



# FRESHWATER SNAILS OF OHIO *field guide*

OHIO DIVISION OF WILDLIFE



# INTRODUCTION

Freshwater snails can occur in all bodies of water in Ohio, from large rivers and lakes to temporary pools and ditches. Some are adapted to flowing rivers, others to calm ponds, and others to the margins of streams. Most feed by grazing algae from rocks and vegetation and in turn, they are an important food source for many fishes, birds, and even mammals. They are a crucial part of any freshwater ecosystem. Most grow fast and do not live very long. Contrary to some legends, snails cannot leave their shells – they are permanently attached to them and a freshwater snail without a shell is a dead snail!

This booklet is produced by the ODNR Division of Wildlife as a free publication. This booklet is not for resale. Any unauthorized reproduction is prohibited. All images within this booklet are copyrighted by the ODNR Division of Wildlife and its contributing artists and photographers. For additional information, please call 1-800-WILDLIFE (1-800-945-3543).

## HOW TO USE THIS BOOKLET

The diagram illustrates the layout of a page in the booklet. It shows two snail shells, a map of Ohio with recorded counties highlighted, and descriptive text for the Rock Fossaria snail. Red arrows point from labels on the right side of the diagram to the corresponding elements on the page. The labels are: Common Name, Family Name, Scientific Name, Overview, Counties Recorded, and Size (Max Length or Width). A label on the left side points to the page number 32.

**Common Name**

**Family Name**

**Scientific Name**

**Overview**

**Counties Recorded**

**Size (Max Length or Width)**

**Page Number** 32

# FRESHWATER SNAILS OF OHIO

## TABLE OF CONTENTS

02 Table of Contents  
04 Introduction

05 Glossary  
06 Sinistral or Dextral?

07 Species Accounts  
49 References

50 Publication Funding

# SPECIES INDEX

## VALVATIDAE

- 7 Purple Valvata
- 8 Mossy Valvata
- 9 Threeridge Valvata

## AMNICOLIDAE

- 10 Amnicola Species

## HYDROBIIDAE

- 11 Hydrobiid Species

## PLEUROCERIDAE

- 12 Liver Elimia
- 13 Sharp Rocksnail
- 14 Silty Rocksnail
- 15 Varicose Rocksnail
- 16 Onyx Rocksnail
- 17 Broad Mudalia

## POMATIOPSIDAE

- 18 Brown Walker
- 19 Slender Walker

## VIVIPARIDAE

- 20 Pointed Campeloma
- 21 Banded Mysterysnail
- 22 Japanese Mysterysnail
- 23 Chinese Mysterysnail
- 24 Furrowed Lioplax

## TATEIDAE

- 25 Potamopyrgus Antipodarum

## BITHYNIIDAE

- 26 Bithynia Tentaculata

## LYMNAEIDAE

- 27 Marsh Pondsnaill
- 28 Flat-Whorled Pondsnaill
- 29 Swamp Lymnaea
- 30 Wrinkled Marshsnail
- 31 Woodland Pondsnaill
- 32 Rock Fossaria
- 33 Mimic Lymnaea
- 34 Big-Ear Radix

## PHYSIDAE

- 35 Lance Aplexa
- 36 Tadpole Physa
- 37 European Physa

## ANCYLIDAE

- 38 Fragile Ancylus
- 39 Creeping Ancylus

## PLANORBIDAE

- 40 Two-Ridge Rams-Horn
- 41 Bellmouth Rams-Horn
- 42 File Rams-Horn
- 43 Marsh Rams-Horn
- 44 Star Gyro
- 45 Flexed Gyro
- 46 Ash Gyro
- 47 Sharp Sprite
- 48 Bugle Sprite

# FRESHWATER SNAILS OF OHIO

Sandwiched between the Great Lakes and the Ohio River, Ohio is uniquely situated to have species from both faunas. In particular, Ohio forms the southern extent of many otherwise northerly snails. Freshwater snails require calcium to build their shells and perhaps for this reason some species seem to be rare in unglaciated southeastern Ohio where there is less of this mineral.

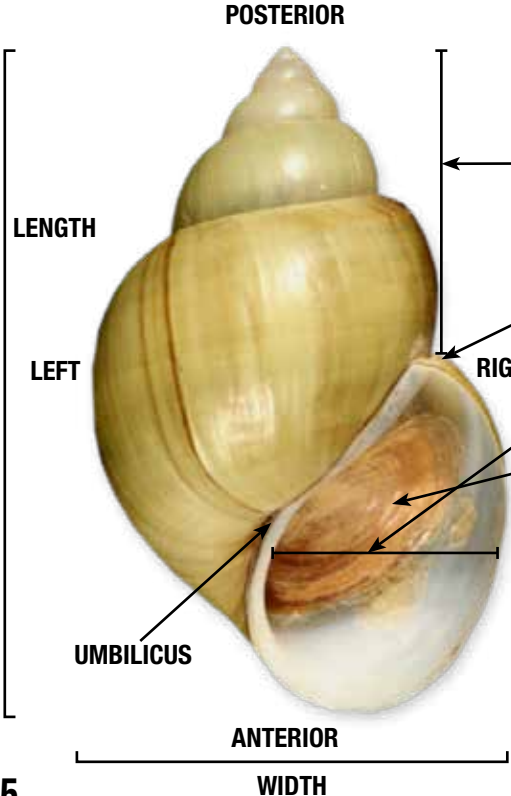
Freshwater snails are not all related to each other. The freshwater environment has been invaded by many different snail families over many millions of years. But they tend to fall into two large groups called prosobranchs and pulmonates. Prosobranchs generally breathe with a gill or gills and have an operculum. The operculum is a trap door attached to the snail's foot that seals the aperture when the animal is withdrawn into its shell. Pulmonates tend to lack both gills and an operculum. Freshwater pulmonates breathe by taking air from the surface into a cavity of their body – a kind of “lung” – or by letting oxygen diffuse across their skin. Because pulmonates do not breathe with a gill they can be much more tolerant of adverse water conditions such as stagnation and moderate pollution. Most prosobranchs on the other hand require cleaner water.

Ohio is one of the best surveyed states when it comes to molluscs. Even so, many if not all of the species covered here undoubtedly occur in additional counties. This is particularly true of the many minute species that are often overlooked.



POND SNAIL | PHOTO BY AMELIA MARTIN

# GLOSSARY



**SPIRE**  
The shell whorls above the aperture. The spire may be high or low.

**COLUMELLA**  
The portion of the shell to which the aperture is attached.

**APERTURE**  
The opening of the shell through which the animal protrudes.

**OPERCULUM**  
A trapdoor attached to the animal's foot that seals the shell when the snail is withdrawn. Not all snails have an operculum.

