A SURVEY OF LAND SNAILS IN SOUTHERN ILLINOIS

by

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<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Background information about snails</td>
<td>4</td>
</tr>
<tr>
<td>Description of the study area</td>
<td>6</td>
</tr>
<tr>
<td>Materials and methods</td>
<td>7</td>
</tr>
<tr>
<td>Results</td>
<td>8</td>
</tr>
<tr>
<td>Discussion and recommendations for future work</td>
<td>8</td>
</tr>
<tr>
<td>Summary</td>
<td>10</td>
</tr>
<tr>
<td>Selected references</td>
<td>12</td>
</tr>
<tr>
<td>Figures 1-12</td>
<td>13</td>
</tr>
</tbody>
</table>
Abstract

Land snails were collected from 58 sites, primarily natural areas, in the eleven southernmost counties of Illinois. Following the classification used by Dr. Frank Baker in his Illinois Natural History Survey Manual, Fieldbook of Illinois Land Snails (1939), about 42 species and subspecies were recorded in this survey. A variety of habitats are represented, and collecting sites were scattered throughout the region. Representative specimens were labeled and preserved, and information about habitat and abundance was recorded.

The Illinois Natural History Survey and University of Illinois collections were examined, and the Baker (1939) collection data (species, locality, and habitat) for all snails from the southernmost eleven counties were recorded. Although the taxonomy has changed since 1939, and most malacologists now recognize fewer species and subspecies than were listed by Baker, his classification was used in the identification of specimens collected in this study. The more recent scientific names, as used by Hubricht (1985), are also given in Figure 8 of this report.

This survey adds new species to the lists of animals known from 32 recognized natural areas in southern Illinois. Several of these natural areas are managed and protected by the Illinois Department of Conservation and/or the Shawnee National Forest. Correlations between species and habitat types are noted, and the distribution, abundance, and rarity of certain species are indicated. The potential for using snails as indicators of environmental disturbance is discussed. The occurrence of one species of federal concern, Stenotrema hubrichti, was documented at a designated natural area within the Shawnee National Forest.

This study also documents the need for more field work and presents data to aid and encourage further study. Specific recommendations for future work are presented.

Introduction

The importance of preserving all native forms of life that occur within a region has become more apparent in recent years than ever in history. A major objective of natural area programs throughout the country is to identify and inventory the species of all groups that do occur, or should occur, within our designated natural areas.

Periodic inventories can help land managers recognize trends in species populations that might indicate unnatural and undesirable disturbances. The decline or disappearance of an inconspicuous species, such as a snail, from a natural area may
indicate subtle environmental changes that are not obvious to the casual observer.

As natural area management programs become more manipulative, managers must consider the effects of vegetation clearing, fire, and chemicals upon invertebrate animals as well as plants.

It is crucial that rare species in need of special protection are identified before the population is gone from an area. Only one snail is currently on the official list of endangered and threatened species in Illinois, because past survey work has been too limited to document species that are truly scarce or declining in numbers.

Background information about snails

Although snails are common in many types of habitats throughout southern Illinois (including gardens, yards, and roadsides), few casual observers know much about their characteristics or habits. As a group, they have received little scientific attention in the Midwest, and no general surveys of species in southern Illinois have been conducted since the 1931-32 collection by Dr. Frank Baker (the basis for his Fieldbook of Illinois Land Snails, 1939). Natural area ecologists who can distinguish one species from another are rare. Some of the reasons for this lack of attention are that snails are unglamorous and usually secretive, they move very slowly and their activities are not easy to observe, they appear to impact the environment very little, and species are not easy to identify.

Although now out of print, the Fieldbook of Illinois Land Snails is particularly useful to the amateur malacologist, because Dr. Baker points out the readily observable means of recognizing the snails using shell characters. Most other identification keys use anatomical differences in body parts (such as teeth and reproductive parts) which requires dissection and a microscope. Although positive identification of some species is not possible without examining the animal, many Illinois snails can be distinguished fairly easily using shell characters alone. It is important that researchers and natural area managers know shell characters, because 1) the shell is often the only part of a snail that is available, 2) the shell is the part that is easiest to find, 3) shells remain at a site to indicate a species’ presence long after the animal is gone or dead, 4) shells may be observed and collected any season of the year and are particularly obvious in the winter when vegetation is sparse, and 5) shells often remain after fires and other catastrophic disturbances to indicate species’ presence and vulnerability. The drawings below illustrate major shell
characters used in identification.

The following are comments (copied from Baker, 1939 and other sources) that provide general background information.

--Snails belong to the Phylum Mollusca and the Class Gastropoda.

--Most snails have a spiral shell into which they can retire; the head and body are joined to form the exposed part of the animal.

--The head bears two pairs of tentacles; a pair of eyes is at the tips of the upper tentacles.

--The animal moves by sliding on its foot; its mouth opens on the bottom, at the anterior end of the foot.

--In the mouth is a radula, a ribbon-like structure with many teeth used in rasping food.

--All Illinois land snails are lung breathers, and the respiratory pore opens at the side, beneath the edge of the shell.

--Snails are mainly nocturnal, but they are often active in the daylight following a rain.

--Most spend the winter inside rotten logs and beneath large boulders, but they are often active during winter months when temperatures are mild.

--Most snails feed upon vegetable matter; a few are carnivorous and feed upon earthworms, leeches, or other snails.

--All Illinois land snails lay eggs in moist localities, usually in May and June; the eggs hatch 20-30 days later, and reach maturity in about two years.

--Lung breathing land snails are hermaphroditic.
--Snails need calcium for their shells, and they often get this from plants growing on limestone bedrock.

--Most snail species are associated with distinctive kinds of environment; many are restricted to certain habitats and range over a small area.

--Forested river valleys are the most favorable habitats for snails, especially where there are outcrops of limestone.

--Rights of ways, especially railroad embankments, provide habitat for a distinct fauna, species perhaps driven from prairies and natural grasslands by civilization.

--Snails are important as food for birds, salamanders, mice, moles, shrews, and squirrels; a few (mostly exotics) are garden pests; some species also serve as intermediate hosts for internal parasites that affect fish and mammals.

Description of study area

The study area is defined as the eleven southernmost counties of Illinois: Alexander, Pulaski, Massac, Pope, Hardin, Johnson, Union, Jackson, Williamson, Saline, and Gallatin (Figure 12) (two collections from outside that area are included in the study data). This is a very diverse part of the state, a point where several major natural regions meet. It is at the point on the continent where the glaciers reached their southernmost limit during Pleistocene time, and where the marine waters of the Gulf Coastal Plain reached their most northerly point (see map of Natural Divisions of Illinois, Figure 11).

The Bottomlands Section of the Coastal Plain is still wet and characterized by cypress-tupelo swamps and wet floodplain forests. The Cretaceous Hills Section once had extensive open grasslands, places with scattered trees and thickets that were called barrens by the early settlers. Disturbed weedy barrens remnants are still common in south Pope and eastern Massac counties.

The original vegetation of the Shawnee Hills was primarily oak-hickory upland forest. Sandstone cliffs, overhangs, and rocky slopes are common in this region, particularly in the Greater Shawnee Hills Section. The Lesser Shawnee Hills Section is not quite as rugged and has south-facing limestone slopes with prairie vegetation, small natural openings in the forest called glades.

The Ozark Division is still primarily forested with many deep ravines and mesic stands. A few small natural openings
occur on ridgetops where the deep loess supports prairie vegetation. This division is characterized by rugged topography and cherty limestones. High steep cliffs border the Mississippi bottomland.

The Lower Mississippi River Bottomlands Division was once mostly forested with extensive swamps and large shallow lakes. It is now almost all cleared and cultivated except for a few floodplain forest, swamp, and pond remnants.

The Mt. Vernon Hill Country Section of the Southern Till Plain Division was mostly glaciated and is more level than the Shawnee Hills to the south. It was mostly forested, but open post oak stands were common. Pin oak was common on poorly drained sites. Small prairies occurred in the northern parts of what are now Jackson and Williamson counties. The prairies are now gone except for a few disturbed remnants along rights of ways. A few small wood lots are left in Williamson County with large old post oaks.

The Bottomlands Section of the Wabash Border Division was originally forested with extensive swamps and large ponds. It is now mostly cleared and cultivated, although some relatively large wooded tracts with natural ponds still occur in the Wabash River floodplain north of Shawneetown.

Materials and methods

This study is based upon observations and collections of land snails during the last nine years in southern Illinois. Specific collecting efforts were centered around 32 natural areas, sites recognized by the Illinois Natural Areas Inventory of 1978 as being of statewide significance (see Figure 3 for area names and NAI numbers). There were 215 collections, each representing either a different species, different locality, or different collecting date (Figure 2). Collecting areas were selected to represent the diversity of natural habitats that occurs in the southernmost eleven counties, but incidental collections from many other sites (disturbed as well as natural) are included (Figure 5). Several specimens were generously contributed by local individuals who were aware of the project and happened to find snails at miscellaneous locations.

Collections, mainly of shells, were made during all seasons of the year. Notes were kept describing habitat, i.e., bedrock, soils, and vegetation types. If many individuals of a particular species were present, only a few were taken. Cleaned and empty shells, together with labels, were placed in plastic film canisters for temporary storage. A few living specimens were collected, drowned in water (to expose the animal), and preserved in 10% formalin.
Specimens were tentatively identified using Baker's key and classification. Other keys, such as *How to Know the Eastern Land Snails*, by John Burch, 1962, were also checked. Some snails were compared with those in the Baker collection for identification. All identifications are subject to error; several shells did not appear to key properly, a few are poor specimens, and the very small snails, particularly the Pupillidae, could not be identified without higher magnification than a hand lens, and most of these are yet to be identified.

The Baker collection was examined at the Illinois Natural History Survey, and the data were recorded for all specimens from the southernmost eleven counties (Figure 7). The recent survey data were compiled and compared with the Baker collection records (Figure 8). This collection will be offered to the Illinois Natural History Survey for permanent storage.

**Results**

During the period April, 1980 through July, 1989, 215 snail collections from 58 sites were preserved and labeled (Figure 1). Using Baker's classification, about 42 species and subspecies have been tentatively identified. Several specimens, particularly species of the very small Pupillidae, remain unidentified.

Snails were not found at every site that was searched. Few were found in the dry-mesic upland forest habitat typical of the sandstone region of the Shawnee Hills. Old growth post oak flatwoods on the till plain (natural areas on the Crab Orchard Wildlife Refuge, Williamson Co.) were searched rather thoroughly, and none were found. Snails are apparently rare in that habitat. They do not appear to be abundant in the extensive bottomland forest communities of the Cache River basin. Very few land snails were observed in swamps, although aquatic species are locally abundant.

Snails appear to be most abundant in the limestone regions, either in mesic forested ravines or on dry limestone glades. Some disturbed habitats, such as abandoned limestone quarries, have large numbers and a good diversity of species.

Figure 8 summarizes and compares the collection data from Baker (1939), Hubricht (1985), and this study.

**Discussion and recommendations for future work**

Because snails move slowly, are relatively defenseless against fires, flooding, chemical spraying, and rapid changes in
vegetative cover, range over a small area, are primarily herbivores, and prefer specific types of food and habitat, it is suspected that they may be good indicators of unnatural changes in the environment. During this study, the effects of fire were particularly obvious at natural area sites intentionally burned as a part of the current management for glade and prairie vegetation. Early spring burns at Cave Creek Glade, Simpson Township Glade, Ozark Hill Prairies, and Pine Hills left literally hundreds of shells from roasted snails scattered over the surface. Rotted logs, limbs, and old stumps where most of the snails were concentrated at that time of the year were spots that burned the hottest. Such calamities would have happened during natural fires prior to settlement, but protected sites are often "islands" on a generally disturbed landscape today, and if any species is wiped out at an area, there may be no adjoining populations to restock the site. Research is needed particularly to study and monitor the long term and short term effects of fire upon snail populations. We must know just how restricted certain species are to specific habitats.

Heavy rainfall and drastically fluctuating water levels in floodplains occasionally affects snails. Dead snails that appeared to be drowned were found along a drainageway at Ozark Hills Nature Preserve the day following a storm and temporary flooding of the ravine. Unnatural drainage changes have probably wiped out local populations in the past.

Certainly, the destruction and changes in vegetative cover have affected snails. Those snails that prefer particular plant species for food or cover would, of course, be subject to the same disturbances that affect the plant. Dr. Baker (1939) mentions that railroad rights of ways across the prairie regions of Illinois may be places of refuge for species driven from the natural grasslands by civilization. He also mentions that certain snail species were found in mature woodlands, whereas different species were more common in cut-over forest stands. There were not enough collections in this survey to determine just how restricted particular snail species were to vegetative types, but the limestone glades appeared to have several species that were observed nowhere else. An obvious problem in determining where snails occur and where they are absent is the difficulty of finding snails in certain habitats. Shells are much easier to see on sites where bare soil and rock are exposed than in thick vegetation or in the deep leaf litter of many forest communities. More work is needed to document the relationships between snail species and vegetation and community types.

Using Dr. Baker's manual and collection as references, the observations and collections of this survey indicate some changes in species occurrence and abundance between the 1930's and 1980's (see Figure 8), but not enough is known about Dr. Baker's
collecting techniques to make statistically valid comparisons. Neither was information found to document sites where Dr. Baker searched but found no snails. Comparisons are also difficult, because 1) several of the very small shells collected in this survey are not yet identified, and 2) there is confusion because of taxonomic changes—some of the rare subspecies listed by Baker are not recognized by Hubricht and other recent malacologists. The following species are noted as uncommon or rare in the state (not just in the south eleven counties) according to Baker (1939) and Hubricht (1985), and further study is recommended to document those that should be considered as threatened or endangered:

*Cochlicopa lubrica*
*Vallonia parvula*
*Gastrocopta procera*
*G. holzingeri*
*G. abbreviata*
*Megapallifera ragsdale*
*Anguispira strongylodes*
*Helicodiscus notius notius*
*Mesomphix globosus*
*Mesomphix cupreus* (name may be changed since Baker, 1939)
*Paravitrea significans* (probably not in southern Illinois)
*P. capsella*
*Zonitoides limatulus*
*Striatura meridionalis*
*S. milium*
*Euconulus dentatus*
*Guppya sterki*
*Rabdopus dealbatus dealbatus*
*Polygyra dorfeuilliana*
*Stenotrema stenotrema*
*Stenotrema hubrichti* (of federal concern)
*Tridopsis denotata*
*T. obstricta*

Of the above, only *Stenotrema hubrichti* was collected (and identified) in this survey. This is a species recently reviewed by The Nature Conservancy for federal listing, because Union Co., Illinois is the only recorded locality. The *Mesomphix cupreus* listed by Baker and identified as a common species in this survey must not be the same as the *M. cupreus* listed by Hubricht. One species, the Iowa pleistocene snail (*Discus macclintocki*), is currently listed as endangered in Illinois. It has been recently found in the northwest corner of the state and is associated with cool slopes.

