

## SOME PLEISTOCENE LAND SNAIL RECORDS FROM MISSOURI AND ILLINOIS

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The records listed here are based on collections made between 1933 and 1940 while the author was a resident of St. Louis, Missouri. The numbers following the species names are the number of specimens collected. These numbers are available only for some localities.

The talus deposits have been largely ignored in the past. The conchologists have not collected the fossils because they were dead shells, and the paleontologists have not collected them because the formation could not be accurately dated. With modern C-14 dating techniques this latter objection is no longer valid. Talus deposits provide a history of species of snails whose habitat requirements prevented them from being preserved in loess. Talus also provides a record of species in areas in which there is no loess. It is only through talus deposits that we know that *Hendersonia occulta* (Say) lived in central Kentucky and Tennessee during Pleistocene time.

Fifty species were found in the loess and 67 species found in the talus in the vicinity of St. Louis, a total of 71 species (excluding the Fox Creek Gap locality). Sixteen of these species are not found in the vicinity of St. Louis at the present time. Of these, 3 are extinct or not recognizable, 3 are now found only at high elevations in the Rocky Mountains, the remaining species are living in the northern United States and

southern Canada. Most of the species which are still living in the vicinity of St. Louis today range farther north, in most cases at least into southern Michigan. From these data it is concluded that the climate at the time these deposits were laid down was colder than at present, probably about like the climate of southern Michigan today.

## MISSOURI

## 1. BOONE CO.: talus, Providence.

*Stenotrema barbatum* (Clapp)  
*Stenotrema stenotrema* (Pfeiffer)  
*Stenotrema leai aliciae* (Pilsbry)  
*Stenotrema fraternum fraternum* (Say)  
*Mesodon thyroidus* (Say)  
*Mesodon clausus* (Say)  
*M. pennsylvanicus* (Green)  
*M. elevatus* (Say)  
*M. inflectus* (Say)  
*Triodopsis fosteri fosteri* (F.C. Baker)  
*T. alleni* (Wetherby)  
*Allogona profunda* (Say)  
*Haplotrema concavum* (Say)  
*Glyphyalinia indentata* (Say)  
*Paravitrea significans* (Bland)  
*Zonitoides arboreus* (Say)  
*Anguispira alternata alternata* (Say)

*Anguispira kochi kochi* (Pfeiffer)  
*Discus patulus patulus* (Deshayes)  
*Helicodiscus notius notius* (Hubricht)  
*H. jacksoni* Hubricht  
*H. singleyanus* (Pilsbry)  
*Strobilops labyrinthica* (Say)  
*Gastrocopta armifera armifera* (Say)  
*G. contracta contracta* (Say)  
*G. holzingeri agna* (Pilsbry)  
*G. pentodon* (Say)  
*G. procera procera* (Gould)  
*Pupoides albilabris* (C. B. Adams)  
*Vertigo milium* (Gould)  
*Vallonia parvula* Sterki  
*V. gracilicosta* Reinhardt  
*Carychium exile* H. C. Lea

2. CALLAWAY CO.: talus, 1 mile north of Cedar City.

*Stenotrema leai leai* (Ward)  
*Mesodon thyroïdus* (Say)  
*M. elevatus* (Say)  
*M. inflectus* (Say)  
*Triodopsis fosteri fosteri* (F. C. Baker)  
*Haplotrema concavum* (Say)  
*Glyphyalinia indentata* (Say)  
*Zonitoides arboreus* (Say)  
*Anguispira alternata alternata* (Say)  
*A. kochi kochi* (Pfeiffer)  
*Helicodiscus parallelus* (Say)  
*Strobilops labyrinthica* (Say)

3. ST. CHARLES CO.: talus, 3 miles south of Harvester.

*Polygyra dorfeuilliana* Lea  
*Stenotrema barbatum* (Clapp)  
*S. fraternum fraternum* (Say)  
*Mesodon clausus* (Say)  
*M. pennsylvanicus* (Green)  
*M. elevatus* (Say)  
*M. inflectus* (Say)  
*Triodopsis fosteri fosteri* (F. C. Baker)  
*T. alleni* (Wetherby)  
*T. multilineata* (Say)  
*Allogona profunda* (Say)  
*Haplotrema concavum* (Say)  
*Nesovitrea electrina* (Gould)

*Glyphyalinia indentata* (Say)  
*Ventridens ligerus* (Say)  
*Zonitoides arboreus* (Say)  
*Anguispira alternata alternata* (Say)  
*A. kochi kochi* (Pfeiffer)  
*Discus patulus patulus* (Deshayes)  
*Helicodiscus notius notius* Hubricht  
*Gastrocopta armifera armifera* (Say)  
*Vallonia parvula* Sterki  
*Hendersonia occulta* (Say)

4. ST. CHARLES CO.: loess, 2.5 miles northwest of St. Charles.

*Stenotrema barbatum* (Clapp)  
*Triodopsis multilineata* (Say)  
*Haplotrema concavum* (Say)  
*Glyphyalinia indentata* (Say)  
*Euconulus fulvus fulvus* (Müller)  
*Hawailia minuscula minuscula* (Binney)  
*Anguispira alternata alternata* (Say)  
*Discus cronkhitei* (Newcomb)  
*D. shimeki* (Pilsbry)  
*D. macclintocki* (F. C. Baker)  
*Succinea ovalis pleistocenica* F.C.B.  
*Gastrocopta armifera armifera* (Say)  
*Pupilla muscorum muscorum* (Linneé)  
*Vertigo hubrichti* Pilsbry  
*V. modesta modesta* (Say)  
*Columella alticola* (Ingersoll)  
*Vallonia gracilicosta* Reinhardt  
*Hendersonia occulta* (Say)  
 Snail eggs (Discus).

