula pustulosa* (I. Lea)
- Call (1886, 1887)
- Unio subrostratus* Say = *Ligumia subrostrata* (Say)
- Call (1885c, 1885d, 1886, 1887)
 - Popenoe (1885)

Unio tenuissimus I. Lea = *Leptodea leptodon* (Rafinesque)

- Call (1885c)

Unio tetralasmus Say [and subspecies] = *Unio tetralasmus* (Say)

- Baker (1909)
- Isely (1925)
- Scammon (1906)

Unio topekaensis I. Lea = *Ligumia subrostrata* (Say)

- Call (1885b, 1885c) [as: *U. topekaensis*]
- Popenoe (1885) [as: *U. topekaensis*]

Unio trigonus I. Lea = *Fusconaia flava* (Rafinesque)

- Call (1886, 1887)

Unio tuberculata Barnes = *Tritogonia verrucosa* (Rafinesque)

- Call (1885b, 1885c, 1885d, 1886, 1887) [as: *U. tuberculatus*]
- Popenoe (1885) [as: *U. tuberculatus*]

Synonyms:

Tritogonia tuberculata (Barnes)

Unio undulatus Barnes = *Amblema plicata* (Say)

- Call (1885b, 1885c, 1885d, 1886, 1887)
- Popenoe (1885)

Unio ventricosus Barnes = *Lampsilis cardium* (Rafinesque)

- Call (1885b)
- Popenoe (1885)

Unio zigzag I. Lea = *Truncilla donaciformis* (I. Lea)

- Call (1885b, 1887)

***Unio tetralasmus* (Say), PONDHORN**

- Angelo et al. (2007)
- Angelo et al. (2009)
- Basch et al. (1961)
- Bergman et al. (2000)
- Branson (1966b, 1966c)
- Cope (1985)
- Distler and Bleam (1995)
- Dorsey (2000)
- DuBois (1981)
- Franzen and Leonard (1943)
- Hoke (1996, 1997, 2004, 2005)
- Huggins and Moss (1974)
- Leonard and Leonard (1946)
- Leonard (1943)
- Liechti and Huggins (1977)
- Metcalf (1980, 1983)
- Miller (1966, 1970)
- Murray and Leonard (1962)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Schuster (1978, 1979)
- Schuster and DuBois (1979)
- Sowards et al. (2016)
- Tiemann (2006)
- Vanleeuwen and Arruda (2001)
- Wedel (1959)
- Welch et al. (2011)
- Wolf and Stark (2008)

Synonyms:

Unio camptodon Say

Unio tetralasmus Say

***Utterbackia imbecillis* Say, PAPER PONDSHELL**

- Angelo et al. (2009)
- Bergman et al. (2000)
- Bleam and Distler (1996)
- Combes and Edds (2005)
- Distler and Bleam (1995)
- Hoke (1996, 1997, 2005)
- Karlin et al. (2017)
- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)
- Obermeyer et al. (1997b)
- Pilger and Gido (2012)
- Sowards et al. (2016)
- Tiemann (2006)
- Wolf and Stark (2008)

Synonyms:

Anodonta imbecillis Say

***Venustaconcha ellipsiformis* (Conrad), ELLIPSE**

V. ellipsiformis occurs the Marais des Cygnes drainage of Kansas. Specimens from the Spring River basin presently are identified as *V. ellipsiformis*, but might be a new species.

- Angelo et al. (2009)
- Cope (1985)
- Obermeyer et al. (1997b)

Synonyms:

Actinonaias ellipsiformis (Conrad)

Lampsilis ellipsiformis (Conrad)

Unio spatulatus I. Lea

Venustaconcha pleasi (Marsh)

Villosa iris (Lea)

Venustaconcha pleasi (Marsh), BLEEDINGTOOTH

Venustaconcha pleasi does not occur in Kansas. See

Venustaconcha ellipsiformis (Conrad).

- Obermeyer et al. (1995)
- Obermeyer et al. (1997a)

Villosa arkansasensis (I. Lea), OUACHITA CREEKSHELL

Villosa arkansasensis occurs only in Arkansas and Oklahoma (Williams et al. 1993). Kansas specimens are *Strophitus rugosus* (Swainson).

Synonyms:

Anodonta arkansasensis I. Lea

Villosa iris (Lea), RAINBOWSHELL = possibly misidentified specimens of *Venustaconcha ellipsiformis* (Conrad). *Villosa iris* is not known to occur in Kansas.

- Cope (1979)
- Schuster and DuBois (1979)

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