**WHORLS**  
The turns of the shell.

SHOWN: POINTED CAMPELOMA



## SINISTRAL

SHOWN: LANCE APLEXA

6

# SINISTRAL OR DEXTRAL?

Snails may be “left-handed” or “right-handed.” Left-handed shells, called sinistral, coil in the opposite direction of right-handed shells, called dextral. To determine which type of shell you have:

Orient the shell posterior (spire) end up and the aperture facing you. Imagine a line through the shell from top to bottom. If the aperture is left of the line the shell is sinistral; if right it is dextral.

Some freshwater shell families are predominately sinistral – a rather rare condition in snails in general. The family *Planorbidae* can be difficult to determine as they coil in a single plane and the spire may be hidden from view. And to complicate things even more, all members of this family begin life with a sinistral shell, a few then change their shell's orientation to dextral, and others turn their sinistral shells over in life to look as if they have a dextral shell.



## DEXTRAL

SHOWN: LIVER ELIMIA

# PURPLECAP VALVATA

*Valvata perdepressa* (Val-vata • per-de-pressa)

**DESCRIPTION:** The shell is very small, highly flattened, sometimes with reddish central whorls. The animal has an uncalcified multispiral operculum, a trapdoor on its foot that seals the aperture when withdrawn.

**SIZE:** To ca. 6 mm in width.

**HABITAT:** Little is known of the habits of this species. Most specimens have been found dead in beach drift.

**RANGE:** The Purple Valvata is found in the Great Lakes but is rare in Ohio.

**SIMILAR SPECIES:** Species of the family *Planorbidae* are similar but are usually larger and their shells coil in a single plane; the Purple-cap Valvata is very flattened but the shells do not coil in a single plane. Members of the *Planorbidae* also lack an operculum.



RECORDED  
COUNTIES



6 MM WIDTH ACTUAL SIZE

## MOSSY VALVATA

*Valvata sincera* (Val-vata • sin-cer-a)

**DESCRIPTION:** The shell is very small, compact, the surface crossed with very fine wrinkles. The animal has an uncalcified multispiral operculum.

**SIZE:** To ca. 5 mm in width.

**HABITAT:** This small species prefers lakes, often in deep water on vegetation and mud.

**RANGE:** The Mossy Valvata is found in northern North America; it is rare in Ohio in Lake Erie. Ohio is on the southern edge of its range.

**SIMILAR SPECIES:** The small shell covered with fine (microscopic) wrinkles and possessing an operculum, differs from all other Ohio freshwater snails. It has a higher spire than the Purplecap Valvata.



RECORDED  
COUNTIES



5 MM WIDTH ACTUAL SIZE



## THREERIDGE VALVATA

*Valvata tricarinata* (Val-vata • try-car-in-ata)

**DESCRIPTION:** The shell is very small, compact, with 1-3 sharp keels or ribs that spiral around the whorls. The animal has an uncalcified multispiral operculum.

**SIZE:** To ca. 6 mm in width.

**HABITAT:** It is found in permanent water bodies on vegetation.

**RANGE:** The Threeridge Valvata is found from northern North America south to the Midwest. It is widespread in Ohio but perhaps avoids unglaciated areas.

**SIMILAR SPECIES:** The sharply keeled, small, compact shell is distinctive.



RECORDED  
COUNTIES



6 MM WIDTH ACTUAL SIZE

## AMNICOLA SPECIES

Representative shown: *Amnicola limosus* (Am-nic-ola • lee-mose-us) Mud Amnicola

**DESCRIPTION:** The shells are very small to minute, usually smooth, and compact. The animal has an uncalcified paucispiral operculum.

**SIZE:** Usually 2-4 mm in length.

**HABITAT:** Species of *Amnicola* are found in most clean water bodies on vegetation.

**RANGE:** Species of *Amnicola* are widespread in North America but are often overlooked.

**SIMILAR SPECIES:** The similar Mud Bithynia has a calcified operculum. Identification of species of *Amnicolidae* and *Hydrobiidae* (next) may require an expert on the groups.

**REMARKS:** The species shown here, the Mud Amnicola, is the most common member in Ohio and probably is much more widespread than shown. Minute shells such as these are often under-represented in surveys and collections.



RECORDED  
COUNTIES

  
2-4 MM LENGTH ACTUAL SIZE

## HYDROBIID SPECIES

Representative shown: *Cincinnatia integra* (Cincinnati-ah • in-teg-rah) Midland Siltsnail

**DESCRIPTION:** Hydrobiids have very small to minute, usually smooth, compact shells. The animal has an uncalcified operculum.

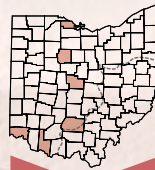
**SIZE:** Minute to ca. 6 mm in length.

**HABITAT:** Hydrobiid habitat varies with species. Some live in open water, others in seeps and springs, and others in perennial water bodies.

**RANGE:** Hydrobiid species are widespread in North America but are often overlooked. Many inhabit very narrow ranges such as a single spring or cave.

**SIMILAR SPECIES:** The Mud Bithynia has a calcified operculum. Identification of species of Amnicolidae and Hydrobiidae may require an expert on the groups.

**REMARKS:** Identification often requires high magnification, including the use of scanning electron microscopes. The species shown here, the Midland Siltsnail, may be the most common member in Ohio and probably is much more widespread than shown.



RECORDED  
COUNTIES



6 MM LENGTH ACTUAL SIZE



# LIVER ELIMIA

*Elimia livescens* (Ee-lim-ee-ah • live-es-ens) *Pleurocera semicarnita livescens*

**DESCRIPTION:** These are medium-sized, smooth shells with a very high spire and a small aperture. The animal has an uncalcified operculum.

**SIZE:** To ca. 25 mm in length.

**HABITAT:** It is found in most clean water bodies, often abundant where it occurs. It is more common in creeks than large rivers.

**RANGE:** This species lives in the upper Ohio River system and the Great Lakes. It is probably found state-wide in Ohio in the proper water conditions but there are fewer records in the north-western part of the state.

**SIMILAR SPECIES:** The Sharp Hornsnail and Silty Hornsnail are larger with higher spires compared to their apertures.

**REMARKS:** This snail can be an indicator of good water quality in streams.



RECORDED  
COUNTIES



25 MM LENGTH ACTUAL SIZE

# SHARP HORNSNAIL

*Pleurocera acuta* (Plur-os-era • ah-cute-ah)

**DESCRIPTION:** The shell is large with a very high spire and a small aperture. The whorls are rounded but they may have weak spiral ridges or grooves. The animal has an uncalcified operculum.