**Summary**

Based upon comparisons with Baker's work in the 1930's, it is likely that snails, in general, are less common today than they were 50 years ago. Although conditions and collecting
techniques vary too much to make accurate assumptions based on numbers collected, many of the Baker collecting vials contain more shells of a particular species than were observed during the total time of this study.

Snails are potentially good indicators of environmental changes, but more base line data is needed to accurately monitor populations. Good species lists are needed for each community type in all of our protected natural areas.

Natural area managers should consider the effects of fire, vegetation clearing, and chemicals upon snails before making decisions regarding use, time of year, and extent of manipulation. Sites should be examined following management applications to note snail mortality. Techniques for estimating numbers should be developed to monitor population changes.

There are several potential snail candidates for the endangered and threatened species list. Each of these should be studied further.
Selected References


Illinois Natural Areas Inventory. 1976-78. Files of information recorded for natural areas of state-wide significance. Illinois Department of Conservation, Springfield.


Myer, D. G. 1958. Key to land snails of Ohio. Ohio State University, Columbus. 23 pages.

FIGURE 1.
LAND SNAIL COLLECTION NUMBERS, SPECIES, AND LOCALITIES
Max D. Hutchison, 1980-89

1 - *Mesomphix cypreus* ... Johnson Co., Simpson Twp. Hill Pr
2 - *Polygyra inflecta* ... Johnson Co., Simpson Twp. Hill Pr
3 - *Polygyra thyrsoidea* ... Union Co., Atwood Ridge
4 - *Polygyra fosteri* ... Alexander Co., Ozark Hill Prairies
5 - *Polygyra abalonebros dentata* ... Alexander Co., Ozark HP
6 - *Polygyra profunda (fossil)* ... Alexander Co., Ozark HP
7 - (unidentified) fossil sp. ... Alexander Co., Ozark HP
8 - *Mesomphix cypreus* ... Alexander Co., Ozark HP
9 - *Polygyra inflecta* ... Union Co., Berryville Shale Glade
10 - *Zonitoides nitidus* ... Union Co., Berryville Shale Glade
11 - *Polygyra Fraudulent* ... Union Co., Berryville Shale Glade
12 - *Mesomphix cypreus* ... Johnson Co., Simpson Twp. Hill Pr
13 - *Haplotrema concavum* ... Johnson Co., Simpson Twp. Hill Pr
14 - *Polygyra thyrsoidea* ... Johnson Co., Simpson Twp. Hill Pr
15 - *Mesomphix perlaevus vulgatus* ... Hardin Co., Panther Hol
16 - *Polygyra tridentata tridentata* ... Hardin Co., Panther Hol
17 - *Retinella indentata* ... Hardin Co., Panther Hollow
18 - *Haplotrema concavum* ... Hardin Co., Panther Hollow
19 - *Mesomphix cypreus* ... Monroe Co., Fults Hill Prairie
20 - *Polygyra fosteri* ... Monroe Co., Fults Hill Prairie
21 - *Polygyra abalonebros dentata* ... Union Co., Atwood Ridge
22 - *Haplotrema concavum* ... Pope Co., Leisure City
23 - *Mesomphix cypreus* ... Pope Co., Leisure City
24 - *Polygyra thyrsoidea* ... Johnson Co., Belknap
25 - *Polygyra inflecta* ... Johnson Co., Belknap
26 - *Haplotrema concavum* ... Hardin Co., Whoopie Cat Mtn
27 - *Polygyra tridentata frisoni* ... Johnson Co., Indian Pt
28 - *Mesomphix cypreus* ... Johnson Co., Indian Point
29 - *Polygyra leporina* ... Hardin Co., Shetlerville
30 - *Polygyra fosteri* ... Hardin Co., Shetlerville
31 - *Retinella indentata* ... Johnson Co., near Heron Pond
32 - *Retinella sp.* ... Johnson Co., near Heron Pond
33 - *Polygyra inflecta* ... Johnson Co., near Heron Pond
34 - *Polygyra fratera fratera* ... Pope Co., Leisure City
35 - *Planorbis trivolvis* ... Johnson Co., Heron Pond
36 - unidentified sp. ... Pope Co., Reddick Hollow
37 - *Polygyra fraudulenta* ... Pope Co., Wallace Bluff
38 - *Mesomphix perlaevus vulgatus* ... Hardin Co., Whoopie Cat
39 - *Mesomphix perlaevus vulgatus* ... Hardin Co., Shetlerville
40 - *Retinella sp.* ... Johnson Co., Wildcat Bluff
41 - *Polygyra fosteri* ... Saline Co., Eldorado
42 - *Polygyra tridentata frisoni* ... Hardin Co., Shetlerville
43 - *Ventriculina ligerus* ... Johnson Co., near Heron Pond
44 - *Polygyra clausa* ... Johnson Co., Lower Cache, Rt 37
45 - *Mesomphix perlaevus vulgatus* ... Hardin Co., Whoopie Cat
46 - *Polygyra tridentata frisoni* ... Hardin Co., Cave in Rock
47 - *Mesomphix perlaevus vulgatus* ... Hardin Co., Whoopie Cat
48 - *Polygyra clausa* ... Johnson Co., near Heron Pond
49 - Haplotrema concavum ... Johnson Co., near Heron Pond
50 - Vivipara sp. ... Pulaski Co., Lower Cache, Sec. 8
51 - Polygyra clausa ... Massac Co., Round Knob, I-24
52 - Polygyra tridentata frisoni ... Massac Co., Joppa
53 - Mesomphix perlaevis vulgatus ... Massac Co., Joppa
54 - Polygyra clausa ... Massac Co., Joppa
55 - Haplotrema concavum ... Pulaski Co., Chestnut Hills
56 - Polygyra inflecta ... Union Co., Atwood Ridge
57 - Mesomphix perlaevis vulgatus ... Union Co., Atwood Ridge
58 - Mesomphix perlaevis vulgatus ... Hardin Co., Whoopie Cat
59 - Retinella indentata ... Johnson Co., Wildcat Bluff
60 - Polygyra thyroidus ... Johnson Co., Wildcat Bluff
61 - Polygyra thyroidus ... Hardin Co., Whoopie Cat Mtn
62 - Polygyra alboblasis alleni ... Pope Co., Gyp Williams Hol
63 - Polygyra alboblasis alleni ... Massac Co., Halesia NP
64 - Paravitrea capsella ... Massac Co., Halesia NP
65 - Polygyra alboblasis alleni ... Massac Co., Halesia NP
66 - Polygyra thyroidus ... Massac Co., Halesia NP
67 - Polygyra thyroidus ... Alexander Co., Horseshoe Island
68 - Polygyra inflecta ... Union Co., Pine Hills
69 - Polygyra fosteri ... Alexander Co., Clear Creek Swamp
70 - Mesomphix perlaevis vulgatus ... Johnson Co., Heron Pond
71 - Mesomphix perlaevis vulgatus ... Hardin Co., Panther Hol
72 - Zonitoides arboreus ... Union Co., Berryville Shale Glade
73 - Polygyra inflecta ... Hardin Co., Panther Hollow
74 - Polygyra sp. ... Johnson Co., near Heron Pond
75 - Haplotrema concavum ... Johnson Co., Heron Pond-LBS
76 - Polygyra inflecta ... Johnson Co., Heron Pond-LBS
77 - Polygyra leporina ... Johnson Co., Heron Pond-LBS
78 - Polygyra thyroidus ... Johnson Co., Heron Pond-LBS
79 - Mesomphix friabilis ... Johnson Co., Heron Pond-LBS
80 - Polygyra fosteri ... Jackson Co., Fern Rocks NP
81 - Anguispira alternata carinata ... Jackson Co., Fern Rocks
82 - Polygyra inflecta ... Johnson Co., near Heron Pond
83 - Polygyra clausa ... Jackson Co., Fern Rocks NP
84 - Polygyra inflecta ... Jackson Co., Fern Rocks NP
85 - Discus patulus ... Jackson Co., Fern Rocks NP
86 - Mesomphix friabilis ... Johnson Co., Heron Pond
87 - Mesomphix perlaevis vulgatus ... Pope Co., Werner Tract
88 - Polygyra thyroidus ... Pope Co., Azotus, Dean Cem East
89 - Vivingiridae sp. ... Johnson Co., near Heron Pond
90 - Lymnaea palustris ... Alexander Co., Clear Creek Swamp
91 - Polygyra tridentata frisoni ... Johnson Co., Indian Point
92 - Haplotrema concavum ... Johnson Co., Indian Point
93 - Polygyra fosteri ... Johnson Co., Indian Point
94 - Mesomphix perlaevis vulgatus ... Johnson Co., Indian Pt
95 - Deroceras gracile ... Jackson Co., S end Fountain Bluff
96 - Haplotrema concavum ... Jackson Co., S end Fountain Bluff
97 - Polygyra inflecta media ... Jackson Co., Fountain Bluff
98 - Polygyra inflecta ... Jackson Co., S end Fountain Bluff
99 - Polygyra fraterna ... Jackson Co., S end Fountain Bluff
100 - Ventridens sp. ... Jackson Co., S end Fountain Bluff
101a - unknown sp. ... Jackson Co., S end Fountain Bluff
101b - Deroceras gracile ... Johnson Co., Bird Spring
102 - Haplotrema concavum ... Johnson Co., Bird Spring
103 - Mesosphix cupreus ... Johnson Co., Bird Spring
104 - Mesosphix perlaevis vulgatus ... Johnson Co., Bird Spring
105 - Polygyra thyroidus ... Johnson Co., Bird Spring
106 - Polygyra clausa ... Johnson Co., Bird Spring
107 - Polygyra inflecta inflecta ... Johnson Co., Bird Spring
108 - Polygyra fraudulenta ... Johnson Co., Bird Spring
109 - Polygyra albolabris dentata ... Johnson Co., Bird Spring
110 - unknown sp. ... Johnson Co., Bird Spring
111 - Pallifera fosteri ... Johnson Co., Bird Spring
112 - Polygyra tridentata edentilabris ... Johnson Co., Belknap
113 - Polygyra inflecta inflecta ... Johnson Co., Belknap Qry
114 - Haplotrema concavum ... Johnson Co., Belknap Quarry
115 - Mesosphix perlaevis vulgatus ... Johnson Co., Belknap Qry
116 - Polygyra thyroidus ... Johnson Co., Belknap Quarry
117 - Polygyra tridentata frisoni ... Johnson Co., Belknap Qry
118 - unidentified sp. ... Johnson Co., Belknap Quarry
119 - Polygyra inflecta inflecta ... Johnson Co., Vienna
120 - unknown sp. ... Johnson Co., Vienna
121 - Ventridens ligerus ... Johnson Co., Vienna
122 - unknown sp. ... Johnson Co., Vienna
123 - Zonitoides arboraeus ... Johnson Co., Wise Ridge
124 - Polygyra tridentata ... Jackson Co., Horseshoe Bluff
125 - Polygyra profunda (fossil) ... Jackson Co., Horseshoe Bf
126 - Mesosphix friabilis ... Johnson Co., Cave Cr Glade NP
127 - Discus patulus ... Johnson Co., Cave Creek Glade NP
128 - Polygyra inflecta ... Johnson Co., Cave Creek Glade NP
129 - Mesosphix cupreus ... Johnson Co., Cave Creek Glade NP
130 - Polygyra fraudulenta ... Johnson Co., Cave Creek Glade
131 - Polygyra elevata ... Johnson Co., Cave Creek Glade NP
132 - Haplotrema concavum ... Johnson Co., Cave Creek Glade NP
133 - Polygyra thyroidus ... Johnson Co., Cave Creek Glade NP
134 - Polygyra fosteri ... Johnson Co., Cave Creek Glade NP
135 - unknown sp. ... Johnson Co., Cave Creek Glade NP
136 - unknown sp. ... Johnson Co., Cave Creek Glade NP
137 - unknown sp. ... Johnson Co., Cave Creek Glade NP
138 - Mesosphix perlaevis vulgatus ... Pope Co., Pleasant Val
139 - Anguispira alternata carinata ... Union Co., Pine Hills
140 - Haplotrema concavum ... Union Co., Pine Hills
141 - Polygyra fraudulenta ... Union Co., Pine Hills
142 - Polygyra albolabris dentata ... Union Co., Pine Hills
143 - Polygyra thyroidus ... Union Co., Pine Hills
144 - Mesosphix perlaevis vulgatus ... Union Co., Pine Hills
145 - Zonitoides arboraeus ... Union Co., Pine Hills
146 - Zonitoides sp. ... Union Co., Pine Hills
147 - unidentified sp. ... Union Co., Pine Hills
148 - unidentified sp. ... Union Co., Pine Hills
149 - unidentified sp. ... Union Co., Pine Hills
150 - Stenotrema hubrichti ... Union Co., Pine Hills
151 - Hawaiia minuscula ... Union Co., Pine Hills
Gastrocopta corticaria ... Union Co., Pine Hills
unidentified sp. ... Union Co., Pine Hills
Polygyra albolabris dentata ... Union Co., Pine Hills
unidentified sp. ... Union Co., Pine Hills
unidentified sp. ... Union Co., Pine Hills
Mesomphix perlaevis vulgatus ... Union Co., Pine Hills
Mesomphix sp. ... Johnson Co., Simpson Twp. Hill Pr
Zonitoides arboresus ... Johnson Co., Simpson Twp. Hill
Retinella indentata ... Johnson Co., Simpson Twp. Hill
Retinella sp. ... Johnson Co., Simpson Twp. Hill Pr
Discus patulus ... Johnson Co., Simpson Twp. Hill Pr
Polygyra inflecta inflecta ... Johnson Co., Simpson Twp.
Gastrocopta sp. ... Johnson Co., Simpson Twp. Hill Pr
Polygyra fosteri ... Union Co., Opossum Trot Trail
Polygyra fosteri ... Johnson Co., Cedar Bluff
Haplotrema concavum ... Johnson Co., Cave Creek Glade
Polygyra inflecta inflecta ... Johnson Co., Cave Creek Glade
Polygyra fraudulenta ... Johnson Co., Cave Creek Glade
Polygyra thyridoides ... Johnson Co., Cave Creek Glade
Mesomphix perlaevis vulgatus ... Johnson Co., Cave Creek
Mesomphix friabilis ... Johnson Co., Cave Creek Glade
Discus patulus ... Johnson Co., Cave Creek Glade
Anguispira alternata carinata ... Johnson Co., Cave Creek
Zonitoides arboresus ... Johnson Co., Cave Creek Glade
Zonitidae sp. ... Johnson Co., Cave Creek Glade
Retinella indentata ... Johnson Co., Cave Creek Glade
Retinella sp. ... Johnson Co., Cave Creek Glade
Strobilops labyrinthica ... Johnson Co., Cave Creek Glade
Pupilidae sp. ... Johnson Co., Cave Creek Glade
Physa gyrina ... Johnson Co., Heron Pond-LBS
Haplotrema concavum ... Union Co., Ozark Hills NP
Polygyra albolabris alleni ... Union Co., Ozark Hills NP
Haplotrema concavum ... Johnson Co., Heron Pond-LBS
Polygyra thyridoides ... Johnson Co., Heron Pond-LBS
Polygyra albolabris dentata ... Johnson Co., Heron Pond
Zonitidae sp. ... Johnson Co., Heron Pond-LBS
Polygyra hirsuta ... Johnson Co., Heron Pond-LBS
Polygyra thyridoides ... Johnson Co., near Heron Pond
Polygyra appressa ... Randolph Co., Swayne Hollow
Polygyra fosteri ... Randolph Co., Swayne Hollow
Zonitidae sp. ... Johnson Co., near Heron Pond
Hawaiia minuscula ... Johnson Co., near Goreville
Retinella indentata ... Johnson Co., near Goreville
Pupilidae sp. ... Johnson Co., near Goreville
Polygyra inflecta inflecta ... Johnson Co., Goreville
Zonitoides arboresus ... Johnson Co., near Goreville
Polygyra inflecta inflecta ... Union Co., Berryville SG
Polygyra appressa ... Jackson Co., Devil's Backbone
Polygyra clausa ... Jackson Co., Devil's Backbone
Mesomphix perlaevis vulgatus ... Jackson Co., D Backbone
Zonitoides arboresus ... Jackson Co., Devil's Backbone
unidentified sp. ... Jackson Co., Devil's Backbone
204 - Polygyra inflecta inflecta ... Jackson Co., D Backbone
205 - Polygyra fraterna ... Jackson Co., Devil's Backbone
206 - Polygyra fraudulenta ... Union Co., Bald Knob
207 - Zonitidae sp. ... Union Co., Bald Knob
208 - Haplotrema concavum ... Union Co., Berryville Shale Glade
209 - Polygyra inflecta inflecta ... Union Co., Berryville SG
210 - Polygyra tridentata ... Union Co., Berryville Shale Glade
211 - Polygyra tridentata ... Union Co., Bald Knob
212 - Deroceras gracile ... Johnson Co., near Goreville
213 - Polygyra inflecta inflecta ... Johnson Co., Goreville
214 - unidentified sp. ... Johnson Co., near Goreville
Anguispira alternata carinata - #81, #139, #174
Anguispira alternata alternata -
Diceroceras gracile - #95, #101b, #212
Discus patulus - #85, #127, #162, #173
Gastrocopta corticaria - #152
Gastrocopta sp. - #164
Haplotrema concavum - #13, #18, #22, #26, #49, #55, #75, #92,
#96, #102, #114, #132, #140, #167, #182,
#184, #208
Hawaii minuscula - #151, #193
Lymnaea palustris - #90
Mesomphix cupreus - #1, #8, #12, #19, #23, #28, #103, #129
Mesomphix friabilis - #79, #86, #126, #172
Mesomphix perlaevis vulgatus - #15, #38, #39, #45, #17, #53, #57,
#58, #70, #71, #87, #94, #104,
#115, #138, #144, #157, #171, #201
Mesomphix sp. - #158
Pallifera fosteri - #111
Paravitrea capsella - #64
Physa gyrina - #181
Physa heterostropha -
Planorbis trivolvis - #35
Polygyra albolabris alleni - #62, #63, #65, #183
Polygyra albolabris dentata - #5, #21, #109, #142, #154, #186
Polygyra appressa - #190, #199
Polygyra clausa - #44, #48, #51, #54, #83, #106, #200
Polygyra elevata - #131
Polygyra fosteri - #4, #20, #30, #41, #69, #80, #93, #134, #165,
#166, #191
Polygyra fraterna - #99, #205
Polygyra fraterna fraterna - #34
Polygyra fraudulenta - #11, #37, #108, #130, #141, #169, #206
Polygyra hirsuta - #188
Polygyra inflecta - #2, #9, #25, #33, #56, #69, #76, #82, #84,
#98, #128
Polygyra inflecta inflecta - #73, #107, #113, #119, #163, #168,
#196, #198, #204, #209, #213
Polygyra inflecta media - #97
Polygyra leporina - #29, #77
Polygyra profunda (fossil) - #6, #125
Polygyra thyroidus - #3, #14, #24, #60, #61, #66, #67, #78, #88,
#105, #116, #133, #143, #170, #185, #189
Polygyra tridentata - #124, #210, #211
Polygyra tridentata edentilabris - #112
Polygyra tridentata frisoni - #27, #42, #46, #52, #91, #117
Polygyra tridentata tridentata - #16
Polygyra sp. - #74
Pupillidae sp. - #180, #195
Retinella indentata - #17, #31, #59, #160, #177, #194
Retinella sp. - #32, #40, #161, #178
Stenotrema hubrichti - #150
Strobilops labyrinthica - #179
Ventriddens ligerus - #43, #121
Ventriddens sp. - #100
Vivipara sp. - #50
Viviparidae sp. - #89
Zonitoides arboreus - #72, #123, #145, #159, #175, #197, #202
Zonitoides nitidus - #10
Zonitoides sp. - #146, #176
Zonitidae sp. - #187, #192, #207
fossil sp. - #7
unidentified sp. - #36, #101a, #110, #118, #120, #122, #135,
#136, #137, #147, #148, #149, #153, #155,
#156, #203, #214
FIGURE 3.
LAND SNAIL COLLECTING SITE DESCRIPTIONS AND SPECIES LIST PER SITE
Max D. Hutchison, 1980-89