5. St. CHARLES CO.: talus, 1 mile west of St. Charles.

<i>Polygyra dorfeuilliana</i> Lea	7
<i>Stenotrema fraternum fraternum</i> (Say)	1
<i>Mesodon clausus</i> (Say)	1
<i>M. elevatus</i> (Say)	88
<i>M. inflectus</i> (Say)	14
<i>Triodopsis fosteri fosteri</i> (FCB)	46
<i>T. multilineata</i> (Say)	18
<i>Allogona profunda</i> (Say)	12
<i>Haplotrema concavum</i> (Say)	3
<i>Glyphyalinia indentata</i> (Say)	4
<i>Ventridens ligerus</i> (Say)	1
<i>Zonitoides arboreus</i> (Say)	2

Zonitoides limatulus (Ward)	2	Haplotrema concavum (Say)	
Anguispira alternata alternata (Say)	20	Euconulus fulvus fulvus (Müller)	
A. kochi kochi (Pfeiffer)	19	Nesovitrea electrina (Gould)	
Helicodiscus parallelus (Say)	2	Zonitoides arboreus (Say)	
H. singleyanus (Pilsbry)	1	Anguispira alternata alternata (Say)	
Gastrocopta armifera armifera (Say)	3	Discus cronkhitei (Newcomb)	
G. contracta contracta (Say)	1	D. shimeki (Pilsbry)	
Carychium exile H. C. Lea	1	D. macclintocki (F. C. Baker)	
Hendersonia occulta (Say)	1	Helicodiscus parallelus (Say)	
		H. intermedius Morrison	
		Punctum minutissimum (Lea)	
		Succinea ovalis pleistocenica F. C. B.	
		Catinella gelida (F. C. Baker)	
		Gastrocopta tappaniana (C. B. Adams)	
		Pupilla muscorum muscorum (Linne)	
		Vertigo hubrichti Pilsbry	
		V. modesta modesta (Say)	
		Columella alticola (Ingersoll)	
		Vallonia gracilicosta Reinhardt	
		Hendersonia occulta (Say)	
		Snail eggs (Discus)	
6. FRANKLIN CO.: talus, 1 mile southwest of St. Albans.		9. ST. LOUIS CO.: loess 3.3 miles east of Chesterfield.	
Polygyra dorfeuilliana Lea		Stenotrema barbatum (Clapp)	
Stenotrema barbatum (Clapp)		Triodopsis fosteri fosteri (F. C. Baker)	
Discus cronkhitei (Newcomb)		T. multilineata (Say)	
D. shimeki (Pilsbry)		Allogona profunda (Say)	
D. macclintocki (F. C. Baker)		Anguispira alternata alternata (Say)	
Hendersonia occulta (Say)		Succinea bakeri Hubricht	
		Catinella gelida (F. C. Baker)	
		Hendersonia occulta (Say)	
7. FRANKLIN CO.: talus, 1 mile southwest of Port Royal.		10. ST. LOUIS CO.: loess, on Lower Bottom Road, 1 mile east of Hine (formerly Mona).	
Stenotrema barbatum (Clapp)		Stenotrema barbatum (Clapp)	26
S. fraternum fraternum (Say)		S. leai leai (Ward)	3
Mesodon inflectus (Say)		Triodopsis multilineata (Say)	6
Triodopsis fosteri fosteri (F. C. Baker)		Allogona profunda (Say)	2
T. alleni (Wetherby)		Haplotrema concavum (Say)	8
Allogona profunda (Say)		Euconulus fulvus fulvus (Müller)	21
Haplotrema concavum (Say)		Nesovitrea electrina (Gould)	14
Glyphyalinia indentata (Say)		Zonitoides arboreus (Say)	16
Ventridens ligerus (Say)		Deroceras laeve (Müller)	2
Anguispira alternata alternata (Say)		Anguispira alternata alternata (Say)	5
Helicodiscus parallelus (Say)			
Gastrocopta armifera armifera (Say)			
Vallonia parvula Sterki			
Cionella lubrica (Müller)			
Hendersonia occulta (Say)			
8. ST. LOUIS CO.: loess, Chesterfield.			
Stenotrema barbatum (Clapp)			
S. leai leai (Ward)			
Mesodon elevatus (Say)			
Triodopsis fosteri hubrichti (F. C. B.)			
T. multilineata (Say)			
Allogona profunda (Say)			