**SIZE:** To ca. 40 mm in length.

**HABITAT:** Typical of rivers, large streams, and large lakes. It is not a creek species.

**RANGE:** The Sharp Hornsnail occurs in the upper Ohio and Mississippi river systems and the Great Lakes. In Ohio, it is found state-wide in rivers, in large streams, and in Lake Erie.

**SIMILAR SPECIES:** The Liver Elimea (previous) is smaller, with a shorter spire. The similar Silty Hornsnail (next) is more compact, with a spiral keel on the midpoint of the whorl, but some specimens may be difficult to place. The Silty Hornsnail probably does not occur in the Great Lakes drainages.



RECORDED  
COUNTIES



40 MM LENGTH ACTUAL SIZE

## SILTY HORNSNAIL

*Pleurocera canaliculata* (Plur-os-era • canal-ik-u-lata)

**DESCRIPTION:** The shell is large with a very high spire and a small aperture. The whorls have one or more prominent ridges or keels at the midpoint rendering the whorls very angular. The animal has an uncalcified operculum.

**SIZE:** To ca. 40 mm in length.

**HABITAT:** The Silty Hornsnail is typical of rivers and large streams. It is not a creek species.

**RANGE:** This species inhabits the upper Ohio and Mississippi river systems. It apparently does not occur in the Great Lakes drainages.

**SIMILAR SPECIES:** The Liver Elimea is smaller, with a shorter spire. The similar Sharp Hornsnail (previous) is more elongated and lacks the strong spiral keel on the midpoint of the whorl, but some specimens may be difficult to place. Unlike the Sharp Hornsnail, the Silty Hornsnail does not occur in the Great Lakes drainages.



RECORDED  
COUNTIES



40 MM LENGTH ACTUAL SIZE

# VARICOSE ROCKSNAIL

*Lithasia verrucosa* (*Lith-asia* • *ver-u-cose-ah*)

**DESCRIPTION:** The distinctive shell is medium-sized, compact, solid, and the spire is about as high as the aperture. The whorls have several spiral rows of bumps or knobs. The animal has an uncalcified operculum.

**SIZE:** To ca. 30 mm in length.

**HABITAT:** The Varicose Rocksnail is strictly a big river species.

**RANGE:** This species is found in the upper Ohio River system. It does not occur in the Great Lakes drainages. In Ohio, it is very rare in the downstream Ohio River mainstem.

**SIMILAR SPECIES:** The rows of knobs on the shell are unique in Ohio's freshwater snails. Other species of *Lithasia* occur in the lower Ohio River system including the Duck and Cumberland rivers. All are sculptured with knobs and ribs.



RECORDED  
COUNTIES



30 MM LENGTH ACTUAL SIZE

# ONYX ROCKSNAIL

*Leptoxis praerosa* (*Lep-tox-is • pree-rosa*)

**DESCRIPTION:** The shell is small, very compact and heavy, with a very low spire and very large aperture. The animal has an uncalcified operculum.

**SIZE:** To ca. 20 mm in length.

**HABITAT:** This is a big river species in free-flowing water.

**RANGE:** This species is limited to the Ohio River system. It does not occur in the Great Lakes drainages. In Ohio, it is very rare in the downstream Ohio River mainstem.

**SIMILAR SPECIES:** No Ohio freshwater snail resembles the Onyx Rocksnail except for the extinct Broad Mudalia. The round, compact shell with an operculum is distinct.

**REMARKS:** The flattened, compact shape is adapted to life in rivers having swift currents. The impoundment of many rivers has eliminated that habitat.



RECORDED  
COUNTIES



20 MM LENGTH ACTUAL SIZE



# BROAD MUDALIA

*Leptoxis trilineata* (*Lep-tox-is • try-lin-ee-ata*)

**DESCRIPTION:** The shell is small, very compact, with a low spire and very large aperture. The animal has an uncalcified operculum.

**SIZE:** To ca. 10 mm in length.

**STATUS:** Presumed Extinct

**HABITAT:** This was apparently a big river species but its exact habitat is unknown.

**RANGE:** The Broad Mudalia is known from the upper Ohio River system. It did not occur in the Great Lakes drainages. In Ohio, it was very rare in the downstream Ohio River mainstem.

**SIMILAR SPECIES:** No Ohio freshwater snail resembles this species except for the Onyx Rocksnail. That snail is larger and lacks the revolving colored lines.

**REMARKS:** This apparently is the only extinct freshwater snail in Ohio. The specimen shown was collected at Cincinnati in the 1800s.



RECORDED  
COUNTIES



10 MM LENGTH ACTUAL SIZE

## BROWN WALKER

*Pomatiopsis cincinnatiensis* (*Po-mati-op-sis • cincinnati-ensis*)

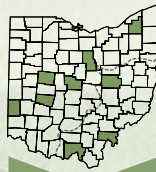
**DESCRIPTION:** The Brown Walker has a small, very compact shell with rounded whorls and a high spire. The animal has an uncalcified paucispiral operculum.

**SIZE:** To ca. 5 mm in length.

**HABITAT:** This is an amphibious snail living along the wet margins of streams and ponds. Nevertheless it breathes with gills and must remain moist.

**RANGE:** This snail ranges from the North American midwest south to Tennessee. It is probably more wide-spread in Ohio than the records indicate.

**SIMILAR SPECIES:** It differs from the Mud Bithynia in lacking a calcified operculum. It has a lower spire than the related Slender Walker (next). It is larger than most species of Amnicolidae and Hydrobiidae. The Brown Walker is perhaps best identified by its amphibious nature.



RECORDED  
COUNTIES



5 MM LENGTH ACTUAL SIZE

# SLENDER WALKER

*Pomatiopsis lapidaria* (Po-mati-op-sis • lap-i-dar-eeya)

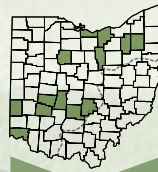
**DESCRIPTION:** The shell is small and compact with rounded whorls and a high spire. The animal has an uncalcified paucispiral operculum.

**SIZE:** To ca. 6 mm in length.

**HABITAT:** The Slender Walker is an amphibious snail living along the wet margins of streams and ponds. Nevertheless it breathes with gills and must remain moist.

**RANGE:** This species occurs throughout eastern North America. It is probably more wide-spread in Ohio than the records indicate, although it seems to avoid unglaciated areas.