Alexander Co., Clear Creek Swamp (NAI #309)
wet floodplain forest, flooded oak woods
- *Lymnaea palustris* (#90)

Alexander Co., near Clear Creek Swamp (NAI #309)
cypress swamp on E. side of Clear Creek
- *Polygyra fosteri* (#69)

Alexander Co., Horseshoe Lake Island (NAI #375)
mesic floodplain forest, on decaying log
- *Polygyra thyroidus* (#67)

Alexander Co., Ozark Hill Prairies (NAI #509)
loess hill prairie
- *Polygyra fosteri* (#1)
- *Polygyra albolabris dentata* (#5)
- *Polygyra profunda* (fossil) (#6)
- unidentified fossil species (#7)
- *Mesomphix cupreus* (#8)

Alexander Co., Opossum Trot Trail (NAI #310)
dry upland forest on deep loess
- *Polygyra fosteri* (#165)

Hardin Co., Panther Hollow (NAI #949)
dry-mesic forest, on N-facing slope with many sandstone boulders
- *Mesomphix perlaevis vulgaris* (#15), (#71)
- *Polygyra tridentata tridentata* (#16)
- *Retinella indentata* (#17)
- *Haplotrema concavum* (#18)
- *Polygyra inflecta inflecta* (#73)

Hardin Co., Whoopie Cat Mountain (NAI #325)

1
limestone glade, N. edge of Whoopie Cat Lake

- **Haplotrema concavum** (#26)
- **Mesomphix perlacvis vulgatus** (#38), (#45), (#47), (#58)
- **Polygyra thyroidus** (#61)

Hardin Co., Shetlerville, abandoned limestone quarry
weedy, disturbed site with limestone gravels and boulders

- **Polygyra leporina** (#29)
- **Polygyra fosteri** (#30)
- **Mesomphix perlacvis vulgatus** (#39)
- **Polygyra tridentata frisoni** (#42)

Hardin Co., Victory Mine, NW of Cave in Rock
disturbed site with limestone gravels and boulders.

- **Polygyra tridentata frisoni** (#46)

Jackson Co., Giant City, Fern Rocks NP (NAI #958)
dry- mesic forest, along sandstone bluff

- **Polygyra fosteri** (#80)
- **Anguispira alternata carinata** (#81)

Jackson Co., Giant City, Fern Rocks NP (NAI #958)
dry- mesic forest, among sandstone boulders along stream

- **Polygyra clausa** (#83)
- **Polygyra inflecta** (#84)
- **Discus patulus** (#85)

Jackson Co., Fountain Bluff, south end
dry- mesic forest, along slope with limestone and sandstone
outcrops and boulders

- **Dercoceras gracile** (#95)
- **Haplotrema concavum** (#96)
- **Polygyra inflecta media** (#97)
- **Polygyra inflecta** (#98)
- **Polygyra fraterna** (#99)
- **Ventricidens** sp. (#100)
- unknown sp. (#101a)

Jackson Co., E of Grand Tower, Horseshoe Bluff (NAI #956)
dry-mesic forest on top of sandstone bluff

- *Polygyra tridentata* (#124)
- *Polygyra profunda* (fossil) (#125)

Jackson Co., Grand Tower, Devil’s Backbone (NAI #594)
dry-mesic forest on W-facing limestone bluff

- *Polygyra appressa* (#199)
- *Polygyra clausa* (#200)
- *Polygyra inflecta inflecta* (#204)
- *Polygyra fraterna* (#205)
- *Mesomphix perlaevis vulgatus* (#201)
- *Zonitoides arboreus* (#202)
- unidentified sp. (#203)

Johnson Co., Rt. 37, Lower Cache River (NAI #610)
along roadside, in beer can

- *Polygyra clausa* (#44)

Johnson Co., Hutchison Farm, near Heron Pond (NAI #1059)
mowed pasture

- *Ventrudens ligerus* (#43)
- *Polygyra clausa* (#48)
- *Naplotrema concavum* (#49)

Johnson Co., Hutchison Farm, near Heron Pond (NAI #1059)
cultivated garden

- *Polygyra thyroidus* (#189)

Johnson Co., Hutchison Farm, near Heron Pond (NAI #1059)
dry-mesic forest, under and around decayed logs

- *Retinella indentata* (#31)
- *Retinella* sp. (#32)
- *Polygyra inflecta* (#33, #82)
- *Mesomphix perlaevis vulgatus* (#70)
- *Polygyra* sp. (#74)

Johnson Co., Ridenhair Pond, near Heron Pond (NAI #1059)
cyypress swamp, on decayed cypress log

- *Viviparidae* sp. (#89)
Johnson Co., Forman Church, near Heron Pond (NAI #1059) in mowed church yard
- Zonitidae sp. (#187)

Johnson Co., N. edge of Heron Pond (NAI #1059) dry-mesic forest
- Mesomphix friabilis (#86)

Johnson Co., Burlington RR, Heron Pond (NAI #1059) under woody debris, along RR ROW next to dry-mesic forest
- Haplotrema concavum (#75)
- Polygyra inflecta (#76)
- Polygyra leporina (#77)
- Polygyra thyroidus (#78)
- Mesomphix friabilis (#79)

Johnson Co., Wildcat Bluff (NAI #1059) limestone glade
- Retinella indentata (#59)
- Polygyra thyroidus (#60)
- Retinella sp. (#40)

Johnson Co., Heron Pond (NAI #1059) cypress swamp, on decayed cypress stump
- Planorbis trivolvis (#35)

Johnson Co., Heron Pond, near Cache River (NAI #1059) wet floodplain forest
- Physa gyrina (#181)
- Haplotrema concavum (#184)
- Polygyra thyroidus (#185)
- Polygyra albolabris dentata (#186)
- Polygyra hirsuta (#188)
- Zonitidae sp. (#187)

Johnson Co., near Belknap soybean field
- *Polygyra thyroidus* (#24)
- *Polygyra inflecta* (#25)

Johnson Co., W. end Indian Point (NAI #27) 
limestone glade

- *Polygyra tridentata frisoni* (#27), (#91)
- *Mesomphix cupreus* (#28)
- *Haplotrema concavum* (#92)
- *Polygyra fosteri* (#93)
- *Mesomphix perlaevis vulgatus* (#94)

Johnson Co., Simpson Twp. Hill Prairie (NAI #613) 
limestone glade

- *Mesomphix cupreus* (#1)
- *Mesomphix* sp. (#158)
- *Polygyra inflecta* (#2)
- *Polygyra inflecta inflecta* (#163)
- *Mesomphix cupreus* (#12)
- *Haplotrema concavum* (#13)
- *Polygyra thyroidus* (#14)
- *Zonitoides arboreus* (#159)
- *Retinella indentata* (#160)
- *Retinella* sp. (#161)
- *Discus patulus* (#162)
- *Gastrocopta* sp. (#164)

Johnson Co., 1 mi. NE Belknap, Bird Spring (part of Heron Pond-Little Black Slough Natural Area, NAI #1059) 
dry-mesic forest, slope with spring and some outcrops of 
limestone and sandstone

- *Deroceras gracile* (#101b)
- *Haplotrema concavum* (#102)
- *Mesomphix cupreus* (#103)
- *Mesomphix perlaevis vulgatus* (#104)
- *Polygyra thyroidus* (#105)
- *Polygyra clausa* (#106)
- *Polygyra inflecta inflecta* (#107)
- *Polygyra fraudulenta* (#108)
- *Polygyra albolabris dentata* (#109)
- unknown sp. (#110)
- *Pallifera fosteri* (#111)

Johnson Co., 1/2 mi. NE Belknap, Quarry (part of Heron Pond-Little Black Slough Natural Area, NAI #1059) 
dry-mesic forest and among boulders on S-facing slope at
abandoned limestone quarry

- Polygyra tridentata edentilabris (#112)
- Polygyra influenta infleta (#113)
- Haplotrema concavum (#114)
- Mesomphix perlaevius vulgatus (#115)
- Polygyra thyroidus (#116)
- Polygyra tridentata frisoni (#117)
- unidentified spp. (#118)

Johnson Co., Vienna, yard of Hutchison home under steps on north side of house

- Polygyra influenta infleta (#119)
- unknown sp. (#120)
- Ventrudens ligera (#121)
- unknown sp. (#122)

Johnson Co., W of Goreville, yard of Robert Craig residence under sandstone rocks and blocks of wood

- Hawaiiia minuscula (#193)
- Retinella indentata (#194)
- Polygyra influenta infleta (#196, #213)
- Zonitoides arboreus (#202)
- Pupillidae sp. (#195)