Anguispira kochi kochi (Pfeiffer)	3	Euconulus fulvus fulvus (Müller)	1
Discus cronkhitei (Newcomb)	85	Nesovitrea electrina (Gould)	4
D. shimeki (Pilsbry)	9	Glyphyalinia wheatleyi (Bland)	1
D. macclintocki (F. C. Baker)	100	G. indentata (Say)	5
Helicodiscus notius notius Hubricht	4	Paravitrea significans (Bland)	1
H. singleyanus (Pilsbry)	8	Ventridens ligerus (Say)	11
H. intermedius Morrison	3	Zonitoides arboreus (Say)	5
Punctum minutissimum (Lea)	19	Anguispira alternata	
Succinea bakeri Hubricht	6	alternata (Say)	1
S. ovalis pleistocenica F.C. Baker	107	A. kochi kochi (Pfeiffer)	12
Catinella gelida (F. C. Baker)	19	Discus patulus patulus (Deshayes)	7
Vertigo hubrichti Pilsbry	38	Helicodiscus parallelus (Say)	10
V. modesta modesta (Say)	305	Succinea ovalis ovalis Say	1
Columella alticola (Ingemoll)	32	Hendersonia occulta (Say)	9
Vallonia gracilicosta Reinhardt	179		
Carychium exile H. C. Lea	9	12. ST. LOUIS CO.: loess, 0.5 mile south of Gumbo.	
Hendersonia occulta (Say)	124	Discus cronkhitei (Newcomb)	
Snail eggs (Discus)	75	D. macclintocki (F. C. Baker)	
Snail egg (Anguispira or Haplotrema)	1	Succinea ovalis pleistocenica (F.C.B.)	
Fossil seeds of three species of bo- rage were also found at this locality: Krynitzia coroniformis Elias, Biorbina fossilis E- lias, and an unidentified species.		Catinella gelida (F. C. Baker)	
This is the type locality for Vertigo goul- di hubrichti Pilsbry which is here treated as a full species rather than a subspecies of V. gouldi (Binney). It was found with V. goul- di at two talus localities and could be readily distinguished, not only by the teeth, but by its smaller size and more slender form. The V. gouldi complex is much in need of study.		Vertigo hubrichti Pilsbry	
		V. modesta modesta (Say)	
		Hendersonia occulta (Say)	
11. ST. LOUIS CO.: talus, 1 mile east of Hine.		13. ST. LOUIS CO.: loess, 3.5 miles west of Pattonville.	
Stenotrema barbatum (Clapp)	13	Discus cronkhitei (Newcomb)	
S. leai leai (Ward)	5	Succinea ovalis pleistocenica (F.C.B.)	
Mesodon thyroidus (Say)	2	Vertigo hubrichti Pilsbry	
M. clausus (Say)	6	V. modesta modesta (Say)	
M. pennsylvanicus (Green)	5	Vallonia gracilicosta Reinhardt	
M. zaletus (Binney)	7	Hendersonia occulta (Say)	
M. elevatus (Say)	15	14. ST. LOUIS CO.: loess, Garrett Road, 6 miles west of Florissant.	
M. inflectus (Say)	13	Stenotrema barbatum (Clapp)	4
Triodopsis fosteri fosteri (F. C. B.)	29	Triodopsis multilineata (Say)	1
T. alleni (Wetherby)	2	Haplotrema concavum (Say)	1
T. multilineata (Say)	1	Euconulus fulvus fulvus (Müller)	2
Allogona profunda (Say)	20	Anguispira alternata alternata (Say)	6
Haplotrema concavum (Say)	9	Discus cronkhitei (Newcomb)	1
		Succinea ovalis pleistocenica F. C. Baker	7
		Hendersonia occulta (Say)	6

15. ST. LOUIS CO.: loess, Charbonnier Road, 3.5 miles west of Florissant.		D. macclintocki (F.C. Baker)	41
Stenotrema barbatum (Clapp)	4	Helicodiscus notius notius Hubricht	7
Triodopsis multilineata (Say)	2	H. singleyanus (Pilsbry)	3
Allogona profunda (Say)	1	H. intermedius Morrison	2
Haplotrema concavum (Say)	2	Punctum minutissimum (Lea)	7
Nesovitrea electrina (Gould)	1	Succinea ovalis pleisto-	
Anguispira alternata		cenica F. C. Baker	5
alternata (Say)	6	S. bakeri Hubricht	171
Discus cronkhitei (Newcomb)	3	Catinella gelida (F. C. Baker)	14
D. macclintocki (F. C. Baker)	5	Vertigo hubrichti Pilsbry	12
Helicodiscus notius notius Hubricht	2	V. modesta modesta (Say)	162
Succinea ovalis pleistocena		Columella alticola (Ingersoll)	22
F. C. Baker	10	Vallonia gracilicosta Reinhardt	41
S. bakeri Hubricht	7	Hendersonia occulta (Say)	231
Vertigo hubrichti Pilsbry	7	Snail eggs (Discus)	6
V. modesta modesta (Say)	9	Snail eggs (Haplotrema or	
Columella alticola (Ingersoll)	1	Anguispira)	2
Vallonia gracilicosta Reinhardt	2	18. ST. LOUIS CO.: talus, Musicks Ferry.	
Hendersonia occulta (Say)	16	Stenotrema fraternum	
16. ST. LOUIS CO.: loess, Charbonnier Road, 4 miles west of Florissant. At this locality there is a layer of fossil wood in the loess. The shells were collected just above this layer.		fraternum (Say)	8
Triodopsis multilineata (Say) fragments		Mesodon thyroidus (Say)	2
Haplotrema concavum (Say)	2	M. clausus (Say)	16
Deroceras laeve (Müller)	1	M. zaleetus (Binney)	11
Carychium exile H. C. Lea	3	M. elevatus (Say)	15
Hendersonia occulta (Say)	3	M. inflectus (Say)	102
Pomatiopsis lapidaria (Say)	16	Triodopsis fosteri fosteri (F.C.B.)	8
17. ST. LOUIS CO.: loess, Musicks Ferry.		T. alleni (Wetherby)	16
Stenotrema barbatum (Clapp)	46	Allogona profunda (Say)	3
S. leai leai (Ward)	28	Haplotrema concavum (Say)	12
Triodopsis multilineata (Say)	39	Glyphyalinia indentata (Say)	32
Allogona profunda (Say)	69	Mesomphix friabilis (W.G. Binney)	1
Haplotrema concavum (Say)	35	Paravitrea significans (Bland)	7
Euconulus fulvus fulvus (Müller)	7	Ventridens ligerus (Say)	7
Nesovitrea electrina (Gould)	4	Zonitoides arboreus (Say)	5
Glyphyalinia indentata (Say)	1	Striatura meridionalis (Pilsbry	
Zonitoides arboreus (Say)	5	& Ferriss)	5
Deroceras laeve (Müller)	1	Anguispira alternata alter-	
Anguispira alternata alternata (Say)	68	nata (Say)	54
A. kochi kochi (Pfeiffer)	2	A. kochi kochi (Pfeiffer)	36
Discus cronkhitei (Newcomb)	31	Discus patulus patulus (Deshayes)	5
D. shimaki (Pilsbry)	3	Helicodiscus notius notius	
		Hubricht	50
		H. singleyanus (Pilsbry)	15
		H. intermedius Morrison	3
		H. jacksoni Hubricht	7
		Punctum minutissimum (Lea)	4