**SIMILAR SPECIES:** It differs from most other minute freshwater snails, including the Brown Walker (previous), in having a high spire. It is also identified by its amphibious nature.



RECORDED  
COUNTIES



6 MM LENGTH ACTUAL SIZE

# POINTED CAMPELOMA

*Campeloma decisum* (Camp-a-loma • dee-sise-um)

**DESCRIPTION:** The shell is medium to large-sized, very solid, with rounded whorls. It is often highly eroded and pitted. The animal has an uncal-cified concentric operculum.

**SIZE:** To ca. 40 mm in length.

**HABITAT:** The Pointed Campeloma is commonly found burrowing in the mud of lakes, ponds, and sluggish rivers and creeks.

**RANGE:** This species is widely distributed in the eastern half of North America except for the southeastern states where it is replaced by simi-lar species. It is found state-wide in Ohio.

**SIMILAR SPECIES:** No other Ohio freshwater snail has the combination of a large, solid, compact, greenish shell with an operculum. The related but much rarer (in Ohio) Banded Mysterysnail (next) is not as elongate and usually has spiral reddish bands.



RECORDED  
COUNTIES



40 MM LENGTH ACTUAL SIZE

# BANDED MYSTERYSNAIL

*Viviparus georgianus* (Vie-vip-ar-us • george-ee-an-us)

**DESCRIPTION:** The shell is medium to large-sized, solid, with rounded whorls and spiral reddish bands. The animal has an uncalcified concentric operculum.

**SIZE:** To ca. 35 mm in length.

**HABITAT:** The Banded Mysterysnail is commonly found burrowing in the mud of lakes, ponds, and sluggish rivers and creeks.

**RANGE:** There are several discontinuous populations across eastern North America. This species is very rare and localized in Ohio.

**SIMILAR SPECIES:** The large, solid, banded shell is unique among Ohio's freshwater snails.

**REMARKS:** As is true for all members of the family *Viviparidae*, the banded mysterysnails gives birth to live young that hatch from eggs that are retained in the female. The mystery is that one day you have a single snail and the next day you have abundant baby snails that appeared "from out of nowhere."



RECORDED  
COUNTIES



35 MM LENGTH ACTUAL SIZE

# JAPANESE MYSTERYSNAIL

*Viviparus japonicus* (Vie-vip-ar-us • jap-on-icus)

**DESCRIPTION:** The shell is very large, solid, with rounded whorls. The spire has spiral ridges. The animal has a large, uncalcified concentric operculum.

**SIZE:** To ca. 70 mm in length.

**STATUS:** Introduced

**HABITAT:** It is commonly found burrowing in the mud of lakes, ponds, and sluggish rivers and creeks.

**RANGE:** This is an exotic from Asia. A few very discontinuous populations occur in North America, usually near cities. Some are thought to be escapees from the aquarium trade, others as an imported (but escaped) food source by Asian immigrants.

**SIMILAR SPECIES:** The Chinese Mysterysnail lacks the spiral ridges on the spire.

**REMARKS:** The Japanese and Chinese Mysterysnails are the largest freshwater snails in Ohio. It is not clear if they represent two different species although they are usually easily separated. Previously placed in *Cipangopaludina*.



RECORDED  
COUNTIES

70 MM LENGTH ACTUAL SIZE

# CHINESE MYSTERYSNAIL

*Viviparus malleatus* (Vie-vip-ar-us • mal-ee-a-tus)

**DESCRIPTION:** The Chinese Mysterysnail shell is very large, solid, with rounded whorls. The spire lacks spiral ridges. The surface of shell is malleated, or dimpled as it were dented by a ballpeen hammer. The animal has a large, uncalcified concentric operculum.

**SIZE:** To ca. 70 mm in length.

**STATUS:** Introduced

**HABITAT:** It is commonly found burrowing in the mud of lakes, ponds, and sluggish rivers and creeks.

**RANGE:** This is another exotic from Asia. A few very discontinuous populations of this species occurs in North America, usually near cities. Some are thought to be escapees from the aquarium trade, others as an imported (but escaped) food source by Asian immigrants.

**SIMILAR SPECIES:** The Japanese Mysterysnail has spiral ridges on the spire.

**REMARKS:** The Japanese and Chinese Mysterysnails are the largest freshwater snails in Ohio. It is not clear if they represent two different species although they are usually easily separated. Previously placed in *Cipangopaludina*.



RECORDED  
COUNTIES

70 MM LENGTH ACTUAL SIZE

## FURROWED LIOPLAX

*Lioplax sulculosa* (Lie-o-plax • sulc-u-losa)

**DESCRIPTION:** The shell is medium-sized, very compact, often with angular whorls. It is covered with very fine spiral lines. The animal has an uncalcified concentric operculum.

**SIZE:** To ca. 25 mm in length.

**HABITAT:** This is a big river and lake species.

**RANGE:** The Furrowed Lioplax occurs in the upper Ohio and Mississippi river systems and Lake Erie. In Ohio, there is a single confirmed record for Lake Erie and it is very rare in the downstream Ohio River mainstem.

**SIMILAR SPECIES:** The pale shell with very fine spiral lines sets this species apart from all other Ohio freshwater snails.

**REMARKS:** There are few species of *Lioplax* in North America and most are uncommon to rare species.



RECORDED  
COUNTIES



25 MM LENGTH ACTUAL SIZE



# NEW ZEALAND MUDSNAIL

*Potamopyrgus antipodarum* (Po-tam-o-pirg-us • anti-pod-ar-um)

**DESCRIPTION:** The shell is small, very compact, with rounded whorls and a fairly high spire. Some specimens have a spiral row of short spines or a keel on the whorls. The animal has an uncalcified paucispiral operculum.

**SIZE:** To ca. 10 mm in length.

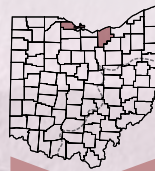
**STATUS:** Introduced

**HABITAT:** This invasive snail occurs in many freshwater habitats including highly eutrophic water. They may attain extremely high densities (nearly 6,000/sq. meter).

**RANGE:** Originally from New Zealand, it now occurs in the Great Lakes and numerous lakes in western North America.

**SIMILAR SPECIES:** The combination of a small, high spired, brown shell, sometimes with a row of spines or a keel, is not to be found in any other Ohio freshwater snail.