Johnson Co., New Burnside, Wise Ridge (NAI #60) small limestone glade

- Zonitoides arboreus (#123)

Johnson Co., 4 mi. S of Vienna, Cave Creek Glade (NAI #360) limestone glade and surrounding dry forest

- Anguispira alternata carinata (#174)
- Mesomphix friabilis (#126, #172)
- Discus patulus (#127, #173)
- Polygyra influenta (#128)
- Polygyra influenta infleta (#168)
- Mesomphix cupreus (#129)
- Mesomphix perlaevius vulgatus (#171)
- Polygyra fraudulenta (#130, #169)
- Polygyra elevata (#131)
- Haplotrema concavum (#132, #167)
- Polygyra thyroidus (#133, #170)
- Polygyra fosteri (#134)
- Retinella indentata (#177)
- Retinella sp. (#178)
- Stobilops labrinthica (#179)
- Zonitoides arboreus (#175)
- Zonitidae sp. (#176)
- Pupillidae sp. (#180)
- unknown sp. (#135)
- unknown sp. (#136)
- unknown sp. (#137)

Johnson Co., SW of Goreville, Cedar Bluff (NAI #359)
dry-mesic forest at base of SS cliff
- Polygyra fosteri (#166)

Massac Co., I-24 near Round Knob
highway ROW, mowed fescue
- Polygyra clausa (#51)

Massac Co., Cook Coal Terminal, Halesia NP (NAI #753)
dry-mesic forest near Ohio River
- Polygyra albolabris alleni (#63), (#65)
- Paravitrea capsella (#64)
- Polygyra thyroidus (#66)

Massac Co., near Joppa
tall weeds along Ohio River bank
- Polygyra tridentata frisoni (#52)
- Mesomphix perlaevis vulgatus (#53)
- Polygyra clausa (#54)

Monroe Co., Fults Hill Prairie (NAI #1045)
limestone bluff
- Mesomphix cupreus (#19)
- Polygyra fosteri (#20)

Pope Co., Leisure City (NAI #808)
limestone glade
- Polygyra fraterna fraterna (#34)
- Haplotrema concavum (#22)
- Mesomphix cupreus (#23)
Pope Co., Reddick Hollow (NAI #336)  
dry-mesic forest, sandstone slope  
  - unidentified sp. (#36)

Pope Co., Wallace Bluff  
sandstone shelter  
  - Polygyra fraudulent

Pope Co., Gyp Williams Hollow (NAI #1027)  
dry-mesic forest  
  - Polygyra albolarbis allenii (#62)

Pope Co., near Azotus, Dean Cemetery East barrens  
  - Polygyra thyroidus (#88)

Pope Co., near Waltersburg, Werner Tract (NAI #337)  
limestone glade  
  - Mesomphix perlaevis vulgatus (#87)

Pope Co., NW of Golconda, Pleasant Valley Glade (NAI #803)  
limestone glade  
  - Mesomphix perlaevis vulgatus (#138)

Pulaski Co., Lower Cache, Section 8 Woods (NAI #610)  
cypress swamp  
  - Vivipara sp. (#50)

Pulaski Co., near Olmsted, Chestnut Hills (NAI #944)  
dry-mesic forest in gravels along Ohio River bluffs  
  - Haplotrema concavum (#55)

Randolph Co., SW of Campbell Hill, Swayne Hollow (NAI #827)  
dry to mesic forest along SS cliffs
- Polygyra appressa (#190)
- Polygyra fosteri (#191)

Saline Co., near Eldorado, church camp mowed lawn
- Polygyra fosteri (#41)

Saline Co., Cave Hill (NAI #243) sandstone glade
- Mesomphix perlaevis vulgatus (#157)

Union Co., Berryville Shale Glade (NAI #854) shale glade
- Polygyra inflecta (#9)
- Polygyra inflecta inflecta (#198, #209)
- Polygyra tridentata (#210)
- Zonitoides nitidus (#10)
- Polygyra fraudulenta (#11)
- Zonitoides arboreus (#72)
- Haplotrema concavum (#208)

Union Co., Atwood Ridge (NAI #1046) mesic ravine forest
- Polygyra thyroidus (#3)

Union Co., Atwood Ridge (NAI #1046) dry forest, limestone slope
- Polygyra albolabris dentata (#21)

Union Co., Atwood Ridge (NAI #1046) loess hill prairie
- Polygyra inflecta (#56)
- Mesomphix perlaevis vulgatus (#57)

Union Co., Pine Hills (NAI #1079) limestone bluff
- Polygyra inflecta (#68)
- Anguispira alternata carinata (#139)
- Haplotrema concavum (#140)
- Polygyra fraudulenta (#141)
- Polygyra albolarbis dentata (#142, #154)
- Polygyra thyroidus (#143)
- Mesomphix perlaevia vulgatus (#144)
- Zonitoides arboreus (#145)
- Zonitoides sp. (#146)
- unidentified sp. (#147)
- unidentified sp. (#148)
- unidentified sp. (#149)
- Stenotrema hubrichti (#150)
- Hawaiia minuscula (#151)
- Gastrocopta corticaria (#152)
- unidentified sp. (#153)
- unidentified sp. (#155)
- unidentified sp. (#156)

Union Co., Ozark Hills Nature Preserve (NAI #856)
mesic ravine forest with cherty limestone outcropping

- Haplotrema concavum (#182)
- Polygyra albolarbis allenii (#183)

Union Co., Bald Knob (NAI #862)
dry-mesic forest on upper slopes of high hill

- Polygyra fraudulenta (#206)
- Polygyra tridentata (#211)
- Zonitidae sp. (#207)
<table>
<thead>
<tr>
<th>locality</th>
<th>community type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander Co., Clear Creek Swamp -</td>
<td>wet floodplain forest</td>
</tr>
<tr>
<td>Alexander Co., near Clear Creek Swamp -</td>
<td>cypress swamp</td>
</tr>
<tr>
<td>Alexander Co., Horseshoe Lake Island -</td>
<td>mesic floodplain forest</td>
</tr>
<tr>
<td>Alexander Co., Ozark Hill Prairies -</td>
<td>loess hill prairie</td>
</tr>
<tr>
<td>Alexander Co., Opossum Trot Trail NA</td>
<td>dry upland forest</td>
</tr>
<tr>
<td>Hardin Co., Panther Hollow -</td>
<td>dry-mesic forest, SS slope</td>
</tr>
<tr>
<td>Hardin Co., Whoopie Cat Mountain -</td>
<td>limestone glade</td>
</tr>
<tr>
<td>Hardin Co., Shetlerville -</td>
<td>limestone quarry</td>
</tr>
<tr>
<td>Hardin Co., Victory Mine -</td>
<td>fluorspar mine</td>
</tr>
<tr>
<td>Jackson Co., Giant City, Fern Rocks -</td>
<td>dry-mesic forest, SS bluff</td>
</tr>
<tr>
<td>Jackson Co., Giant City, Fern Rocks -</td>
<td>dry-mesic forest</td>
</tr>
<tr>
<td>Jackson Co., Fountain Bluff -</td>
<td>dry-mesic forest, LS &amp; SS slope</td>
</tr>
<tr>
<td>Jackson Co., Horseshoe Bluff -</td>
<td>dry-mesic forest</td>
</tr>
<tr>
<td>Jackson Co., Devil's Backbone -</td>
<td>dry-mesic forest, LS bluff</td>
</tr>
<tr>
<td>Johnson Co., Lower Cache River, Rt. 37</td>
<td>roadside</td>
</tr>
<tr>
<td>Johnson Co., near Heron Pond, Hutchison Farm -</td>
<td>pasture</td>
</tr>
<tr>
<td>Johnson Co., near Heron Pond, Hutchison Farm -</td>
<td>garden</td>
</tr>
<tr>
<td>Johnson Co., near Heron Pond, Hutchison Farm -</td>
<td>dry-mesic forest</td>
</tr>
<tr>
<td>Johnson Co., near Heron Pond, Ridenhaur Pond -</td>
<td>cypress swamp</td>
</tr>
<tr>
<td>Johnson Co., near Heron Pond, Forman -</td>
<td>church yard</td>
</tr>
<tr>
<td>Johnson Co., N. edge of Heron Pond -</td>
<td>dry-mesic forest</td>
</tr>
<tr>
<td>Johnson Co., Heron Pond, Burlington RR</td>
<td>railroad ROW</td>
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<tr>
<td>Johnson Co., Wildcat Bluff -</td>
<td>limestone glade</td>
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<tr>
<td>Johnson Co., Heron Pond -</td>
<td>cypress swamp</td>
</tr>
<tr>
<td>Johnson Co., Heron Pond, near Cache River -</td>
<td>wet floodplain forest</td>
</tr>
<tr>
<td>Johnson Co., near Belknap -</td>
<td>soybean field</td>
</tr>
<tr>
<td>Johnson Co., W. end Indian Point -</td>
<td>limestone glade</td>
</tr>
<tr>
<td>Johnson Co., Simpson Twp. Hill Prairie -</td>
<td>limestone glade</td>
</tr>
<tr>
<td>Johnson Co., Bird Sring -</td>
<td>dry-mesic forest, LS &amp; SS slope</td>
</tr>
<tr>
<td>Johnson Co., Belknap Quarry -</td>
<td>dry-mesic forest, LS slope</td>
</tr>
<tr>
<td>Johnson Co., Vienna -</td>
<td>north side of residence, in yard</td>
</tr>
<tr>
<td>Johnson Co., near Goreville -</td>
<td>under SS rocks in yard</td>
</tr>
<tr>
<td>Johnson Co., Wise Ridge -</td>
<td>limestone glade</td>
</tr>
<tr>
<td>Johnson Co., Cave Creek Glade NP -</td>
<td>limestone glade and dry forest</td>
</tr>
<tr>
<td>Johnson Co., Cedar Bluff, SW Goreville -</td>
<td>sandstone bluff</td>
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<tr>
<td>Massac Co., I-24 near Round Knob -</td>
<td>highway ROW</td>
</tr>
<tr>
<td>Massac Co., Cook Coal Terminal, Halesia NP -</td>
<td>dry-mesic forest</td>
</tr>
<tr>
<td>Massac Co., near Joppa -</td>
<td>Ohio River bank</td>
</tr>
<tr>
<td>Monroe Co., Fults Hill Prairie -</td>
<td>limestone bluff</td>
</tr>
<tr>
<td>Pope Co., Leisure City -</td>
<td>limestone glade</td>
</tr>
<tr>
<td>Pope Co., Reddick Hollow -</td>
<td>dry-mesic forest, SS slope</td>
</tr>
<tr>
<td>Pope Co., Wallace Bluff -</td>
<td>SS shelter</td>
</tr>
<tr>
<td>Pope Co., Gyp Williams Hollow -</td>
<td>dry-mesic forest</td>
</tr>
<tr>
<td>Pope Co., near Azotus, Dean Cemetery East -</td>
<td>barrens</td>
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<tr>
<td>Pope Co., near Waltersburg, Werner Tract -</td>
<td>limestone glade</td>
</tr>
<tr>
<td>Pope Co., NW Golconda, Pleasant Valley Glade -</td>
<td>limestone glade</td>
</tr>
</tbody>
</table>
Pulaski Co., Lower Cache, Section 8 Woods - cypress swamp
Pulaski Co., near Olmsted, Chestnut Hills - Ohio River bluffs
Randolph Co., Swayne Hollow - dry to mesic forest, SS cliffs
Saline Co., near Eldorado, church camp - mowed lawn
Saline Co., Cave Hill - sandstone glade
Union Co., Berryville Shale Glade - shale glade
Union Co., Atwood Ridge - mesic ravine forest
dry forest, limestone slope
Union Co., S. end of Atwood Ridge - loess hill prairie remnant
Union Co., Pine Hills - limestone bluff
Union Co., Ozark Hills NP - near Jonesboro - mesic ravine forest
dry-mesic forest
Union Co., Bald Knob -
FIGURE 5.
SNAILS COLLECTED PER COMMUNITY TYPE AND NATURAL DIVISION
Max D. Hutchison, 1980-89

Bottomlands Section of Coastal Plain Division

wet bottomland forest; on and under logs near river
Physa gyrina
Haplotrema concavum
Polygyra thyroidus
Polygyra albolabris dentata
Polygyra hirsuta
Zonitidae sp.

mesic bottomland forest; on decaying log
Polygyra thyroidus

dry-mesic bottomland forest; edge of cypress swamp
Mesomphix friabilis

cultivated soybean field
Polygyra thyroidus
Polygyra inflecta

brushy railroad ROW through dry-mesic bottomland forest
Polygyra inflecta
Polygyra leporina
Polygyra thyroidus
Mesomphix friabilis
Haplotrema concavum

weedy roadside; in beer can
Polygyra clausa

cypress swamp; on decayed cypress log
Viviparidae sp.

cypress swamp; in dry slough bed
Vivipara sp.

cypress swamp; on decayed cypress stump
Planorbis trivolvis

Cretaceous Hills Section of Coastal Plain Division

dry-mesic upland forest along Ohio River bank
Polygyra albolabris alleni
Polygyra thyroidus
Paravitrea thyroidus

dry-mesic upland forest; in gravels along Ohio River bank

1
Haplotrema concavum

Tall weeds and eroded site along Ohio River bank

Polygyra tridentata frisoni
Polygyra clausa
Mesomphix perlaevis vulgatus

dry-mesic barrens; in brush and grasses

Polygyra thyroidus

Lesser Shawnee Hills Section of Shawnee Hills Division

limestone glade

Angulospira alternata carinata
Polygyra fraterna fraterna
Polygyra fraudulenta
Polygyra elevata
Haplotrema concavum (5)
Mesomphix friabilis
Mesomphix perlaevis vulgatus (5)
Polygyra thyroidus (4)
Polygyra fosteri (2)
Retinella indentata (3)
Retinella sp. (3)

Polygyra tridentata frisoni

Mesomphix cupreus (4)
Mesomphix sp.
Polygyra inflecta (2)
Polygyra inflecta inflecta (2)
Zonitoides arboreus (2)
Discus patulus (2)
Gastrocopta sp.
Stobilops labyrinthica
Zonitidae sp.
Pupillidae sp.

unidentified species

abandoned limestone quarry; rocky, weedy, disturbed site

Polygyra leporina
Polygyra fosteri
Polygyra tridentata frisoni (2)
Polygyra tridentata edentilabris
Polygyra inflecta inflecta
Haplotrema concavum
Polygyra thyroidus
Mesomphix perlaevis vulgatus (2)

unidentified species

abandoned fluorspar mine; rocky disturbed site

Polygyra tridentata frisoni
mowed pasture
  *Ventricula ligera*
  *Polygyra clausa*
  *Haplotrema concavum*

cultivated garden
  *Polygyra thyroidus*

mowed lawn
  *Zonitidae* sp.
  *Polygyra inflecta inflecta*
  *Ventricula ligera*
  unidentified species

dry-mesic upland forest; under and around decaying logs
  *Polygyra inflecta*
  *Polygyra* sp.
  *Mesomphix perlævis vulgatus*
  *Retinella indentata*
  *Retinella* sp.

dry-mesic upland forest; rocky, N-facing, limestone and sandstone slope
  *Derocea gracile*
  *Haplotrema concavum*
  *Mesomphix cupreus*
  *Mesomphix perlævis vulgatus*
  *Polygyra thyroidus*
  *Polygyra clausa*
  *Polygyra inflecta inflecta*
  *Polygyra fraudulenta*
  *Polygyra albolabris dentata*
  *Pallifera fosteri*
  unidentified species

Greater Shawnee Hills Section of Shawnee Hills Division

limestone glade
  *Zonitoides arboreus*

sandstone glade
  *Mesomphix perlævis vulgatus*

dry-mesic upland forest; rocky, N-facing, sandstone slope
  *Polygyra tridentata tridentata*
  *Polygyra inflecta inflecta*
  *Mesomphix perlævis vulgatus*
  *Haplotrema concavum*
  *Retinella indentata*
dry-mesic upland forest; along sandstone bluff
Polygyra fosteri (2)
Polygyra fraudulent
Polygyra albolabris alleni
Anguispira alternata carinata

dry-mesic upland forest; along rocky (sandstone) stream
Polygyra clausa
Polygyra inflecta
Discus patulus

dry-mesic upland forest; rocky (sandstone and limestone), S-facing slope
Dero ceras gracile
Haplotrema concavum
Polygyra inflecta
Polygyra inflecta media
Polygyra fraterna
Ventridens sp.
unidentified species

dry-mesic upland forest; on top of sandstone bluff
Polygyra tridentata
Polygyra profunda

mowed lawn; under sandstone rocks and blocks of wood
Hawaiiia minuscula
Retinella indentata
Polygyra inflecta inflecta
Zonitoides arboreus
Pupillidae sp.