<i>Succinea ovalis ovalis</i> (Say)	1	20. ST. LOUIS CO.: talus, Fox Creek Gap, 1 mile west of Allenton. This is probably the oldest deposit recorded here. The rock fragments are much eroded without sharp edges. It contains several species of southern distribution not found in other deposits. Three of the species have not been found elsewhere in eastern Missouri. These species are: <i>Triodopsis vulgata</i> (all other records for this species are based on <i>Triodopsis discoidea</i> ), <i>Stenotrema stenotrema nudum</i> , and <i>Helicina orbiculata orbiculata</i> .	
<i>Catinella gelida</i> (F.C. Baker)	1		
<i>Strobilops labyrinthica</i> (Say)	23		
<i>S. aenea</i> Pilsbry	1		
<i>Gastrocopta armifera armifera</i> (Say)	39		
<i>G. contracta contracta</i> (Say)	65		
<i>G. pentodon</i> (Say)	2		
<i>G. procera procera</i> (Gould)	2		
<i>G. corticaria</i> (Say)	1		
<i>Vertigo hubrichti</i> Pilsbry	1		
<i>Carychium exile</i> H. C. Lea	11		
19. ST. LOUIS CO.: silt, Mill Creek, 3 miles east of Musicks Ferry.			
<i>Stenotrema barbatum</i> (Clapp)	4	<i>Polygyra leporina</i> (Gould)	1
<i>Mesodon elevatus</i> (Say)	1	<i>P. dorfeuilliana</i> Lea	271
<i>Triodopsis fosteri fosteri</i> (F.C.B.)	10	<i>Stenotrema stenotrema nudum</i> (Pilsbry)	2
<i>T. alleni</i> (Wetherby)	10	<i>S. leaï aliciae</i> (Pilsbry)	25
<i>Allogona profunda</i> (Say)	6	<i>Mesodon thyroidus</i> (Say)	1
<i>Haplotrema concavum</i> (Say)	4	<i>M. elevatus</i> (Say)	1
<i>Nesovitrea electrina</i> (Gould)	7	<i>M. inflectus</i> (Say)	33
<i>Zonitoides arboreus</i> (Say)	2	<i>Triodopsis vulgata</i> Pilsbry	3
<i>Anguispira alternata alternata</i> (Say)	1	<i>T. fosteri fosteri</i> (F. C. Baker)	1
<i>Discus cronkhitei</i> (Newcomb)	1	<i>Allogona profunda</i> (Say)	2
<i>Helicodiscus notius notius</i> Hubricht	3	<i>Bulimulus dealbatus dealbatus</i> (Say)	20
<i>Oxyloma retusa</i> (Lea)	2	<i>Haplotrema concavum</i> (Say)	3
<i>Catinella gelida</i> (F. C. Baker)	5	<i>Glyphyalinia wheatleyi</i> (Bland)	4
<i>Gastrocopta contracta contracta</i> (Say)	1	<i>G. indentata</i> (Say)	3
<i>Vertigo hubrichti</i> Pilsbry	3	<i>Mesomphix friabilis</i> (W.G. Binney)	6
<i>V. modesta modesta</i> (Say)	5	<i>Zonitoides limatulus</i> (Ward)	1
<i>Hendersonia occulta</i> (Say)	15	<i>Anguispira alternata alternata</i> (Say)	1
<i>Pomatiopsis lapidaria</i> (Say)	25	<i>Discus patulus patulus</i> (Deshayes)	1
The following freshwater species were found at this locality.			
<i>Lymnaea stagnalis</i> (Linne)	2	<i>Helicodiscus notius notius</i> Hubricht	36
<i>L. parva</i> (Say)	2	<i>H. intermedius</i> Morrison	1
<i>Helisoma anceps</i> (Menke)	8	<i>Succinea ovalis ovalis</i> Say	1
<i>H. campanulatum</i> (Say)	2	<i>Catinella gelida</i> (F.C. Baker)	2
<i>Gyraulus altissimus</i> (F. C. Baker)	74	<i>Strobilops labyrinthica</i> (Say)	1
<i>Physa gyrina</i> (Say) ?	3	<i>Gastrocopta armifera armifera</i> (Say)	11
<i>Valvata tricarinata</i> (Say)	58	<i>G. contracta contracta</i> (Say)	8
<i>V. sincera</i> (Say) ?	1	<i>Pupoides albilabris</i> (C.B. Adams)	1
<i>Sphaerium simile</i> (Say) (valves)	14	<i>Hendersonia occulta</i> (Say)	1
<i>Pisidium</i> spp. (valves)	75	<i>Helicina orbiculata orbiculata</i> (Say)	4