**REMARKS:** This snail was first found in Europe in the 1800s but did not occur in North America until 1987.



RECORDED  
COUNTIES



10 MM LENGTH ACTUAL SIZE

## MUD BITHYNIA (FAUCET SNAIL)

*Bithynia tentaculata* (Bith-in-nee-ya • ten-tac-u-lata)

**DESCRIPTION:** The shell is small, smooth, compact, the triangular spire about as high as the aperture. The animal has a white, thick, calcified operculum, a trapdoor on its foot that seals the aperture when withdrawn. It has a concentric operculum.

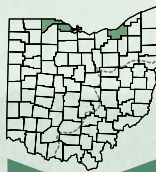
**SIZE:** To ca. 15 mm.

**HABITAT:** The Mud Bithynia lives in large lakes and sluggish rivers, usually in shallow water.

**RANGE:** A native of Europe, it now occurs in the Great Lakes and parts of the eastern United States.

**SIMILAR SPECIES:** The Mud Bithynia resembles some species of *Amnicolidae* and *Hydrobiidae* but is generally larger. The operculum is thick, white, and calcified in *Bithynia*. It is thin, brown, and uncalcified in the other families.

**REMARKS:** The invasive Mud Bithynia first appeared in Lake Erie about 1930.



RECORDED  
COUNTIES



15 MM LENGTH ACTUAL SIZE

# MARSH PONDSNAIL

*Lymnaea elodes* (Lim-nee-a • e-lode-ees)

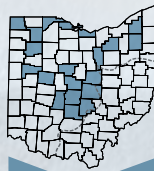
**DESCRIPTION:** A fairly large, fragile, elongated shell. The spire is very high and tapers to a fine point. Some individuals have numerous dents covering the shell, others may be quite smooth. Adults often have a brown band just within the aperture. This species can be quite variable across its wide range. The animal lacks an operculum.

**SIZE:** To ca. 40 mm in length.

**HABITAT:** As its name suggests, this snail frequents marshes, ponds, and areas with little water flow. It often occurs among cattails and may be very common. It is not expected to be found in streams and rivers.

**RANGE:** It is widely distributed in North America, possibly in Europe as well. In Ohio it avoids unglaciated regions.

**SIMILAR SPECIES:** The much rarer Flat-whorled Pondsnaail (next) is even more elongate and narrow. The Swamp *Lymnaea* is larger and the last whorl is more expanded.



RECORDED  
COUNTIES



40 MM LENGTH ACTUAL SIZE

# FLAT-WHORLED PONDSNAIL

*Lymnaea exilis* (Lim-nee-a • ex-ile-is)

**DESCRIPTION:** A fairly large, fragile, very elongated shell, the sides of the shell are nearly flat. The spire is very high and tapers to a fine point. Adults often have a brown band just within the aperture. The animal lacks an operculum.

**SIZE:** To ca. 35 mm in length.

**HABITAT:** This snail lives in marshes, ponds, and areas with little water flow, including temporary water bodies. It is not expected to be found in streams and rivers.

**RANGE:** The Flat-whorled Pondsail occurs in the midwestern United States, but is sporadic. In Ohio it is known from Calamus Swamp in Pickaway County, but is probably scattered across the state.

**SIMILAR SPECIES:** The similar but much more common Marsh Pondsail (previous) is less elongate and less narrow. The Swamp Lymnaea (next) is larger and the last whorl is more expanded.



RECORDED  
COUNTIES



35 MM LENGTH ACTUAL SIZE

# SWAMP LYMNAEA

*Lymnaea stagnalis* (Lim-nee-a • stag-nal-is)

**DESCRIPTION:** This is a large but very fragile, elongated shell. The spire is very high and tapers to a fine point. The last whorl of the adult shell is noticeably expanded and rounded resulting in a wide aperture. The columella has a prominent twist. The animal lacks an operculum.

**SIZE:** To ca. 60 mm in length.

**HABITAT:** This species frequents swamps, lakes, and ponds.

**RANGE:** It is widely distributed in northern North America and Europe. Some workers consider the North American populations to be different from the European ones. It is probably more widely distributed in Ohio than recorded here.

**SIMILAR SPECIES:** The combination of large size, expanded last whorl, and wide aperture distinguishes this species from other lymnaeids.



RECORDED  
COUNTIES



60 MM LENGTH ACTUAL SIZE

# WRINKLED MARSHSNAIL

*Lymnaea caperata* (Lim-nee-a•ca-per-ata)

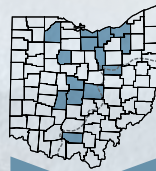
**DESCRIPTION:** This is a medium-sized, fragile, compact shell. The spire is about as tall as the aperture. The shell is covered with microscopic spiral threads. The animal lacks an operculum.

**SIZE:** To ca. 15 mm in length.

**HABITAT:** This snail lives in temporary ponds, less commonly in lakes, streams, and rivers.

**RANGE:** The Wrinkled Marshsnail is widespread in northern North America. In Ohio it is found in unglaciated portions of the state.

**SIMILAR SPECIES:** The overall shell shape and presence of the microscopic spiral threads are unique among Ohio's freshwater snails.



RECORDED  
COUNTIES



15 MM LENGTH ACTUAL SIZE

# WOODLAND PONDSNAIL

*Lymnaea catascopium* (Lim-nee-a•cata-scope-ee-um)

**DESCRIPTION:** The Woodland Pondsnaail has a medium-sized, rather solid, compact shell. The spire is about as tall as the aperture or less. The aperture is wide and rounded. The animal lacks an operculum.

**SIZE:** Rarely to ca. 30 mm, usually ca. 20 mm in length.

**HABITAT:** This snail is most common in large lakes and sluggish rivers.

**RANGE:** It is widespread in northern North America. Ohio is at its southern limit.

**SIMILAR SPECIES:** The compact, solid shell with a wide aperture, combined with its lake and river habitat, sets it apart from other lymnaeids.



RECORDED  
COUNTIES



20 MM LENGTH ACTUAL SIZE  
30 MM LENGTH RARE SIZE

# ROCK FOSSARIA

*Lymnaea humilis* (Lim-nee-a•hu-mil-is)

**DESCRIPTION:** These are small, thin, compact shells, the spires about as tall as the apertures. The animal lacks an operculum.

**SIZE:** Usually 8-10 mm in length.

**HABITAT:** This species is an aquatic edge species, which can survive receding water but is not as amphibious as the *Pomatiopsidae*.

**RANGE:** This species is widespread in North America but is often overlooked.

**SIMILAR SPECIES:** Similar snails such as the Mud Bithynia and members of the *Amnicolidae*, *Hydrobiidae*, and *Pomatiopsidae* have an operculum.