Southern Section of Lower Mississippi River Bottomlands Division

wet bottomland forest; flooded oak woods
Lymnaea palustris

cypress swamp; along edge
Polygyra fosteri

Southern Section of Ozark Division

loess hill prairie
Polygyra fosteri
Polygyra albolabris dentata
Polygyra inflecta
Polygyra profunda (fossil)
Mesomphix cupreus
Mesomphix perlæavis vulgatus
unidentified fossil species
dry upland forest on deep loess
  *Polygyra fosteri*

dry upland forest; W-facing, cherty limestone slope
  *Polygyra albolabris dentata*

dry-mesic upland forest; upper slopes of high hill
  *Polygyra fraudulenta*
  *Polygyra fraudulenta*
  *Zonitidae sp.*

dry to mesic forest and glades; W-facing, cherty limestone bluff
  *Polygyra inflecta*
  *Polygyra fraudulenta*
  *Polygyra albolabris dentata*
  *Polygyra thyroidus*
  *Anguispira alternata carinata*
  *Haplotrema concavum*
  *Mesomphix perlaevis vulgatus*
  *Zonitoides arboreus*
  *Zonitoides sp.*
  *Stenotrema hubrichti*
  *Hawaiiia minuscula*
  *Gastrocopta corticaria*
  unidentified species

dry-mesic upland forest; rocky, W-facing, limestone bluff
  *Polygyra appressa*
  *Polygyra clausa*
  *Polygyra fraterna*
  *Polygyra inflecta inflecta*
  *Mesomphix perlaevis vulgatus*
  *Zonitoides arboreus*
  unidentified species

mesic ravine forest with cherty limestone outcrops
  *Polygyra thyroidus*
  *Polygyra albolabris allenii*
  *Haplotrema concavum*

shale glade
  *Polygyra inflecta*
  *Polygyra inflecta inflecta*
  *Polygyra tridentata*
  *Polygyra fraudulenta*
  *Zonitoides arboreus*
  *Zonitoides nitidus*
  *Haplotrema concavum*
Central Section of Ozark Division

dry to mesic upland forest along sandstone cliffs
  Polygyra appressa
  Polygyra fosteri

Northern Section of Ozark Division

dry upland forest and glades along W-facing limestone bluff
  Polygyra fosteri
  Mesomphix cupreus

Mt. Vernon Hill Country Section of the Southern Till Plain Division

mowed lawn
  Polygyra fosteri
FIGURE 6.

ILLINOIS LAND SNAILS WITH COMMENTS ON OCCURRENCE AND ABUNDANCE
ACCORDING TO BAKER, 1939

(those species with an asterisk are reported from the southernmost eleven counties)

Helcinidae

Hendersonia occulta - Menard Co.; very rare in state

Polygyridae

Polygyra dorfeuilliana* - Jackson Co.; upper part of dry bluffs; rare in state
Polygyra tridentata tridentata* - probably in all eleven cos.; limestone bluffs
Polygyra tridentata frisoni* - probably in all eleven cos.; limestone bluffs
Polygyra tridentata bidentata* - probably in all eleven cos.; limestone bluffs
Polygyra tridentata unidentata* - probably in all eleven cos.; limestone bluffs
Polygyra tridentata edentilabris* - probably in all eleven cos.; limestone bluffs
Polygyra fraudulenta* - perhaps in most of eleven cos.; ravines and valleys of Mississippi and Ohio rivers
Polygyra inflecta inflecta* - probably in all eleven cos.; Ohio and Mississippi valleys
Polygyra inflecta media* - probably in all eleven cos.; Ohio and Mississippi valleys
Polygyra inflecta edentata* - probably in all eleven cos.; Ohio and Mississippi valleys
Polygyra profunda profunda - only in fossil deposits in southern Illinois
Polygyra profunda efasciata - only in fossil deposits in southern Illinois
Polygyra albolabris albolabris - mostly in northern Illinois
Polygyra albolabris alleni* - probably in all eleven counties; forests with debris of long accumulation
Polygyra albolabris dentata* - Williamson Co.; very rare in state
Polygyra zaleta* - may be in all eleven cos.; ravines and bluffs
Polygyra multilineata multilineata* - Alexander Co.; swamps and low ground; uncommon in southern Illinois
Polygyra multilineata algonquinensis - northern Illinois
Polygyra multilineata alba* - Alexander Co.; swamps and low ground; rare in state
Polygyra multilineata rubra* - Alexander Co.; swamps and low ground
Polygyra palliata - eastern Illinois; very rare in state
Polygyra obstricta - eastern Illinois; very rare in state
Polygyra appressa* - probably in all eleven cos.; river bluffs
Polygyra fosteri* - probably in most of eleven cos.; limestone bluffs
Polygyra elevata* - Jackson and Alexander cos.; mesic ravines; uncommon in state
Polygyra pennsylvanica* - probably in all eleven cos.; mesic ravines
Polygyra thyroidus* - probably in most of eleven cos.; floodplains of larger river valleys
Polygyra clausa* - probably in all eleven cos.; river valleys, railway embankments, and rights-of-way with grass and small shrubs; prairie habitats
Polygyra stenotrema* - Hardin Co.; limestone quarry; very rare in state
Polygyra hirsuta* - probably in all eleven cos.; mesic and wet forests along river valleys
Polygyra monodon* - perhaps in all eleven cos.; more common in northern than southern part of the state; floodplain forests
Polygyra fraterna fraterna* - probably in most of eleven cos.; Ohio and Mississippi river bluffs
Polygyra fraterna cava - northern and central Illinois; rare
Polygyra leporina (or Loboscelum leporinum)* - Jackson, Union, Saline, and Hardin cos.; on wooded slopes; not common in state

Bulimulidae

Bulimus dealbatus* - Jackson Co.; very rare in state

Zonitidae

Mesomphix cupreus* - probably in all eleven cos.; along river valleys, particularly on Mississippi River limestone cliffs
Mesomphix friabilis* - Williamson Co.; moist localities; rare in state
Mesomphix perlaevis vulgatus* - Saline, Gallatin, Pope, and Hardin cos.; forested hills with bushes and vines; uncommon in state

Retinella electrina (or Vitrea hammonis or V. viridulus) -
Illinois River valley; sporadic distribution

Retinella wheatleyi* - may be in southern eleven cos.; river valleys; rarely in woods bordering agricultural fields; probably not common
Retinella rhoadsi* - Jackson Co.; bluffs; very rare in state
Retinella indentata* - probably in all eleven cos.; forests

Hawaii minuscula* - may be in some of eleven cos.; mesic and floodplain forests; sporadically distributed in state

Paravitrea capsella* - may be in some of eleven cos.; woodlands; not abundant in state, known only from seven cos.
Paravitrea significans* - may be in some of eleven cos.; woodlands; more common than P. capsella

Euconulus fulvus* - may be in some of eleven cos.; floodplains; widely scattered but not common in the state
Euconulus chersinus chersinus* - may be in some of eleven cos.; hilly regions bordering large rivers; more common than E. fulvus
Euconulus chersinus polygyratus* - northern part of state

Striatura milium milium - McHenry Co.; woodlands; rare
Striatura milium meridionalis - Washington and Monroe cos.; woodlands; not common

Zonitoides arboreus* - probably in all eleven cos.; varied habitats; common
Zonitoides nitidus - northern part of state; muddy places on floodplains
Zonitoides limatulus - Clark, Washington, and Hamilton cos.; rocky ravines; rare

Ventridens ligerus* - probably in all eleven cos.; varied habitats; common
Ventridens demissus - Shelby and Effingham cos.; river bluffs; rare

Endodontidae

Anguispira alternata alternata* - probably in all eleven cos.; varied habitats; common
Anguispira alternata carinata* - Union, Pope, White, Hardin, and Gallatin cos.; hills and limestone bluffs near Ohio and Mississippi rivers; not so
common as *A. a. alternata*

*Anguispira kochi* - may be in all eleven cos.; ravines and river banks and bluffs; scattered records

*Discus cronkhidei anthomyi* - northern Illinois; floodplains
*Discus patulus* - probably in several of eleven cos.; varied habitats

*Helicodiscus parallelus* - may be in all of eleven cos.; river valleys and floodplains
*Helicodiscus singleyanus inermis* - may be in some of eleven cos.; most common in northern and eastern parts of state; floodplains

*Punctum pygmaeum* - McHenry, Cook, Will, Washington, and Jackson cos.; woodlands; rare

**Haplotrematidae**

*Haplotrema concavum* - probably in all eleven cos.; moist woods; found throughout the state

**Pupillidae**

*Gastrocopta armifera armifera* - probably in all eleven cos.; wide variety of habitats, particularly characteristic of the prairie region of the state; common

*Gastrocopta armifera similis* - may be in some of eleven cos.; not as common as *G. a. armifera*

*Gastrocopta armifera affinis* - may be in some of eleven cos.
*Gastrocopta armifera abbreviata* - Winnebago and Jackson cos.; rare

*Gastrocopta contracta contracta* - may be in some of eleven cos.; variety of habitats; fairly common

*Gastrocopta contracta climeana* - Washington Co.; rare
*Gastrocopta holzingeri* - Will, La Salle, Hancock, and Jackson cos.; variety of habitats; rare

*Gastrocopta pentodon pentodon* - may be in some of eleven cos.; variety of habitats; widely distributed but scattered in state

*Gastrocopta pentodon gracilis* - Jackson, Union, and Lawrence cos.; rare

*Gastrocopta tappaniana* - may be in some of eleven cos.; variety of habitats; widely distributed but scattered in state
Gastrocopta corticaria* - may be in some of eleven cos.; tree-inhabiting in woodlands; scattered sites throughout Illinois
Gastrocopta procera procera* - eight cos. in the state including Union; woodlands; not common
Gastrocopta procera meclungi* - Effingham, Monroe, and Jackson cos.; varied habitats; rare

Vertigo morsei - Will Co.; rare
Vertigo ovata* - scatteringly distributed over the state in nine cos. including Jackson; floodplains
Vertigo ventricosa - Winnebago Co.; rare
Vertigo elatior - Winnebago Co.; rare
Vertigo tridentata - Will, La Salle, Champaign, and Fulton cos.; in grass or weeds; not common
Vertigo milium* - may be in some of eleven cos.; floodplains and forested river bluffs; well distributed but scattered in state

Pupoides marginatus* - known from Jackson Co. and may be in several of other southern Illinois cos.; wooded bluffs and hillsides; widely distributed in state

Columella edentula - McHenry, Fulton, and Washington cos.; floodplains; rare

Strobilopsidae

Strobilops labyrinthica labyrinthica* - may be in some of eleven cos.; woodlands but not common in floodplain areas; generally distributed over the state
Strobilops labyrinthica virgo* - McHenry, Washington, Williamson, and Saline cos.; not common
Strobilops labyrinthica parietalis - Washington, Marion, and La Salle cos.; rare
Strobilops affinis - Lake, McHenry, Kane, and Cook cos.; moist woodlands; rare
Strobilops aenea aenea* - probably in some of eleven cos.; higher upland forests; widely distributed in the state
Strobilops aenea micromphala* - White, Washington, and Hardin cos.; higher upland forests; not common
Strobilops aenea spiralis* - Union Co.; heavily wooded hill; very rare
Valloniidae

Vallonia pulchella* - probably in all eleven cos.; variety of habitats including floodplains; common
Vallonia excentrica - Champaign Co.; disturbed site; very rare
Vallonia costata - northern half of the state; floodplains and prairie habitats; rare
Vallonia parvula - northern half of the state; variety of habitats; not common

Cochlicopidae

Cochlicopa lubrica* - possible in southern cos.; in ravines and isolated woodlands; not common in the state and widely scattered

Succineidae

Succinea ovalis ovalis* - possible in southern cos.; under leaves and other forest debris; occurs only sporadically in northern part of state and rare in southern part
Succinea ovalis optima* - probable in southern cos.; more often in floodplain forests; more common in northern part of state
Succinea concordialis - only one locality in state; along railroad in Washington Co.
Succinea avara avara* - probable in southern cos.; distributed throughout the state; variety of habitats
Succinea avara wardiana* - probable in southern cos.; distributed throughout the state; variety of habitats
Succinea retusa retusa* - probable in southern cos.; more common in northern part; wet, marshy places
Succinea retusa magister - known from only a few localities in northern and central parts of state; wet marshy places
Succinea retusa decampi - known from only one locality, in Fulton Co.; wet, marshy places
Succinea retusa illinoisensis - known from only two localities in the state, both north of the south eleven cos.; wet, marshy places
Succinea retusa peoriensis - known from only four cos. in state, in northern and central cos.; wet, marshy places
Succinea saleana - known from only two cos. in the state, Monroe and St. Clair; wet, marshy places
Limacidae

