

## 2017 Summary Report for SCCi Research Permit no. 1004

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Limrock Blowing Cave (AJK311) was visited on 1 November 2017. Survey personnel included Dr. Niemiller, Dr. K. Denise Kendall Niemiller, and three UAH Ecology students. Visual encounter surveys and quadrat surveys for terrestrial invertebrates were conducted every 20 m from the entrance to 200 m into the cave. Aquatic fauna also was noted. Environmental data were recorded along this transect, including air temperature, humidity, dew point, wind speed, and light level. Baited pitfall traps were placed along the transect every 20 m before departing. We returned on 9 November 2017 to recover pitfall traps set on the previous visit and briefly explored to the Breakdown and the Deep Pool. Twenty-five taxa have been documented to date (Table 1), including eight troglobionts.

**Table 1.** List of taxa documented at Limrock Blowing Cave (AJK311), Jackson Co., Alabama during the current study. Ecological classification includes troglobiont (TB), stygobiont (SB), troglophile (TP), stygophile (SP), troglaxene (TX), stygaxene (SX), and accidental (AC).

Scientific Name	Common Name	Ecological Classification
<b>Vertebrates</b>		
<i>Eptesicus fuscus</i>	Big Brown Bat	TX
<i>Perimyotis subflavus</i>	Tri-Colored Bat	TX
<i>Procyon lotor</i>	Raccoon	TX
<i>Eurycea lucifuga</i>	Cave Salamander	TP
<i>Plethodon dorsalis</i>	Zigzag Salamander	TP
<i>Lithobates palustris</i>	Pickerel Frog	TX
<i>Lepomis macrochirus</i>	Bluegill	AC
<b>Crustaceans</b>		
<i>Caecidotea bicrenata</i>	Two-Toothed Cave Isopod	SB
<i>Orconectes australis</i>	Southern Cave Crayfish	SB
<b>Arachnids</b>		
<i>Nesticus barri</i>	Barr's Cave Spider	TB
<i>Phanetta subterranea</i>	Subterranean Sheet-web Spider	TB
<i>Pholcus</i> sp.	A Cellar Spider	TP
<i>Leiobunum</i> sp.	A Harvestman	TX
<b>Millipedes</b>		
<i>Scoterpes</i> sp.	A Cave Millipede	TB
<i>Tetracion jonesi</i>	Jones' Cave Millipede	TB
<b>Insects</b>		
<i>Ceuthophilus</i> sp.	A Cave Cricket	TX
<i>Hadenoeus</i> sp.	A Cave Cricket	TX
<i>Ptomphagus valentinei</i>	Valentine's Cave Fungus Beetle	TB
<i>Oecothia</i> sp.	A Heleomyzid Fly	TX
<i>Amoebaleria</i> sp.	A Heleomyzid Fly	TX

Tipulidae	A Crane Fly	TX
Culicidae	A Mosquito	TX
<i>Scoliopteryx libatrix</i>	Herald Moth	TX
<b>Springtails</b>		
<i>Pseudosinella</i> sp.	A Cave Springtail	TB
Entomobryidae	A Springtail	TP/TX

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**Figure 1.** A Big Brown Bat (*Eptesicus fuscus*) observed at Limrock Blowing Cave.



**Figure 2.** A female Southern Cave Crayfish (*Orconectes australis*) with recently hatched young at Limrock Blowing Cave.



**Figure 3.** A Herald Moth (*Scoliopteryx libatrix*) observed at Limrock Blowing Cave.

Tumbling Rock Cave (AJK171) was visited on 7 December 2017. Survey personnel included Dr. Niemiller, Dr. K. Denise Kendall Niemiller, and Niemiller lab students Joseph Benito, Katie Dooley, Jennifer Nix, and L. Jashen Bailey. Visual encounter surveys and quadrat surveys for terrestrial invertebrates were conducted every 20 m from the entrance to 200 m into the cave. Aquatic fauna also was noted. Environmental data were recorded along this transect, including air temperature, humidity, dew point, wind speed, and light level. After surveys were completed, we briefly explored to the Elephant's Feet. We decided against placing baited pitfall traps due to the amount of visitation at Tumbling Rock Cave. Twenty-one taxa have been documented to date (Table 2), including nine troglobionts.

**Table 2.** List of taxa documented at Tumbling Rock Cave (AJK171), Jackson Co., Alabama during the current study. Ecological classification includes troglobiont (TB), stygobiont (SB), troglophile (TP), stygophile (SP), troglaxene (TX), stygaxene (SX), and accidental (AC).

Scientific Name	Common Name	Ecological Classification
<b>Vertebrates</b>		
<i>Eptesicus fuscus</i>	Big Brown Bat	TX
<i>Perimyotis subflavus</i>	Tri-Colored Bat	TX
<i>Eurycea lucifuga</i>	Cave Salamander	TP
<i>Gyrinophilus palleucus</i>	Tennessee Cave Salamander	TB
<b>Crustaceans</b>		
<i>Caecidotea bicrenata</i>	Two-Toothed Cave Isopod	SB
<i>Cambarus hamulatus</i>	Prickly Cave Crayfish	SB
<b>Arachnids</b>		
<i>Nesticus barri</i>	Barr's Cave Spider	TB
<i>Phanetta subterranea</i>	Subterranean Sheet-web Spider	TB
<i>Pholcus</i> sp.	A Cellar Spider	TP
<i>Leiobunum</i> sp.	A Harvestman	TX
<b>Millipedes</b>		
<i>Scoterpes stewartpecki</i>	Peck's Cave Millipede	TB
<i>Tetracion jonesi</i>	Jones' Cave Millipede	TB
<b>Insects</b>		
<i>Ceuthophilus</i> sp.	A Cave Cricket	TX
<i>Hadenoeus</i> sp.	A Cave Cricket	TX
<i>Ptomphagus hazelae</i>	A Cave Fungus Beetle	TB
<i>Oecothia</i> sp.	A Heleomyzid Fly	TX
<i>Amoebaleria</i> sp.	A Heleomyzid Fly	TX
Tipulidae	A Crane Fly	TX
Culicidae	A Mosquito	TX
<b>Springtails</b>		
<i>Pseudosinella</i> sp.	A Cave Springtail	TB
Entomobryidae	A Springtail	TP/TX





**Figure 4.** Students searching for terrestrial invertebrates in 1-m<sup>2</sup> quadrats at Tumbling Rock Cave.



**Figure 5.** A Cave Salamander (*Eurycea lucifuga*) observed at Tumbling Rock Cave.