**REMARKS:** There are a number of nominal taxa, including *humilis*, assigned to the genus *Fossaria*. Five of these occur in Ohio. All five have been placed in synonymy with *humilis*, which has been moved from *lymnaea* although some others still use *calba* as the genus rather than subgenus name. This species is a widespread member of the Ohio fauna.



RECORDED  
COUNTIES



8-10 MM LENGTH ACTUAL SIZE



# MIMIC LYMNAEA

*Pseudosuccinea columella* (Sudo-suk-sin-eeya • col-u-mella)

**DESCRIPTION:** The Mimic Lymnaea has a medium-sized, very fragile shell with a short spire and an expansive aperture. The animal lacks an operculum.

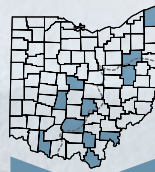
**SIZE:** To ca. 20 mm in length.

**HABITAT:** It is found in calm bodies of water of all sizes.

**RANGE:** Widespread in eastern North America, it is probably more widespread in Ohio than records indicate.

**SIMILAR SPECIES:** This is the only Ohio freshwater snail with the combination of a low spire and a large aperture, but compare with the much larger Big-ear Radix (next), which has an even wider aperture.

**REMARKS:** The generic name *Pseudosuccinea* refers to its very similar appearance to members of the unrelated land snail family *Succineidae* – a case of convergent evolution.



RECORDED  
COUNTIES



20 MM LENGTH ACTUAL SIZE

# BIG-EAR RADIX

*Radix auricularia* (Ray-dix • ar-ik-cu-lar-eeya)

**DESCRIPTION:** This large, very fragile shell has a very short spire and very large aperture. The animal lacks an operculum.

**SIZE:** To ca. 30 mm in length.

**STATUS:** Introduced

**HABITAT:** It is found in bodies of water of all sizes, flowing or calm. It can live in stagnant water.

**RANGE:** This is a Eurasian species that has been introduced to North America. It is often found near cities. In Ohio it has been found in Lake Erie around Sandusky. An older record for the Ohio-Erie Canal also exists.

**SIMILAR SPECIES:** This is the only Ohio freshwater snail with the combination of a very low spire and a huge aperture. Compare with the much smaller Mimic Lymnaea (previous), which has a smaller aperture.

**REMARKS:** This species first appeared in North America in the Hudson River of New York about 1869. It first occurred in Lake Erie in 1911.



RECORDED  
COUNTIES



30 MM LENGTH ACTUAL SIZE

# LANCE APLEXA

*Aplexa hypnorum* (Ay-plex-a • hip-nor-um)

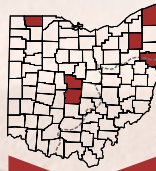
**DESCRIPTION:** The Lance Aplexa has a characteristic small, polished, bullet-shaped shell with a sharp apex. As with all members of the family in Ohio, shells are sinistral – the aperture opens on the left side of the shell. The animal lacks an operculum.

**SIZE:** To ca. 18 mm in length.

**HABITAT:** This snail can be abundant in vernal (temporary) pools, less common in other water bodies.

**RANGE:** It is widespread in northern North America and Europe. Ohio is at its southern limit.

**SIMILAR SPECIES:** The bullet-shaped, sinistral shell is unique among Ohio's freshwater snails.



RECORDED  
COUNTIES



18 MM LENGTH ACTUAL SIZE

# TADPOPLE PHYSA

*Physella gyrina* (*Phy-sella* • *gy-ri-na*)

**DESCRIPTION:** The shell is thin, fragile, and sinistral with a short, blunt spire and a wide aperture. The animal lacks an operculum.

**SIZE:** To ca. 24 mm in length, usually smaller.

**HABITAT:** This species inhabits nearly any water body, including temporary ones, and is tolerant of stagnant and even moderately polluted water.

**RANGE:** It is widespread in North America and is abundant and state-wide in Ohio.

**SIMILAR SPECIES:** The very similar European Physa (next) tends to have a higher and a more straight-sided spire but the two may be difficult to distinguish.

**REMARKS:** The shell characteristics of many *Physidae* species are variable and difficult to define. Some workers feel that the two common Ohio species, the Tadpole and European Physas, are actually a complex of several additional taxa.



RECORDED  
COUNTIES



24 MM LENGTH ACTUAL SIZE

# EUROPEAN PHYSA

*Physella acuta* (Phy-sella • a-cute-a)

**DESCRIPTION:** The shell is thin, fragile, and sinistral with a moderately-high, blunt spire, and a wide aperture. The animal lacks an operculum.

**SIZE:** To ca. 24 mm in length, usually smaller.

**HABITAT:** This species inhabits nearly any water body, including temporary ones, and is tolerant of stagnant and even moderately polluted water.

**RANGE:** This species is widespread in North America and introduced to many places around the world. Originally believed to be an exotic from Europe, it is now believed to be native to North America. It is abundant and state-wide in Ohio.

**SIMILAR SPECIES:** The very similar Tadpole Physa (previous) tends to have a lower and more convex-sided spire but the two may be difficult to distinguish.

**REMARKS:** The shell characteristics of many *Physella* species are variable and difficult to define. Some workers feel that the two common Ohio species, the Tadpole and European Physas, are actually a complex of several additional taxa.



RECORDED  
COUNTIES



24 MM LENGTH ACTUAL SIZE

## FRAGILE ANCYLID

*Ferrissia fragilis* (Ferris-eeya • fragile-is)

**DESCRIPTION:** The shell is minute, very fragile, and limpet-shaped. The animal lacks an operculum.

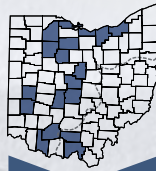
**SIZE:** To ca. 3 mm in length.

**HABITAT:** This species can be found attached to rocks, shells, and cat-tails in lakes and ponds.

**RANGE:** The Fragile Ancyloid is widespread in North America. In Ohio it seems to avoid unglaciated areas.

**SIMILAR SPECIES:** The only other limpet-like snail that is commonly encountered in Ohio is the Creeping Ancyloid (next). That species has a more rounded outline and is slightly larger and taller.

**REMARKS:** The term “limpet” is applied to any shells of this shape. Not all “limpets” are related to each other and they may be found in several snail families, both marine and freshwater – another case of convergent evolution.



RECORDED  
COUNTIES

3 MM LENGTH ACTUAL SIZE

# CREEPING ANCYLID

*Ferrissia rivularis* (*Ferris-eeya • riv-u-lar-is*)

**DESCRIPTION:** The shell is very small, fragile, and limpet-shaped. The sides of the shell are more rounded than straight. The animal lacks an operculum.