Deroceras gracile* - probably in all eleven cos.; widely distributed in the state; found in a variety of habitats

Deroceras agreste - alien sp. found in several cos. but all north of southern eleven

Philomyidae

Philomyeus carolinianus* - probably in all eleven cos.; widely distributed over the state; moist woodlands

Pallifera dorsalis - found in northern and central cos.; forest habitat

Pallifera fosteri - found in Monroe, Wayne, and Vermilion cos.; forest habitat

Ellobiidae

Carychium exiguum* - possibly in southern eleven cos.; more abundant in northern part of the state; under forest debris near water

Carychium exile* - probably in some of eleven cos.; widely distributed over most of the state; under forest debris near water

exotics

Oxychilus cellarium - greenhouses in northern cities
Oxychilus lucidum - parks in Chicago area

Opeas mauritianum - greenhouses in Chicago

Limax maximus - common in Chicago greenhouses
Limax flavus - in Chicago greenhouses

Testacella europaea - in Chicago greenhouses

species of possible presence

Polygyra mitchelliana - found in Indiana and Michigan

Retinella cryptomphala - common in Tennessee

Ventridens intertextus - common in Indiana
FIGURE 7.
LAND SNAILS COLLECTED IN THE ELEVEN SOUTHERNMOST COUNTIES OF ILLINOIS BY DR. FRANK BAKER, MOSTLY DURING 1931-32, FOR THE ILLINOIS NATURAL HISTORY SURVEY

Records examined and species listed per site by Max D. Hutchison, May, 1989

Jackson Co., S end Fountain Bluff, 600', oak, elm, hickory, pine

Polygyra dorceuilliana
Polygyra tridentata
Polygyra tridentata frisoni
Polygyra inflecta
Polygyra albolabris alleni
Polygyra zaleta
Polygyra clausa
Polygyra monodon fraterna
Bulimulus dealbatus
Mesomphix cupreus
Retinella wheatleyi
Retinella indentata
Zonitoides arboreus
Anguispira alternata
Anguispira kochii
Discus patulus
Helicodiscus parallelus
Haplotrema concavum
Strobilops aenea

Jackson Co., 2 mi. N Grand Tower, S end Fountain Bluff, Mississippi River side

Polygyra inflecta
Polygyra appressa
Polygyra appressa fosteri

Jackson Co., river bluff N Grand Tower, Mississippi River side

Polygyra tridentata unidentata
Polygyra inflecta
Polygyra profunda
Polygyra albolabris alleni
Polygyra zaleta
Mesomphix cupreus
Retinella indentata

Jackson Co., Fountain Bluff
Polygyra tridentata unidentata
Polygyra thyroidus
Mesomphix cupreus
Gastrocopta procera mcClungi

Jackson Co., Grand Tower
Helicodiscus parallelus
Helicodiscus singleyanus inermis

Jackson Co., Trestle Hollow, Fountain Bluff, rocky ravine, oak
and hickory
Polygyra tridentata unidentata
Polygyra tridentata frisoni
Polygyra inflecta
Polygyra albolabris alleni
Polygyra zaleta
Polygyra appressa
Polygyra thyroidus
Polygyra monodon fraterna
Mesomphix cupreus
Haplotrema concavum

Jackson Co., 5 mi. E Carbondale, valley of Crab Orchard Creek,
Rt. 13, open woodland, oak, hickory, sycamore
Polygyra inflecta
Polygyra appressa fosteri
Zonitoides arbores
Anguispira alternata
Gastrocopta contracta
Strobilops labyrinthica

Jackson Co., floodplain of Big Muddy River, Rt. 2, N Carbondale
Polygyra zaleta
Polygyra appressa fosteri
Retinella indentata
Haplotrema concavum

Jackson Co., Rt 13, N Murphysboro, Beaucoup Creek bottoms, oak,
sycamore, maple
Polygyra appressa fosteri
Retinella indentata
Zonitoides arboreus
Haplotrema concavum
Succinea avara

Jackson Co., Makanda
Polygyra monodon fraterna

Williamson Co., 1 1/2 mi. SW Stonefort, 500', forested hill
Polygyra inflecta
Polygyra thyroidus
Retinella indentata
Zonitoides arboreus
Strobilops labyrinthica

Williamson Co., 3 mi. S Marion, parkland with black oak
Zonitoides arboreus
Strobilops virgo

Williamson Co., 2 mi. S Herrin, Rt. 148, wooded parkland, oak
Zonitoides arboreus

Saline Co., 3 mi. NW Herod, dome shaped wooded hill, 920'-800'
Polygyra inflecta
Polygyra appressa fosteri
Mesomphix perlaevis vulgatus
Retinella indentata

Saline Co., Horton Hill, 980'-800', Mountain Tnsp.
Polygyra inflecta
Polygyra appressa
Polygyra appressa fosteri
Polygyra thyroidus
Polygyra monodon fraterna
Mesomphix cupreus
Retinella indentata
Zonitoides arboreus

Saline Co., Cave Hill, 940', 700'-800', 5 mi. SW Equality
Polygyra inflecta
Polygyra appressa fosteri
Polygyra monodon fraterna
Lobosculum leporinum
Retinella indentata
Zonitoides arboreus
Anguispira alternata
Helicodiscus parallelus
Strobilops labyrinthica
Strobilops virgo
Succinea avara

Gallatin Co., Shawneetown Hills, 3 mi. NNE Shawneetown, 500', forest glad(e)

Polygyra inflecta
Mesomphix perlaevis vulgatus
Retinella indentata
Paravitrea significans
Anguispira alternata carinata
Discus patulus

Union Co., 8 mi. SW Anna, in hills, 600'-700'

Hendersonia occulta (fossil ?)
Polygyra fraudulenta
Polygyra inflecta
Polygyra zaleta
Polygyra appressa fosteri
Polygyra thyroidus
Polygyra monodon fraterna
Lobosculum leporinum
Mesomphix cupreus
Retinella indentata
Discus patulus
Gastrocopta armifera

Union Co., wooded hill near Lake Hill School, 4 mi. SW Anna

Polygyra fraudulenta
Polygyra appressa fosteri
Discus patulus

Union Co., 3 mi. W Alto Pass, in valley, 600'

Polygyra fraudulenta
Polygyra appressa
Polygyra appressa fosteri
Polygyra thyroidus
Mesomphix cupreus
Retinella indentata
Anguispira alternata
Haplotrema concavum

Union Co., W Alto Pass

Polygyra fraudulenta
Polygyra inflecta
Polygyra zaleta
Polygyra appressa fosteri
Polygyra thyroidus
Polygyra hirsuta
Polygyra monodon fraterna
Mesomphix cupreus
Zonitoides arboresus
Ventriculus ligera (ligerus)
Anguispira alternata
discus patulus
Haplotrema concavum
Gastrocopta armifera
Pupoides marginatus

Union Co., 2 mi. SW Alto Pass, Bald Knob, 1030', wooded hill, stony

Polygyra fraudulenta
Polygyra inflecta
Polygyra zaleta
Polygyra appressa
Polygyra appressa fosteri
Anguispira alternata carinata
Haplotrema concavum

Union Co., Giant City State Park, hilly woodland, oak, hickory, pine

Polygyra fraudulenta
Polygyra inflecta
Polygyra appressa
Polygyra appressa fosteri
Polygyra thyroidus
Mesomphix cupreus
Retinella wheatleyi
Retinella indentata
Zonitoides arboresus
Anguispira alternata
discus patulus
Helicodiscus parallelus
Cochlicopa lubrica

Union Co., 3 mi. N Alto Pass, hilly parkland, oak, hickory

Polygyra fraudulenta
Polygyra appressa fosteri
Polygyra thyroidus

Union Co., 3 mi. N Dongola, woodland

Polygyra fraudulenta
Polygyra inflecta
Discus patulus
Helicodiscus parallelus

Union Co., 2 mi. W Alto Pass, Seminary Creek, N Bald Knob, valley woodland, 600'

Polygyra fraudulenta
Polygyra appressa fosteri
Polygyra thyroidus
Polygyra monodon fraterna
Mesomphix cupreus
Haplotrema concavum

Union Co., 1/2 mi. E Alto Pass, 800', rock hillside, wooded

Polygyra appressa fosteri
Retinella indentata

Union Co., 1 1/2 mi. N Alto Pass, hilly woodland, oak, elm, walnut, hickory

Polygyra fraudulenta
Polygyra appressa fosteri
Polygyra thyroidus
Polygyra monodon fraterna
Mesomphix cupreus
Retinella indentata
Zonitoides arboreus
Haplotrema concavum

Union Co., 10 mi. SW Anna, on hillside

Polygyra inflecta
Polygyra zaleta
Polygyra appressa fosteri
Mesomphix cupreus

Union Co., ICRR embankment, 4 1/2 mi. SSW of Anna, near Balcom

Polygyra appressa appressa
Polygyra appressa fosteri
Polygyra thyroidus

Union Co., near Cobden, ICRR embankment

Polygyra appressa
Polygyra appressa fosteri
Polygyra thyroidus
Retinella indentata
Hawaiia minuscula
Gastrocopta armifera
Gastrocopta procera
Succinea avara

Union Co., near Reynolds ville, animal eaten by rodents

Polygyra thyroidus

Union Co., 1 3/4 mi. E Reynolds ville, Twp. 19, floodplain Main Ditch, forest

Polygyra thyroidus
Retinella indentata
Euconulus fulvus
Succinea avara

Union Co., 5 mi. S Anna, near hardroad, wooded hillside

Zonitoides arboreus

Johnson Co., Schwartz Hill, N Vienna, 500', forest hill

Polygyra inflecta
Polygyra monodon fraterna
Retinella indentata

Johnson Co., 7 mi. NNW Vienna, forested hill, 600'-700'

* probable should be "SSE"
Polygyra inflecta
Polygyra monodon fraterna
Retinella indentata
Zonitoides arboreus
Anguispira kochi
Discus patulus

Johnson Co., 4 1/2 mi. SW Vienna, floodplain Cache River, woods

Polygyra appressa fosteri
Polygyra thyroidus
Zonitoides arboreus
Anguispira alternata

Pope Co., 4 mi. W Golconda, wooded hill

Polygyra tridentata unidentata
Polygyra tridentata frisoni
Polygyra inflecta
Mesomphix cupreus
Retinella indentata
Zonitoides arboreus
Strobilops labyrinthica
Strobilops aenea

Pope Co., Bay City, limestone* bluff, Ohio River, 400'-500'

Polygyra tridentata frisoni
Polygyra inflecta
Polygyra zaleta
Polygyra appressa
Polygyra hirsuta
Mesomphix perlaevis vulgatus
Retinella indentata
Zonitoides arboreus
Euconulus chersinus
Anguispira alternata carinata
Discus patulus
Helicodiscus parallelus
Haplotrema concavum

Pope Co., Golconda, limestone* bluffs, Ohio River, 350'-400'

Polygyra tridentata frisoni
Polygyra zaleta
Polygyra appressa fosteri
Polygyra monodon fraterna
Mesomphix perlaevis vulgatus

* I doubt that the bluffs are primarily "limestone" - M. D. Hutchison
Haplotrema concavum

Hardin Co., 1 mi. NE Elizabethtown, limestone* bluffs on Ohio River, 300’-400’

Polygyra tridentata bidentata
Polygyra tridentata unidentata
Polygyra tridentata frisoni
Polygyra tridentata edentilabris
Polygyra inflecta
Polygyra appressa
Polygyra thyroidus
Polygyra monodon fraterna
Mesomphix perlaevis vulgatus
Retinella indentata
Zonitoides arboreus
Anguispira alternata
Discus patulus
Helicodiscus singleyanus inermis
Haplotrema concavum
Gastrocopta armifera
Vallonia parvula

Hardin Co., 1 mi. SW Elizabethtown, old quarry bordering Ohio River, 400’

Polygyra tridentata unidentata
Polygyra tridentata frisoni
Polygyra tridentata edentilabris
Polygyra appressa
Polygyra stenotrema
Zonitoides arboreus
Anguispira alternata carinata

Hardin Co., Cave in Rock, limestone* bluff bordering Ohio River

Polygyra tridentata unidentata
Polygyra tridentata frisoni
Polygyra tridentata
Polygyra appressa

Hardin Co., 4 mi. SE Gibsonia, Beaver Creek, county boundary line, 600’, hilly woodland, burnt over

Polygyra fraudulenta
Polygyra inflecta
Polygyra thyroidus
Mesomphix perlaevis vulgatus

* I doubt that the bluffs are primarily limestone - M. D. Hutchison
Discus patulus
Haplotrema concavum

Hardin Co., 3 mi. NW Elizabethtown, valley of Big Creek, 380'

Polygyra inflecta media
Polygyra inflecta
Polygyra edentata
Polygyra zaleta
Polygyra appressa appressa
Polygyra appressa fosteri
Polygyra thyroidus
Polygyra clausa
Polygyra monodon cava
Mesomphix perlaevis vulgatus
Retinella indentata
Anguispira alternata carinata
Haplotrema concavum

Hardin Co., 3 mi. N Rosiclare, forest hillside, 500'

Polygyra inflecta
Polygyra monodon fraterna
Mesomphix perlaevis vulgatus

Hardin Co., McFarlan Twp., 3 mi. NE Elizabethtown, wooded hill, 560', rocky

Polygyra inflecta
Polygyra monodon fraterna
Lobosculum leporinum
Mesomphix perlaevis vulgatus
Retinella wheatleyi
Retinella indentata
Euconulus chersinus
Gastrocopta armifera
Strobilops labyrinthica

Hardin Co., woodland 1/2 mi. NE Cave in Rock

Polygyra tridentata frisoni
Polygyra inflecta
Polygyra thyroidus
Polygyra hirsuta
Mesomphix perlaevis vulgatus
Hawaiiia minuscula
Zonitoides arboreus
Helicodiscus parallelus
Haplotrema concavum
Strobilops acena
Strobilops acena micromphala

Hardin Co., Ohio River bluff E Rosiclare
Mesomphix perlaevis vulgatus

Alexander Co., 2 mi. E McClure, Dongola Hollow hills, 720'-600'
Polygyra inflecta
Polygyra edentata
Polygyra zaleta
Polygyra appressa fosteri
Polygyra elevata
Polygyra thyroidus
Mesomphix cupreus
Ventralis ligerus
Anguispira alternata
Discus patulus

