

# U.S. Fish and Wildlife *Stygobromus* Study

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14 Oct 2020



## Comments on caves:

### Cassell Cave:

The spelling of Greenbrier should be corrected.

Cassell Cave is most likely scarp-slope karst, meaning that the water, once captured and underground, will move down the stratigraphic dip in vadous channels, then—once some local base level has been reached—parallel and along the side of the mountain in either vadous or phreatic channels to reappear at large springs. Cassell, I believe, is at the downstream end of its hydrological system.

### Crawford Cave #2:

No comment.

### Izaak Walton Cave:

No comment.

### Piddling Pit:

No comment.

### Bonner Mountain Cave:

No comment.

### Bonner Pit Cave:

No comment.

### Bonner Cave:

No comment.

### Shreve-Howell Pit:

Shevel-Howell Pit is seriously difficult to get to, plus the start of the rappel is reportedly incredibly tight. The cave is located very close to a mountain ridge line, and its entrance pit is 102 feet deep. As such, there may be no or little epi-karst at this location. On the other hand, the bottom of the drop does contain a substantial pool, and there is also a stream in the cave.

### Silers Cave:

Silers and Cricket Maze Caves are located in a small karst area that is separate from the other nearby karst areas.

Silers and Cricket Maze are west of North Mountain and are formed in either the Helderberg or Tonoloway limestones. They are also formed along the Ferrel Ridge

Anticline, and would be one cave, except that a surface stream has cut a valley between the two caves. This also means that the limestone is not continuous between the two caves; however, they still may be one biological system and Cricket Maze should definitely be checked to see if *Stygobromus* is present.

**Witheros Cave:**

In Virginia; no comment.

**Corbett Cave:**

In Virginia; no comment.

**Secret Anthodite Cave:**

In Virginia; no comment.

**Dyers Cave:**

As stated in the *Stygobromus* study, Dyers and Dyers Cave #2 are located in a small karst area that may be separate from the other nearby karst areas.

Dyers Cave is located approximately 3.8 miles northeast of Appalachian Corridor H, **upstream of the highway**, and is approximately 3.2 miles north-northeast of Lost River, into which the Dyers' water must flow. The cave is on the opposite site of Hanging Rock Ridge and the Hanging Rock Anticline from Corridor H, and it should be noted that this is a massive anticline that brings the extremely thick and resistant Tuscarora Sandstone to the surface (and which strikes perpendicular to the short-line direction between the cave and the highway).

Dyers Cave #2 is located very near Dyers Cave. Because of this, Dyers #2 should also be checked to see if *Stygobromus* is present. In addition, Carols Crack, which is located very near Lost River, but may be in the same (or adjacent) hydrological system, should also be checked for *Stygobromus*.

**Mountain Grove Cave:**

In Virginia; no comment.

**Starr Chapel Saltpeter Cave:**

In Virginia; no comment.

**Crossroads Cave:**

In Virginia; no comment.

**Kenny Simmons Cave::**

This cave is located directly adjacent to U.S. Route 220 and is known to contain a lake. I do not know if there are any chicken barns nearby, but it is serious chicken-barn country.

Kenny Simmons Cave is a one-time commercial cave, and has been closed by the landowner for at least four decades. It has been surveyed on several occasions, but no one (other than William Davies) followed through and produced a map. WVASS would be interested in accompanying anyone who obtains access to the cave to map it once again.

**U.S. Fish and Wildlife Service**

Participation in Peer Review of  
Three West Virginia Cave Amphipods  
(*Stygobromus cooperi*, *S. parvus*, and *S. morrisoni*)  
Species Status Assessment (SSA) Report

CONFLICT OF INTEREST DISCLOSURE

Name: George Dasher  
Telephone: [REDACTED]  
Address: [REDACTED]  
e-mail address: [REDACTED]  
Current employer: [REDACTED]

It is essential that a peer reviewer used by the U.S. Fish and Wildlife Service as part of its peer review of proposed listing and proposed critical habitat rules under the ESA report any conflict of interest. For this purpose, the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.<sup>1</sup> The term "conflict of interest" means something more than individual bias. There must be an interest that could be directly affected by your participation as a peer reviewer.

Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual (and his or her family members or business associates), the Service, and the public interest. The individual and the Service should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the information produced through the peer review simply because of the existence of conflicting interests.

Please provide the information requested below regarding relevant organizational affiliations, government service, public statements and positions, research support, and additional information (if any) and complete the signature page following the questionnaire.

1. EMPLOYMENT AND INVESTMENT INTERESTS.

(a) If you are employed or self-employed, could your current employment or self-employment (or your spouse's current employment or self-employment) be directly affected?

(b) Do you have any current or continuing consulting relationships (including, for example, commercial and professional consulting and service arrangements, scientific and technical advisory board memberships, serving as an expert witness in litigation, or providing services in exchange for honorariums and travel expense reimbursements) that are directly related to the subject matter of the possible government regulatory action or inaction?

(c) To the best of your knowledge, could any financial interests of your (or your spouse's) employer or, if self-employed, your (or your spouse's) clients and/or business partners be directly affected?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this peer review?

(e) Do you or your spouse or minor children own directly or indirectly (e.g., through a trust or an individual account in a pension or profit-sharing plan) stocks, bonds or other financial instruments or investments that could be affected, either indirectly or by a direct effect on the business enterprise or activities underlying the investments?

If the answer to all of the above questions under EMPLOYMENT AND INVESTMENTS INTERESTS is either "no" or "not applicable," check here \_\_\_\_\_ (NO).

I am retired; I have no current employer.

If the answer to any of the above questions under EMPLOYMENT AND INVESTMENTS INTERESTS is "yes," check here \_\_\_\_\_ (YES), and briefly describe the circumstances below.

## 2. PROPERTY INTERESTS.

(a) Do you, your spouse or minor children own directly or indirectly any property (e.g. real estate, tangible properties or intellectual properties) interests that could be directly affected?

(b) To the best of your knowledge, do any others with whom you have substantial common financial interests (e.g., employer, business partners, etc.) own directly or indirectly any such property interests that could be directly affected?

If the answer to all of the above questions under PROPERTY INTERESTS is either "no" or "not applicable," check here \_\_\_\_\_ (NO).

If the answer to any of the above questions under PROPERTY INTERESTS is "yes," check here \_\_\_\_\_ (YES), and briefly describe the circumstances below.

No. No one in my family, including myself, owns any such property.

## 3. RESEARCH FUNDING AND OTHER INTERESTS.

(a) Could research funding and support for you or your close research colleagues and collaborators be directly affected, or

(b) If you have any research agreements for current or continuing research funding or support from any party whose financial interests could be directly affected, and such funding or support is directly related to the subject matter of the regulatory process, do such agreements significantly limit your ability to independently conduct and publish the results of your research?

(c) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the proposed rule?

(d) Could your service as a peer reviewer create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under RESEARCH FUNDING AND OTHER INTERESTS is either "no" or "not applicable," check here \_\_\_\_\_ (NO).

If the answer to any of the above questions under RESEARCH FUNDING AND OTHER INTERESTS is "yes," check here \_\_\_\_ (YES), and briefly describe the circumstances below.

No. I have no such funding or interests.

Please return the form to Sarah Furtak at Sarah\_Furtak@fws.gov. Please retain a copy for your records.

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the responsible staff officer.

I foresee no such changes as occurring.



14 October 2020

\_\_\_\_\_  
PEER REVIEWER'S SIGNATURE

\_\_\_\_\_  
DATE

Received by: \_\_\_\_\_

\_\_\_\_\_  
Sarah Furtak

\_\_\_\_\_  
DATE

U.S. Fish and Wildlife Service  
North Atlantic-Appalachian Regional Office  
Project Manager

Reviewed by: \_\_\_\_\_

\_\_\_\_\_  
Martin Miller  
U.S. Fish and Wildlife Service  
North Atlantic-Appalachian Regional Office  
Chief, Endangered Species Program

DATE

1 This definition and the other information in these instructions are drawn from the National Academy of Sciences Policy on Committee Composition and Balance and Conflicts of Interest for Committees Used in the Development of Reports (May 12, 2003).

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