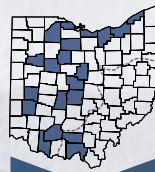
**SIZE:** To ca. 7 mm in length.

**HABITAT:** This species can be found attached to rocks and shells in most water bodies.

**RANGE:** The Creeping Ancyloid is widespread in North America east of the Rocky Mountains. In Ohio it seems to avoid unglaciated areas.

**SIMILAR SPECIES:** The only other limpet-like snail that is commonly encountered in Ohio is the Fragile Ancyloid (previous). That species is more elongate and is slightly smaller and shorter.

**REMARKS:** The term “limpet” is applied to any shells of this shape. Not all “limpets” are related to each other and they may be found in several snail families, both marine and freshwater – another case of convergent evolution.



RECORDED  
COUNTIES



7 MM LENGTH ACTUAL SIZE



## TWO-RIDGE RAMS-HORN

*Helisoma anceps* (Hee-li-soma • an-seps)

**DESCRIPTION:** This is a small, compact, dextral shell that coils in a single plane, with a sharp spiral ridge on both the top and the bottom. The adult aperture may be flared outward but is not shaped like a bell. The animal lacks an operculum.

**SIZE:** To ca. 15 mm in width.

**HABITAT:** It lives among vegetation in most permanent water bodies; it is usually absent from temporary ponds.

**RANGE:** It is found throughout most of North America and is state-wide in Ohio.

**SIMILAR SPECIES:** Its small size and ridged whorls set this species apart from the larger planorbids. The lip does not form a bell-shaped opening as in the Bellmouth Rams-horn (next).

**REMARKS:** The shell of the Two-ridge Rams-horn is primarily sinistral but early in life it becomes dextral. This is referred to a pseudodextral.



RECORDED  
COUNTIES



15 MM WIDTH ACTUAL SIZE



# BELLMOUTH RAMS-HORN

*Planorbella campanulata* (Plan-or-bella • cam-pan-u-lata)

**DESCRIPTION:** The Bellmouth Rams-horn has a small, compact, sinistral shell that coils in a single plane, lacking a sharp spiral ridge on either the top or the bottom. The adult aperture is flared outward forming a bell-like opening. The animal lacks an operculum.

**SIZE:** To ca. 15 mm in width.

**HABITAT:** This species lives among vegetation in lakes and ponds as well as the backwaters of rivers.

**RANGE:** It occurs throughout northern North America east of the Rocky Mountains. It is apparently rare in Ohio.

**SIMILAR SPECIES:** Its combination of small size and bell-shaped opening are unique among Ohio's planorbids.



RECORDED  
COUNTIES



15 MM WIDTH ACTUAL SIZE

# FILE RAMS-HORN

*Planorbella pilsbryi* (Plan-or-bella • pils-bree-eye)

**DESCRIPTION:** The File Rams-horn has a large, compact, sinistral shell that coils in a single plane. The adult aperture is slightly flared outward. The animal lacks an operculum.

**SIZE:** To ca. 30 mm in width.

**HABITAT:** The File Rams-horn lives among vegetation in lakes and ponds as well as the backwaters of rivers and streams.

**RANGE:** This is a boreal species that extends into the Great Lakes. It is apparently rare in Ohio in Lake Erie. There is a suspicious record from Wyandot County as well.

**SIMILAR SPECIES:** This large planorbid can only be confused with the much more common and widely distributed Marsh Rams-horn (next). It differs from that species in having a higher shell relative to the shell's width.



RECORDED  
COUNTIES



30 MM WIDTH ACTUAL SIZE

# MARSH RAMS-HORN

*Planorbella trivolvis* (*Plan-or-bella • try-vol-vis*)

**DESCRIPTION:** This is a large, compact, sinistral shell that coils in a single plane. The adult aperture is slightly flared outward. The animal lacks an operculum.

**SIZE:** To ca. 32 mm in width.

**HABITAT:** It lives among vegetation in lakes and ponds as well as the backwaters of rivers and streams.

**RANGE:** The Marsh Rams-horn is widespread in eastern North America south to Tennessee. It is found state-wide in Ohio.

**SIMILAR SPECIES:** This large *planorbid* can only be confused with the rare (in Ohio) File Rams-horn (previous). That species has a taller shell for its width than does the Marsh Rams-horn.



RECORDED  
COUNTIES



32 MM WIDTH ACTUAL SIZE

# STAR GYRO

*Gyraulus crista* (Gye-rall-us • cris-tah)

**DESCRIPTION:** The Star Gyro is a very minute, flattened, pseudodextral shell that does not coil in a single plane. The shell has radiating ridges arranged across the shell rendering the outline ragged or star-shaped. The animal lacks an operculum.

**SIZE:** To ca. 3 mm in width.

**HABITAT:** It lives among vegetation in ponds and sluggish streams.

**RANGE:** It is widespread in northern North America, Europe, and Asia. Ohio is on its southern limit where it is rare in Lake Erie.

**SIMILAR SPECIES:** The very small, flattened shell with a ragged outline is unique among Ohio's freshwater snails.



RECORDED  
COUNTIES

3 MM WIDTH ACTUAL SIZE

# FLEXED GYRO

*Gyraulus deflectus* (Gye-rall-us • de-flek-tus)

**DESCRIPTION:** This is a very small, flattened, pseudodextral shell that coils in a single plane. Some specimens have a blunt keel around the whorls and spiral rows of minute hairs. The animal lacks an operculum.

**SIZE:** To ca. 8 mm in width.

**HABITAT:** It lives among vegetation in lakes and ponds as well as the backwaters of rivers and streams.

**RANGE:** The Flexed Gyro is widespread in northeastern North America. It is probably state-wide in Ohio although overlooked.

**SIMILAR SPECIES:** This species may be confused with the Ash Gyro (next), which is slightly smaller and less broad for its height. From species of *Valvata*, it has a sunken spire (the spire is visible in *Valvata*) and lacks an operculum (present in *Valvata*).



RECORDED  
COUNTIES



8 MM WIDTH ACTUAL SIZE

# ASH GYRO

*Gyraulus parvus* (*Gye-rall-us • parv-us*)

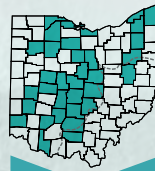
**DESCRIPTION:** The Ash Gyro has a minute, flattened, pseudodextral shell that coils in a single plane. The animal lacks an operculum.