Alexander Co., wooded hill near Thebes
Polygyra inflecta
Polygyra elevata
Polygyra thyroidus

Alexander Co., Cairo Point, junction of Mississippi and Ohio rivers, old floodplain forest grove
Polygyra multolineata
Polygyra thyroidus
Ventralis ligerus
Succinea avara

Alexander Co., 1 mi. S Cairo, Mississippi River floodplain, W of hardroad
Polygyra multolineata
Polygyra appressa
Polygyra thyroidus

Alexander Co., N Cairo, IC ROW, W of road, burned over
Polygyra thyroidus
Retinella indentata
Ventriculus ligerus
Succinea avara

Massac Co., 7 mi. N Brookport, hilly woodland

Polygyra inflecta media
Polygyra inflecta
Polygyra edentata
Polygyra monodon fraterna
Retinella indentata
Zonitoides arboreus

Massac Co., 6 mi. NW Metropolis, swamp near Q Ditch

Polygyra albolabris alleni
Polygyra thyroidus

Massac Co., Seven Mile Creek, 3 mi. E Metropolis, near Ohio River
Succinea avara
FIGURE 8.
A COMPARISON OF BAKER (1939) AND HUBRICH (1985) LAND SNAIL OCCURRENCES WITH COLLECTIONS DURING THIS SURVEY (1980-89)
Max D. Hutchison

HELCINIDAE

Hendersonia occulta
- Baker: one collection in south eleven cos. of fossils, "Union Co., 8 mi. SW of Anna, in hills" -- very abundant in fossil deposits; known only from Menard Co. as a living member;
  - Hubricht: fossils reported in Jackson Co.
  - Hutchison: did not find

POMATIOPSISIDAE

Pomatiopsis lapidaria
- Baker: not listed
- Hubricht: fossils reported in Union Co.
- Hutchison: did not find

CARYCHIIDAE

Carychium exile exile
- Baker: listed as C. exile; no collections in south eleven cos.--widely distributed over most of Illinois
  - Hubricht: listed for Jackson Co. in southern part of state
  - Hutchison: did not find

Carychium exile canadense
- Baker: canadense subspecies not listed
- Hubricht: fossils reported from Jackson Co.
- Hutchison: did not find

COCHLICOPIDAE

Cochlicopa lubrica
- Baker: one collection, "Giant City State Park, in hilly woodland" -- not common in Illinois, and records are widely scattered
  - Hubricht: listed for Jackson Co.
  - Hutchison: did not find

VALLONIIDAE

Vallonia parvula
- Baker: one collection, "Hardin Co., 1 mi. NE of Elizabethtown, Ohio River bluffs" -- rare in Illinois; known
from only the north half
- Hubricht: listed for Union Co.
- Hutchison: did not find

Vallonia gracilicosta
- Baker: not listed
- Hubricht: fossils reported for Alexander Co.
- Hutchison: did not find

Vallonia perspectiva
- Baker: not listed
- Hubricht: fossils reported for Union Co.
- Hutchison: did not find

PUPILLIDAE

Pupoides albilabris
- Baker: not listed
- Hubricht: listed from Jackson, Union, Hardin, and Pope cos.
- Hutchison: did not find

Pupoides marginatus
- Baker: one collection, "Union Co., W of Alto Pass" -- only sp. of this genus in Ill.; widely distributed over Illinois; particularly abundant in Jackson Co. in the southern part
- Hubricht: not listed (same as P. albilabris ?)
- Hutchison: did not identify

Gastrocopta contracta contracta
- Baker: one collection, "Jackson Co., 5 mi. E of Carbondale, Crab Orchard Creek valley, open woodland," -- fairly common over Illinois
- Hubricht: listed as G. contracta; reported from Jackson Co. in southern part
- Hutchison: did not identify

Gastrocopta contracta climean
- Baker: known from only one site in the state, in Washington Co.
- Hubricht: included with G. contracta
- Hutchison: did not find

Gastrocopta armifera armifera
- Hubricht: *G. armifera* is listed from Jackson and Union cos.
- Hutchison: did not identify

**Gastrocopta armifera similis**
- Baker: no collections -- less widely distributed than *G. a. armifera*
  - Hubricht: listed as *G. similis*; not reported in south eleven cos.
  - Hutchison: did not identify

**Gastrocopta armifera affinis**
- Baker: no collections in south eleven cos. -- no distribution information
  - Hubricht: probably grouped with *G. similis*; not listed as a distinct sp.
  - Hutchison: did not identify

**Gastrocopta armifera abbreviata**
- Baker: no collections in south eleven cos. -- rare in Illinois; known from only Winnebago and Jackson cos.
  - Hubricht: listed as *G. abbreviata*; reported from Jackson Co.
  - Hutchison: did not identify

**Gastrocopta procera procera**
- Baker: one collection, "Union Co., railroad embankment near Cobden" -- reported from nine cos. in Illinois including Union
  - Hubricht: listed as *G. procera*; listed from Jackson and Union cos.
  - Hutchison: did not identify

**Gastrocopta procera meclungi**
- Baker: one collection, "Jackson Co., Fountain Bluff" -- known from three sites in the state including Grand Tower in Jackson Co.
  - Hubricht: included with *G. procera*
  - Hutchison: did not identify

**Gastrocopta holzingeri**
- Baker: no collections -- rare in Illinois; known from four sites including Jackson Co.
  - Hubricht: listed from Jackson Co.
  - Hutchison: did not identify

**Gastrocopta abbreviata**
- Baker: not listed
  - Hubricht: listed from Jackson Co.
  - Hutchison: did not identify

**Gastrocopta tappaniana**
- Baker: no collections -- distributed throughout Illinois but widely scattered
  - Hubricht: listed from Jackson and Union cos.
  - Hutchison: did not identify

_Gastrocopta pentodon pentodon_
- Baker: no collections -- distributed throughout Illinois but widely scattered
  - Hubricht: listed from Jackson and Union cos.
  - Hutchison: did not identify

_Gastrocopta corticaria_
- Baker: no collections in south eleven cos. -- scattered throughout Illinois
  - Hubricht: reported from Jackson Co. in river drift
  - Hutchison: one possible collection at "Union Co., Pine Hills, limestone cliff"

_Vertigo milium_
- Baker: no collections -- well distributed over Illinois, but the records are scattered
  - Hubricht: listed from Jackson Co.
  - Hutchison: did not find

_Vertigo ovata_
- Baker: no collections -- scatteringly distributed over Illinois; listed from Jackson Co.
  - Hubricht: listed from Jackson Co.
  - Hutchison: did not find

_Vertigo elatior_
- Baker: no collections -- living specimens known only from Winnebago Co. in Illinois; abundant and widely distributed as a fossil
  - Hubricht: listed as a fossil in Jackson Co.
  - Hutchison: did not find

_Vertigo hubrichti_
- Baker: not listed
  - Hubricht: listed as a fossil in Jackson and Alexander cos.
  - Hutchison: did not find

_Vertigo modesta modesta_
- Baker: not listed
  - Hubricht: listed as a fossil in Jackson and Alexander cos.
  - Hutchison: did not find

_Vertigo brierensis_
- Baker: not listed
  - Hubricht: listed as a fossil in Jackson Co.
- Hutchison: did not find

STROBILOPSIDAE

Strobilops labyrinthica labyrinthica
- Hubricht: listed as S. labyrinthica; reported from Jackson, Williamson, Saline, Pope, and Hardin cos.
- Hutchison: one collection identified, "Johnson Co., Cave Creek, limestone glade"

Strobilops labyrinthica virgo
- Baker: collections at 1) "Williamson Co., 3 mi. S of Marion, parkland with black oak," 2) "Saline Co., Cave Hill" -- known from only four cos. in the state including Williamson and Saline
- Hubricht: included with S. labyrinthica
- Hutchison: did not identify

Strobilops aenea aenea
- Baker: collections at 1) "Jackson Co., S end of Fountain Bluff," 2) "Pope Co., 4 mi. W of Golconda, wooded hill," 3) "1/2 mi. NE of Cave in Rock, woodland" -- distributed widely in Illinois
- Hubricht: listed as S. aenea; reported from Jackson, Union, Pope, and Hardin cos.
- Hutchison: did not identify

Strobilops aenea micromphala
- Baker: one collection, "Hardin Co., 1/2 mi. NE of Cave in Rock, woodland" -- known from three cos. in Illinois including Hardin
- Hubricht: included with S. aenea
- Hutchison: did not identify

Strobilops aenea spiralis
- Baker: no collections -- known in Illinois only from Union Co., near Alto Pass
- Hubricht: may be listed as S. texasiana; no records in Illinois
- Hutchison: did not identify

SUCCINEIDAE

Succinea chittenangoensis
- Baker: probably listed as *S. ovalis*; the *S. ovalis optima* subspecies occurs almost throughout the state
  - Hubricht: listed as a fossil in Union Co.
  - Hutchison: did not find

*Succinea bakeri*
- Baker: not listed
- Hubricht: listed as a fossil in Alexander Co.
- Hutchison: did not find

*Succinea ovalis optima*
- Baker: occurs almost throughout the state?
- Hubricht: probably listed as *S. chittenangoensis*; listed as a fossil in Union Co.
- Hutchison: did not identify

*Catinella avara*
- Baker: listed as *Succinea avara* with two subspecies, *S. avara avara* and *S. avara wardiana*; both are reported as distributed throughout Illinois in suitable habitats; collections of *S. avara avara* at 1) "Jackson Co., Beaucoup Creek bottoms, N of Murphysboro," 2) "Saline Co., Cave Hill," 3) "Union Co., railroad embankment near Cobden," 4) "Union Co., 1 3/4 mi. E of Reynolds ville, floodplain forest," 5) "Alexander Co., Cairo Point, floodplain forest at junction of Ohio and Mississippi rivers," 6) "Alexander Co., railroad embankment N of Cairo," 7) "Massac Co., 3 mi. E of Metropolis, Seven Mile Creek"
- Hubricht: listed from Saline, Hardin, and Pope cos.
- Hutchison: did not identify

*Catinella gelida*
- Baker: not listed
- Hubricht: listed as a fossil in Saline Co.
- Hutchison: did not find

**LIMACIDAE**

*Deroceras laeve*
- Baker: not listed
- Hubricht: listed from Jackson Co. in southern part
- Hutchison: did not find

*Deroceras gracile*
- Baker: no collections; widely distributed over Illinois
- Hubricht: not listed
- Hutchison: collected at 1) "Jackson Co., S end of Fountain Bluff," 2) "Johnson Co., near Heron Pond, Bird Spring, in woods," 3) "Johnson Co., near Goreville, mowed lawn"

**PHILOMYCIDAE**
Philomycus carolinianus
- Baker: wide distribution over Illinois
- Hubricht: listed from Jackson, Williamson, Union, Alexander, Johnson, Massac, and Pope cos.
- Hutchison: no collections

Pallifera fosteri
- Baker: no collections in south eleven cos. -- not known from south eleven cos.
- Hubricht: not listed for south eleven cos.
- Hutchison: one collection, "Johnson Co., near Heron Pond, Bird Spring, in woods"

Megapallifera mutabilis
- Baker: not listed
- Hubricht: listed from Jackson and Union cos.
- Hutchison: did not find

Megapallifera ragsdalei
- Baker: not listed
- Hubricht: listed from Jackson Co.
- Hutchison: did not find

DISCIDAE

Anguispira alternata alternata
- Hubricht: listed as A. alternata; reported from all of eleven southern cos. except Pulaski and Massac
- Hutchison: a single collection from the south eleven cos. but specific locality unknown

Anguispira alternata carinata
- Baker: collections at 1) "Gallatin Co., 3 mi. NNE of Shawneetown, Shawneetown Hills, in a forest glade," 2) "Union Co., Bald Knob, woodland," 3) "Pope Co., Bay City, Ohio River bluffs," 4) "Hardin Co., 1 mi. SW of Elizabethtown, old quarry," 5) "Hardin Co., 3 mi. NW of Elizabethtown, valley of Big Creek" - reported from Union, Pope, White, Hardin, and Gallatin cos.
- Hubricht: probably included with A. alternata
- Hutchison: collected at 1) "Jackson Co., Giant City, Fern Rocks Nature Preserve," 2) "Union Co., Pine Hills, limestone bluff," 3) "Johnson Co., Cave Creek, limestone glade"
**Anguispira strongylodes**
- Baker: probably included with one of *A. alternata* subspecies
  - Hubricht: listed from Alexander Co.
  - Hutchison: did not find

**Anguispira kochi**
- Baker: collected at 1) "Jackson Co., S end of Fountain Bluff," 2) "Johnson Co., 7 mi. NNW of Vienna, forested hill" -- in scattered places over the greater part of Illinois
  - Hubricht: listed from Jackson and Johnson cos.
  - Hutchison: did not find

**Discus cronkhitei**
- Baker: listed as *D. cronkhitei anthonyi*; confined to northern half of the state
  - Hubricht: listed as a fossil in Alexander and Jackson cos.
  - Hutchison: did not find

**Discus macclintocki**
- Baker: not listed
  - Hubricht: listed as a fossil in Alexander Co.
  - Hutchison: did not find

**Discus patulus**
  - Hubricht: listed from all southernmost eleven cos. except Williamson and Saline
  - Hutchison: collected at 1) "Jackson Co., Giant City State Park, Fern Rocks Nature Preserve," 2) "Johnson Co., Cave Creek, limestone glade," 3) "Johnson Co., Simpson Township Hill Prairie limestone glade"

**HELICODISCIDAE**

**Helicodiscus notius notius**
- Baker: not listed
  - Hubricht: listed from Union Co.
  - Hutchison: did not find
**Helicodiscus singleyanus**
- Baker: listed as *H. singleyanus inermis*; collected at 1) "Jackson Co., Grand Tower," 2) "Hardin Co., 1 mi. NE of Elizabethtown, Ohio River bluffs," 3) "Hardin Co., 1/2 mi. NE of Cave in Rock, woodland" -- widely distributed throughout Illinois but somewhat scattered
  - Hubricht: listed as a fossil in Union Co.
  - Hutchison: did not find

**Helicodiscus parallelus**
  - Hubricht: listed from Union Co.
  - Hutchison: did not find

**PUNCTIDAE**

**Punctum minutissimum**
- Baker: probably listed as *P. pygmaeum*; no collections -- recorded from only five cos. in the state including Jackson
  - Hubricht: listed from Jackson, Union, and Williamson cos.
  - Hutchison: did not find

**ZONITIDAE**

**Nesovitrea electrina**
- Baker: listed as *Retinella electrina*; no collections -- distribution is sporadic
  - Hubricht: listed as a fossil in Jackson, Union, Alexander, and Gallatin cos.
  - Hutchison: did not find