21. ST. LOUIS CO.: talus, near Fern Glen.		<i>Vertigo tridentata</i> (Wolf)	28
<i>Polygyra dorfeuilliana</i> Lea	8	<i>V. ventricosa</i> Morse	47
<i>Stenotrema barbatum</i> (Clapp)	10	<i>V. gouldi</i> (Binney)	25
<i>S. leai aliciae</i> (Pilsbry)	2	<i>V. hubrichti</i> Pilsbry	4
<i>Mesodon thyroidus</i> (Say)	8	<i>V. modesta modesta</i> (Say)	1
<i>M. clausus</i> (Say)	8	<i>Vallonia parvula</i> Sterki ca.	1350
<i>M. pennsylvanicus</i> (Green)	12	<i>V. gracilicosta</i> Reinhardt	5
<i>M. zaletus</i> (Binney)	5	<i>Carychium exile</i> H. C. Lea ca.	1700
<i>M. elevatus</i> (Say)	5	<i>Hendersonia occulta</i> (Say)	44
<i>M. inflectus</i> (Say)	2	Snail eggs (Discus)	5
<i>Triodopsis discoidea</i> (Pilsbry)	246	Snail egg ( <i>Anguispira</i> or <i>Haplotrema</i> )	1
<i>T. fosteri fosteri</i> (F. C. Baker)	145		
<i>T. alleni</i> (Wetherby)	9		
<i>Allogona profunda</i> (Say)	29	22. ST. LOUIS CO.: talus, near Cliff Cave.	
<i>Haplotrema concavum</i> (Say)	56	<i>Stenotrema barbatum</i> (Clapp)	62
<i>Guppya sterkii</i> (Dall)	3	<i>S. fraternum fraternum</i> (Say)	11
<i>Euconulus fulvus fulvus</i> (Müller)	3	<i>Mesodon thyroidus</i> (Say)	57
<i>Glyphyalinia wheatleyi</i> (Bland)	27	<i>M. clausus</i> (Say)	12
<i>G. indentata</i> (Say)	115	<i>M. pennsylvanicus</i> (Green)	19
<i>Mesomphix friabilis</i> (W.G. Binney)	27	<i>M. zaletus</i> (Binney)	38
<i>Paravitrea significans</i> (Bland)	7	<i>M. elevatus</i> (Say)	79
<i>Ventridens ligerus</i> (Say)	1	<i>M. inflectus</i> (Say) (1 sinistral)	175
<i>Zonitoides arboreus</i> (Say)	17	<i>Triodopsis fosteri</i>	
<i>Z. limatulus</i> (Ward)	30	<i>fosteri</i> (F. C. Baker)	206
<i>Anguispira alternata</i>		<i>T. alleni</i> (Wetherby)	139
<i>alternata</i> (Say)	60	<i>T. multilineata</i> (Say)	9
<i>A. kochi kochi</i> (Pfeiffer)	83	<i>Allogona profunda</i> (Say)	30
<i>Discus patulus patulus</i> (Deshayes)	2	<i>Haplotrema concavum</i> (Say)	75
<i>D. macclintocki</i> (F. C. Baker)	31	<i>Euconulus chersinus chersinus</i> (Say)	6
<i>Helicodiscus parallelus</i> (Say) ca.	500	<i>Nesovitrea electrina</i> (Gould)	8
<i>H. singleyanus</i> (Pilsbry)	295	<i>Glyphyalinia indentata</i> (Say)	46
<i>H. intermedius</i> Morrison	20	<i>Mesomphix friabilis</i> (W.G. Binney)	32
<i>H. jacksoni</i> Hubricht	14	<i>Paravitrea significans</i> (Bland)	6
<i>Punctum minutissimum</i> (Lea)	308	<i>Ventridens ligerus</i> (Say)	8
<i>Succinea ovalis ovalis</i> Say	5	<i>Zonitoides limatulus</i> (Ward)	5
<i>Catinella gelida</i> (F. C. Baker)	16	<i>Anguispira alternata alternata</i> (Say)	127
<i>Strobilops labyrinthica</i> (Say)	30	<i>A. kochi kochi</i> (Pfeiffer)	85
<i>S. aenea</i> Pilsbry	2	<i>Discus patulus patulus</i> (Deshayes)	1
<i>Gastrocopta armifera armifera</i> (Say) ca.	500	<i>Helicodiscus notius</i>	
<i>G. contracta contracta</i> (Say) ca.	500	<i>notius</i> Hubricht	30
<i>G. holzingeri agna</i> (Pilsbry) ca.	4000	<i>H. singleyanus</i> Pilsbry	19
<i>G. pentodon</i> (Say) ca.	850	<i>H. intermedius</i> Morrison	1
<i>G. procera procera</i> (Gould)	30	<i>H. jacksoni</i> Hubricht	12
<i>G. corticaria</i> (Say)	13	<i>Punctum minutissimum</i> (Lea)	20
<i>Pupoides albilabris</i> (C.B. Adams)	44	<i>Succinea bakeri</i> Hubricht	2
<i>Pupilla muscorum muscorum</i> (Linné)	1	<i>Strobilops labyrinthica</i> (Say)	230