**SIZE:** To ca. 5 mm in width.

**HABITAT:** It lives among vegetation in lakes and ponds as well as the backwaters of rivers and streams.

**RANGE:** This minute species is widespread in North America. It is also widespread in Ohio outside of unglaciated areas.

**SIMILAR SPECIES:** This species may be confused with the Flexed Gyro (previous), which is slightly larger and broader for its height. From species of *Valvata*, it has a sunken spire (the spire is visible in *Valvata*) and lacks an operculum (present in *Valvata*).



RECORDED  
COUNTIES



5 MM WIDTH ACTUAL SIZE

# SHARP SPRITE

*Promenetus exacuus* (Pro-men-ee-tus • ex-ac-u-o-sus)

**DESCRIPTION:** This is a very small, very flattened, pseudodextral shell that coils in a single plane. The shell whorls rapidly increase in size and have a sharp keel. The animal lacks an operculum.

**SIZE:** To ca. 6 mm in width.

**HABITAT:** It lives among vegetation in lakes, ponds, and streams, whether permanent or temporary.

**RANGE:** The Sharp Sprite is widespread in North America east of the Rocky Mountains. It is probably more wide-spread in Ohio than the records indicate, although it seems to avoid unglaciated areas.

**SIMILAR SPECIES:** The small size, compressed form, and sharp keel identify this species. The Bugle Sprite (next) has a blunt keel. From species of *Valvata*, it has a sunken spire (the spire is visible in *Valvata*) and lacks an operculum (present in *Valvata*).



RECORDED  
COUNTIES



6 MM WIDTH ACTUAL SIZE

## BUGLE SPRITE

*Micromenetus dilatatus* (Micro-men-ee-tus • dye-la-tate-us)

**DESCRIPTION:** This is a very small, very flattened, pseudodextral shell that does not coil in a single plane. The shell whorls rapidly increase in size and have a blunt keel. The animal lacks an operculum.

**SIZE:** To ca. 6 mm in width.

**HABITAT:** It lives among vegetation in lakes, ponds, and streams, whether permanent or temporary.

**RANGE:** The Sharp Sprite is widespread in North America east of the Rocky Mountains. It is undoubtedly more wide-spread in Ohio than the records indicate.

**SIMILAR SPECIES:** The small size, compressed form, and blunt keel identify this species. The Sharp Sprite (previous) has a sharp keel. From species of *Valvata*, it has a sunken spire (the spire is visible in *Valvata*) and lacks an operculum (present in *Valvata*).



RECORDED  
COUNTIES



6 MM WIDTH ACTUAL SIZE





## REFERENCES

### **North American Freshwater Snails**

by John B. Burch & John L. Tottenham,  
Walkerana 1 (3), 1980 & 2(6), 1988.

### **Freshwater Snails of the University of Michigan Biological Station Area**

by John B. Burch & Younghun Jung,  
Walkerana 6(15), 1992.

### **The Freshwater Molluscs of Canada**

by Arthur H. Clarke,  
National Museums of Canada, 1981.

### **The Ecology of Freshwater Molluscs**

by Robert T. Dillon,  
Cambridge University Press, 2000.

### **The Freshwater Gastropods of North America**

by A.T. Williams, Jr. and colleagues, 2019.  
<http://www.fwgn.org>



# PUBLICATION FUNDING

Funding for this publication was provided in part by donations to the state income tax checkoff program, sales of the cardinal license plate, and the Ohio Wildlife Legacy Stamp. Funding also provided by the sale of Ohio hunting and fishing licenses.

For more information about Ohio's native wildlife, please contact the Division of Wildlife:

**1-800-WILDLIFE**

*(1-800-750-0750 Ohio Relay TTY only)*

**WILDOHIO.GOV**

To mail a donation, send to:

**WILDLIFE DIVERSITY FUND**

2045 Morse Road, Bldg G.  
Columbus, OH 43229-6693

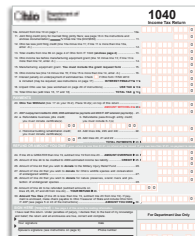
### To purchase a Legacy Stamp:

Call the Division of Wildlife at  
**1-800-WILDLIFE** or visit  
[wildohio.gov](http://wildohio.gov)



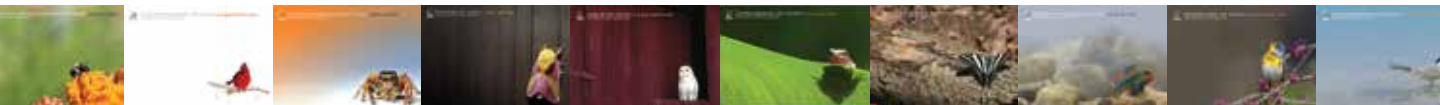
### To make a donation:

Go to the second page of the  
1040 income tax form for the  
**tax checkoff program**



### To purchase a license plate:

Visit your local registrar's  
office or call the **BMV** at  
**1-888-PLATES3**



## OTHER OHIO DIVISION OF WILDLIFE BOOKLETS

- Pub 5127 - Stream Fishes of Ohio
- Pub 5140 - Common Spiders of Ohio
- Pub 5204 - Butterflies & Skippers of Ohio
- Pub 5320 - Dragonflies & Damselflies of Ohio
- Pub 5344 - Mammals of Ohio

- Pub 5348 - Amphibians of Ohio
- Pub 5349 - Warblers of Ohio
- Pub 5354 - Reptiles of Ohio
- Pub 5386 - Raptors of Ohio
- Pub 5414 - Common Birds of Ohio

- Pub 5418 - Waterbirds of Ohio
- Pub 5423 - Owls of Ohio
- Pub 5467 - Moths of Ohio
- Pub 5473 - Common Lichens of Ohio
- Pub 5488 - Common Bees & Wasps of Ohio

- Pub 5494 - Spring Wildflowers of Ohio
- Pub 5509 - Trees of Ohio
- Pub 5512 - Freshwater Snails of Ohio
- Pub 5517 - Freshwater Mussels of Ohio
- Pub 5527 - Millipedes of Ohio



# OHIO DIVISION OF WILDLIFE



## MISSION STATEMENT

To conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all.

ODNR Division of Wildlife is the state agency responsible for managing Ohio's fish and wildlife resources. The primary source of funding for the division comes from the sale of hunting and fishing licenses, federal excise taxes on hunting, fishing, and shooting equipment, and donations from the public. We care about all wildlife and maintaining stable, healthy wildlife populations. Our challenge is to balance the needs of wildlife, habitat, and people.