**Glyphyalinia wheatleyi**
- Baker: listed as *Retinella wheatleyi*; collected at 1) "Jackson Co., S end of Fountain Bluff," 2) "Jackson Co., Giant City State Park, hilly woodland," 3) "Hardin Co., 3 mi. NE of Elizabethtown, wooded hill" -- confined to the southern half of Illinois
  - Hubricht: listed from Jackson, Union, and Alexander cos.
  - Hutchison: did not identify

**Glyphyalinia indentata**
- Hubricht: listed from all of the south eleven cos.

**Mesophix friabilis**
- Baker: no collections in south eleven cos. -- known from only three sites in Illinois including Williamson Co.
- Hubricht: listed from Jackson, Union, and Williamson cos.
- Hutchison: collected at 1) "Johnson Co., Heron Pond-Little Black Slough, along railroad embankment," 2) "Johnson Co., Heron Pond, N edge of swamp in woods," 3) "Johnson Co., Cave Creek, limestone glade;" (may be confused with M. cupreus)

**Mesophix globosus**
- Baker: not listed
- Hubricht: listed from Pope, Saline, Hardin, and Gallatin cos.
- Hutchison: did not identify

**Mesophix perlaevis vulgatus**

- Hubricht: both M. perlaevis and M. vulgatus are listed as separate species, but neither are recorded from Illinois

Mesomphix cupreus


- Hubricht: not recorded in Illinois

Paravitorea capsella

- Baker: no collections -- confined largely to the southern half of the state
- Hubricht: recorded for Jackson and Union cos. in southern part

Paravitorea significans

- Baker: one collection in south eleven cos., "Gallatin Co., 3 mi. NNE of Shawneetown, Shawneetown Hills, in forest
glade" -- confined to southern half of state
  - Hubricht: not listed in south eleven cos.
  - Hutchison: did not identify

**Hawaii minimuscula**
  - Baker: collected at 1) "Union Co., near Cobden, railroad embankment," 2) "Hardin Co., 1/2 mi. E of Cave in Rock, woodland" -- abundantly though sporadically distributed throughout Illinois
  - Hubricht: listed from Jackson, Union, and Williamson cos.
  - Hutchison: collected at 1) "Union Co., Pine Hills, limestone cliff," 2) "Johnson Co., near Goreville, mowed lawn"

**Ventridens ligerus**
  - Baker: listed as *V. ligerus*; collected at 1) "Union Co., W of Alto Pass," 2) "Alexander Co., Dongola Hollow hills," 3) "Alexander Co., Cairo Point, junction of Ohio and Mississippi rivers, floodplain forest," 4) "Alexander Co., N of Cairo, railroad embankment," -- found over much of Illinois but particularly abundant in the hill and bluff region of the extreme southern part
  - Hubricht: listed from Jackson, Union, Williamson, Massac, and Pope cos. in the southern part
  - Hutchison: collected at 1) "Johnson Co., near Heron Pond, mowed pasture," 2) "Johnson Co., Vienna, mowed lawn"

**Zonitoides arbores**
  - Hubricht: listed from every co. except Pulaski
Co., near Goreville, mowed lawn," 6) "Johnson Co., Cave Creek, limestone glade," 7) "Jackson Co., near Grand Tower, Devil's Backbone"

Zonitoides nitidus
- Baker: no collections, known from only the northern part of the state
- Hubricht: no records for south eleven cos.
- Hutchison: one collection at "Union Co., Berryville, shale glade" (identification unsure)

HELICARIONIDAE

Euconulus fulvus
- Baker: one collection in south eleven cos., "Union Co., 1 3/4 mi. E of Reynoldsville, floodplain forest" -- widely scattered throughout Illinois
- Hubricht: listed as a fossil in Jackson and Alexander cos.
- Hutchison: did not identify

Euconulus trochulus
- Baker: probably listed as E. chersinus -- collected at 1) "Pope Co., Bay City, Ohio River bluffs," 2) "Hardin Co., 3 mi. NE of Elizabethtown, wooded hill," -- generally distributed throughout Illinois
- Hubricht: listed from Pope and Hardin cos.
- Hutchison: did not identify

Guppya sterkii
- Baker - not listed
- Hubricht: listed from Union Co.
- Hutchison: did not identify

HAPLOTREMATIDAE

Haplotrema concavum
- Hubricht: listed from Jackson, Union, Alexander, Pope, and Hardin cos.

**BULIMULIDAE**

*Rabdopus dealbatus dealbatus*
- Baker: listed as *Bulimusulus dealbatus*; collected at one site, "Jackson Co., S end of Fountain Bluff" -- known in Illinois only from Fountain Bluff in Jackson Co.
- Hubricht: listed from Union Co. in south part
- Hutchison: did not find

**POLYGYRIDAE**

*Polygyra leporina*
- Baker: collected at 1) "Saline Co., Cave Hill," 2) "Union Co., 8 mi. SW of Anna, in hills," 3) "Hardin Co., 3 mi. NE of Elizabethtown, wooded hill" -- reported from the counties of Clark, Randolph, Perry, Jackson, Union, Saline, and Hardin
- Hubricht: listed from Jackson, Union, Saline, and Hardin cos.
- Hutchison: collected at 1) "Hardin Co., Shetlerville, abandoned limestone quarry," 2) "Johnson Co., Heron Pond-Little Black Slough, railroad embankment"

*Polygyra dorfeuilliana*
- Baker: collected from only one site in south eleven cos., "Jackson Co., S end of Fountain Bluff" -- known in Illinois only from the dry bluffs in Monroe and Jackson cos.
- Hubricht: listed from Jackson co.
- Hutchison: did not find

*Stenotrema barbatum*
- Baker: may be listed as *Polygyra hirsuta*; collected at 1) "Union Co., W of Alto Pass," 2) "Hardin Co., 1/2 mi. NE of"
Cave in Rock, woodland" -- one of the commonest and most widely distributed snails in Illinois
- Hubricht: listed from Jackson, Union, Gallatin, Hardin, and Pope cos.
- Hutchison: collected at "Johnson Co., Heron Pond-Little Black Slough, floodplain forest"

Stenotrema hubrichti
- Baker: not listed
- Hubricht: Union Co., Illinois is only reported site for sp.
- Hutchison: collected at "Union Co., Pine Hills, limestone cliff"

Stenotrema leai aliciae
- Hubricht: listed from Jackson and Hardin cos.
- Hutchison: did not identify; may have confused with Polygyra fraterna

Stenotrema fraternum fraternum
- Baker: probably listed as Polygyra fraterna fraterna; Baker has no collections for Polygyra fraterna fraterna in south eleven cos., but reports it as abundant on the bluffs bordering the Ohio and Mississippi rivers and more common in the southern than northern part of the state (see comments for Stenotrema leai aliciae above)
- Hubricht: listed from all southern eleven cos. except Pulaski
- Hutchison: collected at 1) "Jackson Co., S end of Fountain Bluff," 2) "Pope Co., Leisure City, limestone glade," 3) "Jackson Co., N of Grand Tower, Devil's Backbone"

Stenotrema stenotrema

15
- Baker: may be listed as *Polygyra stenotrema*; collected at one site, "Hardin Co., 1 mi. SW of Elizabethtown, old quarry" -- only Illinois site is at Hardin Co. quarry
  - Hutchison: did not find

*Mesodon inflectus*

- Baker: probably listed as *Polygyra inflecta inflecta*, *P. inflecta media*, and/or *P. inflecta edentata*; the following are Baker collections for each:
  - *Polygyra inflecta inflecta* -- no collections in south eleven cos.
  - *Polygyra inflecta media* -- 1) "Hardin Co., 3 mi. NW of Elizabethtown, Big Creek valley," 2) "Massac Co., 7 mi. N of Brookport, hilly woodland"
  - *Polygyra inflecta edentata* -- "Massac Co., 7 mi. N of Brookport, hilly woodland"

confined largely to the southern part of the state
  - Hubricht: listed from all eleven southern cos. except Pulaski
  - Hutchison: collections for:
    - *Polygyra inflecta media* -- "Jackson Co., S end of Fountain Bluff"
    - *Polygyra inflecta edentata* -- did not find

*Mesodon zaletus*

  - Hubricht: listed from Jackson, Union, Alexander, Pope, and Hardin cos. in the southern part
  - Hutchison: did not identify; may have confused with

*Polygyra albolabris*

*Mesodon clausus clausus*

- Baker: probably listed as *Polygyra clausa*; collected at
1) "Jackson Co., S end of Fountain Bluff," 2) "Hardin Co., 3 mi. NW of Elizabethtown, valley of Big Creek" -- widely distributed over Illinois
- Hubricht: listed from Jackson, Alexander, and Hardin cos.

Mesodon thyroidus
- Hubricht: listed from all eleven southernmost cos. except Gallatin and Johnson
"Union Co., Pine Hills, limestone cliff," 14) "Johnson Co., near Heron Pond, cultivated garden"

**Mesodon elevatus**
- **Baker:** probably listed as *Polygyra elevata*; collected at
  1) "Alexander Co., Dongola Hollow hills," 2) "Alexander Co., near Thebes, wooded hill" -- known from only seven cos. in Illinois including Jackson and Alexander
  - **Hubricht:** listed from Jackson and Alexander cos.
  - **Hutchison:** collected at "Johnson Co., Cave Creek, limestone glade"

**Mesodon pennsylvanicus**
- **Baker:** probably listed as *Polygyra pennsylvanica*; no collections in south eleven cos. -- widely distributed over Illinois
  - **Hubricht:** listed from Jackson Co. in the southern part
  - **Hutchison:** did not find

**Triodopsis vulgata**
- **Baker:** may be listed as *Polygyra fraudulenta*; collected at
  - **Hubricht:** listed from Jackson, Union, Pope, and Hardin cos.
  - **Hutchison:** collected at 1) "Union Co., Berryville, shale glade," 2) "Pope Co., Wallace Bluff," 3) "Johnson Co., near Heron Pond, Bird Spring, in woods," 4) "Johnson Co., Cave Creek, limestone glade," 5) "Union Co., Pine Hills, limestone cliff," 6) "Union Co., Bald Knob, edge of woods"

**Triodopsis discoidea**
- **Baker:** may include *Polygyra tridentata tridentata*, *P. tridentata frisoni*, *P. tridentata bidentata*, *P. tridentata unidentata*, and/or *P. tridentata edentilibris* as listed by Baker; the following are collections per subspecies:
  - **Polygyra tridentata tridentata** -- no collections in south eleven cos.
Elizabethtown, old quarry,” 8) "Hardin Co., Cave in Rock," 9) "Hardin Co., 1/2 mi. NE of Cave in Rock, in woods"

**Polygryra tridentata bidentata** -- collected at one site in south eleven cos., "Hardin Co., 1 mi. NE of Elizabethtown, Ohio River bluffs"


**Polygryra tridentata edentilabris** -- collected at 1) "Hardin Co., 1 mi. NE of Elizabethtown, Ohio River bluffs," 2) "Hardin Co., 1 mi. SE of Elizabethtown, old quarry"

-- abundant in parts of Illinois, most common in the southern part

- Hubricht: listed from Jackson, Union, Alexander, Pope, and Hardin cos.
- Hutchison collections for:
  **Polygryra tridentata tridentata** -- did not find
  **Polygryra tridentata frisoni** -- 1) "Johnson Co., Indian Point, limestone glade," 2) "Hardin Co., Shetlerville, abandoned limestone quarry," 3) "Massac Co., near Joppa, Ohio River bank," 4) "Johnson Co., near Belknap, abandoned limestone quarry"
  **Polygryra tridentata bidentata** -- did not find
  **Polygryra tridentata unidentata** -- did not find
  **Polygryra tridentata edentilabris** -- "Johnson Co., near Belknap, abandoned limestone quarry"

**Triodontopsis fosteri**


- Hubricht: reported from all eleven southernmost cos. except Pulaski and Massac

Polygyra appressa
- Hubricht: not listed; may be included with Triiodopsis fosteri

- Hutchison: collected at 1) "Randolph Co., Swayne Hollow, sandstone bluffs," 2) "Jackson Co., N of Grand Tower, Devil's Backbone, limestone bluff" (may be confused with Triiodopsis fosteri)

Triiodopsis multilineata
- Baker: probably includes Polygyra multilineata

multilineata, P. multilineata alba, and/or P. multilineata rubra as listed by Baker; two collections for Polygyra multilineata listed: 1) "Alexander Co., Cairo Point, junction of Mississippi and Ohio rivers, floodplain forest," 2) "Alexander Co., 1 mi. S of Cairo, Mississippi River floodplain" -- more abundant in northern than in southern Illinois but has been collected near Cairo in Alexander Co.
- Hubricht: listed from Alexander Co.
- Hutchison: did not find

Triiodopsis allenii
- Baker: may be listed as Polygyra albolabris allenii; collected at 1) "Jackson Co., S end of Fountain Bluff," 2) "Jackson Co., Fountain Bluff, Trestle Hollow," 3) "Jackson Co., N of Grand Tower, river bluff," 4) "Massac Co., 6 mi. NW of Metropolis, swamp near Q Ditch" -- confined to the southern part of the state
- Hubricht: listed from Jackson and Alexander cos.
- Hutchison: collected at 1) "Pope Co., Gyp Williams


*Allogona profunda*

- Baker: may be listed as *Polygyra profunda*; fossils collected at one site in south eleven cos., "Jackson Co., N of Grand Tower, river bluff," -- confined to northern part of the state, but fossils are often found in southern Illinois
- Hubricht: listed as a fossil in Jackson and Alexander cos.
- Hutchison: collected fossils at 1) "Alexander Co., Ozark Hill Prairies, loess hill prairies," 2) "Jackson Co., Horseshoe Bluff, in woods"

**MISCELLANEOUS COLLECTIONS OF AQUATIC SPECIES**

*Planorbis trivolvis*

- Hutchison: collected at "Johnson Co., Heron Pond, on stumps and logs in swamp"

*Vivipara sp.*

- Hutchison: collected at "Pulaski Co., Section 8 Woods, in dried slough"

*Physa gyrina*

- Hutchison: collected at "Johnson Co., near Heron Pond, dried slough"

*Physa heterostropha*

- Hutchison: collected at "Johnson Co., near Heron Pond, dried slough"
FIGURE 12. Copy of part of Illinois Official Highway Map, 1987-88, showing eleven southernmost counties
FIGURE 9. Collecting sites for land snails by Dr. Frank Baker (1939) on copy of Landforms of Illinois map, J. A. Bier, University of Illinois, 1980.