<i>Strobilops aenea</i> Pilsbry	1	<i>Guppya sterkii</i> (Dall)
<i>Gastrocopta armifera armifera</i> (Say)	52	<i>Glyphyalinia indentata</i> (Say)
<i>G. contracta contracta</i> (Say)	113	<i>Paravitrea significans</i> (Bland)
<i>G. holzingeri agna</i> (Pilsbry)	25	<i>Hawaiiia minuscula</i> (Binney)
<i>G. pentodon</i> (Say)	77	<i>Zonitoides arboreus</i> (Say)
<i>G. procera procera</i> (Gould)	29	<i>Z. limatulus</i> (Ward)
<i>G. corticaria</i> (Say)	13	<i>Anguispira alternata alternata</i> (Say)
<i>Pupoides albilabris</i> (C. B. Adams)	43	<i>Helicodiscus notius notius</i> Hubricht
<i>Vertigo milium</i> (Gould)	12	<i>H. singleyanus</i> (Pilsbry)
<i>V. tridentata</i> (Wolf)	20	<i>H. intermedius</i> Morrison
<i>V. gouldi</i> (Binney)	4	<i>H. jacksoni</i> Hubricht
<i>V. hubrichti</i> Pilsbry	3	<i>Punctum minutissimum</i> (Lea)
<i>Columella edentula</i> (Draparnaud)	2	<i>Catinella gelida</i> (F. C. Baker)
<i>Vallonia parvula</i> Sterki	32	<i>Strobilops labyrinthica</i> (Say)
<i>V. gracilicosta</i> Reinhardt	11	<i>Gastrocopta armifera armifera</i> (Say)
<i>Carychium exile</i> H. C. Lea	42	<i>G. contracta contracta</i> (Say)
Snail eggs ( <i>Anguispira kochi</i> )	2	<i>G. holzingeri agna</i> (Pilsbry)
		<i>G. pentodon</i> (Say)
		<i>G. corticaria</i> (Say)
		<i>G. procera procera</i> (Gould)
		<i>Pupoides albilabris</i> (C. B. Adams)
		<i>Vertigo tridentata</i> (Wolf)
		<i>Vallonia perspectiva</i> Sterki
		<i>Carychium exile</i> H. C. Lea
		<i>Hendersonia occulta</i> (Say)
		Snail eggs ( <i>Discus</i> )

23. JEFFERSON Co.: talus, 2 miles southeast of Selma.

<i>Stenotrema barbatum</i> (Clapp)
<i>S. fraternum fraternum</i> (Say)
<i>Mesodon thyroidus</i> (Say)
<i>M. zaletus</i> (Say)
<i>M. inflectus</i> (Say)
<i>Triodopsis discoidea</i> (Pilsbry)
<i>T. fosteri fosteri</i> (F. C. Baker)
<i>Allogona profunda</i> (Say)
<i>Haplotrema concavum</i> (Say)
<i>Glyphyalinia indentata</i> (Say)
<i>Ventridens ligerus</i> (Say)
<i>Discus patulus patulus</i> (Deshayes)

#### ILLINOIS

24. MADISON CO.: talus, 2 miles northwest of Alton.

<i>Stenotrema barbatum</i> (Clapp)
<i>Mesodon thyroidus</i> (Say)
<i>M. pennsylvanicus</i> (Green)
<i>M. elevatus</i> (Say)
<i>M. inflectus</i> (Say)
<i>Triodopsis fosteri fosteri</i> (F. C. Baker)
<i>T. alleni</i> (Wetherby)
<i>Allogona profunda</i> (Say)
<i>Haplotrema concavum</i> (Say)

25. MADISON CO.: silt, 1 mile northeast of Collinsville.

<i>Mesodon elevatus</i> (Say)	2
<i>Glyphyalinia indentata</i> (Say)	1
<i>Zonitoides arboreus</i> (Say)	4
<i>Anguispira alternata alternata</i> (Say)	1
<i>Discus cronkhitei</i> (Newcomb)	2
<i>D. macclintocki</i> (F. C. Baker)	2
<i>Helicodiscus parallelus</i> (Say)	19
<i>H. singleyanus</i> (Pilsbry)	25
<i>H. roundyi</i> (Morrison)	3
<i>Succinea bakeri</i> Hubricht	15
<i>Catinella gelida</i> (F. C. Baker)	2
<i>Gastrocopta armifera armifera</i> (Say)	16
<i>G. contracta contracta</i> (Say)	3
<i>G. procera procera</i> (Gould)	26
<i>Pupoides albilabris</i> (C. B. Adams)	80



26. MADISON CO.: loess, near Collinsville.		Pomatiopsis lapidaria (Say)	10
Stenotrema barbatum (Clapp)	117	Snail eggs (Discus)	4
S. leai leai (Ward)	31	Snail eggs (Anguispira or Haplotrema)	2
S. fraternum fraternum (Say)	4		
Mesodon pennsylvanicus (Green)	1		
M. elevatus (Say)	4	27. ST. CLAIR CO.: loess, near Centerville:	
Triodopsis fosteri fosteri (F.C.B.)	3	At this locality there is a stratum of fossiliferous limestone from one to two inches thick in the loess. The fossils are the same as those in the loess.	
T. multilineata (Say)	90	Stenotrema barbatum (Clapp)	37
Allogona profunda (Say)	137	S. leai leai (Ward)	11
Haplotrema concavum (Say)	9	Triodopsis fosteri fosteri (F. C. Baker)	3
Euconulus fulvus fulvus (Müller)	19	T. multilineata (Say)	28
Nesovitrea electrina (Gould)	53	Allogona profunda (Say)	34
Glyphyalinia indentata (Say)	3	Haplotrema concavum (Say)	7
Mesomphix friabilis (W.G. Binney)	1	Euconulus fulvus fulvus (Müller)	11
Ventridens ligerus (Say)	4	Nesovitrea electrina (Gould)	31
Zonitoides arboreus (Say)	3	Ventridens ligerus (Say)	1
Striatura milium (Morse)	17	Striatura milium (Morse)	9
Deroceras laeve (Müller)	3	Deroceras laeve (Müller)	10
Anguispira alternata alternata (Say)	163	Anguispira alternata alternata (Say)	32
A. kochi kochi (Pfeiffer)	27	A. kochi kochi (Pfeiffer)	5
Discus cronkhitei (Newcomb)	32	Discus cronkhitei (Newcomb)	15
D. macclintocki (F. C. Baker)	285	D. macclintocki (F. C. Baker)	47
Helicodiscus notius notius Hubr.	16	Helicodiscus notius notius Hubr.	5
H. singleyanus (Pilsbry)	11	H. intermedius Morrison	2
H. intermedius Morrison	3	Punctum minutissimum (Lea)	4
Punctum minutissimum (Lea)	1	Succinea ovalis pleistocenic F. C. Baker	2
Succinea ovalis pleistocenic F. C. Baker	2	Succinea bakeri Hubricht ca.	200
Succinea bakeri Hubricht ca.	200	Catinella gelida (F. C. Baker)	28
Catinella gelida (F. C. Baker)	28	Strobilops labyrinthica (Say)	27
Strobilops labyrinthica (Say)	27	Gastrocopta armifera armifera (Say)	10
Gastrocopta armifera armifera (Say)	10	G. contracta contracta (Say)	2
G. contracta contracta (Say)	2	G. holzingeri agna (Pilsbry)	1
G. holzingeri agna (Pilsbry)	1	G. procera procera (Gould)	1
G. procera procera (Gould)	1	G. tappaniana (C. B. Adams)	14
G. tappaniana (C. B. Adams)	14	Pupoides albilabris (C. B. Adams)	9
Pupoides albilabris (C. B. Adams)	9	Vertigo elatior Sterki ca.	200
Vertigo elatior Sterki ca.	200	V. hubrichti Pilsbry	5
V. hubrichti Pilsbry	5	V. modesta modesta (Say)	27
V. modesta modesta (Say)	93	Columella alticola (Ingersoll)	3
Columella alticola (Ingersoll)	84	Vallonia gracilicosta Reinhardt	5
Vallonia gracilicosta Reinhardt	7	Carychium exile H. C. Lea	20
Carychium exile H. C. Lea	2	Hendersonia occulta (Say)	34
Hendersonia occulta (Say)	90	Pomatiopsis lapidaria (Say)	22
Pomatiopsis lapidaria (Say)	359	Snail eggs (Discus)	3

28. ST. CLAIR CO.: silt, small creek, 1 mile east of Centerville.		Hendersonia occulta (Say)	106
Stenotrema barbatum (Clapp)		Snail eggs (Discus)	
Mesodon clausus (Say)			
M. pennsylvanicus (Green)		30. ST. CLAIR CO.: loess, Stolle.	
M. elevatus (Say)		Triodopsis multilineata (Say)	
Allogona profunda (Say)		Zonitoides arboreus (Say)	
Haplotrema concavum (Say)		Anguispira alternata alternata (Say)	
Glyphyalinia indentata (Say)		Discus cronkhitei (Newcomb)	
Hendersonia occulta (Say)		D. shimeki (Pilsbry)	
Pomatiopsis lapidaria (Say)		D. macclintocki (F. C. Baker)	
		Helicodiscus parallelus (Say)	
		Succinea bakeri Hubricht	
29. ST. CLAIR CO.: loess, near Edgemont.		Vertigo hubrichti Pilsbry	
Stenotrema barbatum (Say)	3	V. modesta modesta (Say)	
S. leai leai (Ward)	2	Columella alticola (Ingersoll)	
S. fraternum fraternum (Say)	3	Vallonia gracilicosta Reinhardt	
Triodopsis fosteri fosteri (F.C.B.)	5	Hendersonia occulta (Say)	
T. multilineata (Say)	8	Snail eggs (Discus)	
Allogona profunda (Say)	8		
Haplotrema concavum (Say)	1	31. MONROE CO.: loess, above quarry, Valmeyer.	
Euconulus fulvus fulvus (Müller)	2	Stenotrema barbatum (Clapp)	7
Nesovitrea electrina (Gould)	2	S. leai leai (Ward)	2
Ventridens ligerus (Say)	1	Mesodon clausus (Say)	3
Zonitoides arboreus (Say)	2	M. pennsylvanicus (Green)	2
Deroceras laeve (Müller)	3	Triodopsis fosteri hubrichti (F. C. Baker)	50
Anguispira alternata alter- nata (Say)	18	T. multilineata (Say)	33
Discus cronkhitei (Newcomb)	9	Allogona profunda (Say)	248
D. macclintocki (F. C. Baker)	80	Haplotrema concavum (Say)	3
Helicodiscus notius notius Hubr.	5	Euconulus fulvus fulvus (Müller)	6
H. jacksoni Hubricht	5	Nesovitrea electrina (Gould)	13
Punctum minutissimum (Lea)	10	Mesomphix friabilis (W.G. Binney)	6
Succinea ovalis pleistoce- nica F. C. Baker	112	Zonitoides arboreus (Say)	2
S. bakeri Hubricht	3	Anguispira alternata alter- nata (Say)	11
Catinella gelida (F. C. Baker)	1	A. kochi kochi (Pfeiffer)	2
Strobilops labyrinthica (Say)	4	Discus cronkhitei (Newcomb)	8
Gastrocopta armifera armi- fera (Say)	53	D. shimeki (Pilsbry)	3
Pupoides albilabris (C. B. Adams)	1	D. macclintocki (F. C. Baker)	2
Vertigo elatior Sterki	3	Helicodiscus notius notius Hubr.	3
V. hubrichti Pilsbry	7	Punctum minutissimum (Lea)	3
V. modesta modesta (Say)	52	Succinea bakeri Hubricht	10
Columella alticola (Ingersoll)	3	Catinella gelida (F. C. Baker)	1
Vallonia perspectiva Sterki	2	Vertigo hubrichti Pilsbry	2
V. gracilicosta Reinhardt	16	V. modesta modesta (Say)	7
Cionella lubrica (Müller)	1	Vallonia gracilicosta Reinhardt	3

<i>Carychium exile</i> H. C. Lea	1	<i>Anguispira alternata</i> alter-
<i>Hendersonia occulta</i> (Say)	13	nata (Say)
		<i>Helicodiscus parallelus</i> (Say)
32. UNION CO.: talus, just south of McCann		<i>H. singleyanus</i> (Pilsbry)
School, 2 miles northeast of Aldridge.		<i>H. jacksoni</i> Hubricht
<i>Stenotrema barbatum</i> (Clapp)		<i>Punctum minutissimum</i> (Lea)
<i>S. hubrichti</i> Pilsbry		<i>Gastrocopta armifera</i> armi-
<i>Mesodon thyroidus</i> (Say)		fera (Say)
<i>M. zaletus</i> (Binney)		<i>G. contracta contracta</i> (Say)
<i>Triodopsis discoidea</i> (Pilsbry)		<i>G. holzingeri agna</i> (Pilsbry)
<i>T. fosteri fosteri</i> (F. C. Baker)		<i>G. pentodon</i> (Say)
<i>Haplotrema concavum</i> (Say)		<i>G. procera procera</i> (Gould)
<i>Guppya sterkii</i> (Dall)		<i>Pupoides albilabris</i> (C. B. Adams)
<i>Nesovitrea electrina</i> (Gould)		<i>Vallonia perspectiva</i> Sterki
<i>Mesomphix friabilis</i> (W. G. Binney)		<i>Pomatiopsis lapidaria</i> (Say)

CURRENT LITERATURE ON NON-MARINE OSTRACODES,  
SECOND NOTE

Frank L. Staplin, now with Imperial Oil Limited, Calgary, Alberta, Canada, continues his study of Pleistocene Ostracoda of Illinois in the *Journal of Paleontology* for November, 1963 (vol. 37, No. 6, pp. 1164-1203, pls. 159-160, 1 text-fig.). The full title of his paper is appended. Earlier work on Pleistocene Ostracoda was noted in *STERKIANA* 12: 7, December, 1963. Other papers in this field will be noticed here as they come to my attention.

Aurèle La Rocque

STAPLIN, Frank L. (1963) Pleistocene Ostracoda of Illinois Part II. Subfamilies Cyclo-cyprinae, Cypridopinae, Ilyocyprinae; Families Darwinulidae and Cytheridae. Stratigraphic ranges and assemblage patterns. — *Journal of Paleontology* 37: 1164-1203, pls. 159-160, 1 text-fig.