

NOTES

CAVERNICOLOUS MISSOURI TRICLAD (PLATYHELMINTHES:
TURBELLARIA) RECORDS

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ABSTRACT—*Dendrocoelopsis americana* is reported for the first time in Missouri. *Sphalloplana evaginata* is reported from central Missouri and extends the range of this species by 280 km.

RESUMEN—La especie *Dendrocoelopsis americana* se está registrada por primera vez en el estado de Missouri y a la especie *Sphalloplana evaginata*, que se registra en el centro del estado de Missouri, se extiende su rango geográfico 280 km más.

Dendrocoelopsis americana (Hyman, 1939) inhabits subterranean streams and springs in Oklahoma and Arkansas (Hyman, 1939*a*, 1939*b*; Kenk, 1973; Darlington and Chandler, 1979; Kawakatsu et al., 1995) and a single well in northeastern Texas (Kawakatsu and Mitchell, 1984). *Sphalloplana evaginata* Kenk, 1977 is known from 4 caves in Perry County, Missouri (Kenk, 1977; Peck and Lewis, 1978).

While conducting biological inventories in several Missouri caves, we fixed flatworms in Bouin's fluid and transferred them to 75% ethanol. For identification, RS prepared 8- μ m thick histological sections stained in Mallory-Cason. The Zoological Museum Amsterdam (ZMA) retains all material.

We collected 2 specimens of *D. americana* (Hyman, 1939) from Stadin Elbow Cave, McDonald County, Missouri, on 21 November 2002 (ZMA V.Pl. 982.1, sagittal sections on 6 slides). They occurred in a pool 5 cm wide by 8 cm long by 2.5 cm deep approximately 20 m within the cave. The pool contained no obvious organic material such as plant debris or bat guano. This locality is 45 km north of the other known locations for this species and the first record for Missouri. Other aquatic fauna present include *Caecidotea stiladactyla* (Isopoda:

Asellidae) and *Stygobromus* (Amphipoda: Crangonyctidae).

We identified *S. evaginata* Kenk, 1977 from specimens collected in Moles Cave, Camden County, Missouri on 1 September 2001 (1 individual) by Lawrence Ireland and 27 January 2003 (3 individuals) by MES (ZMA V.Pl. 983.1, sagittal sections of anterior end on 28 slides and horizontal sections of posterior end on 20 slides; V.Pl. 983.2, sagittal sections on 25 slides). Flatworms occurred approximately 20 m inside the cave in a section of stream 2 to 5 cm deep that was flowing out of the cave. This portion of the stream received organic input from a maternity colony of gray bats (*Myotis grisescens*) roosting upstream and partially over the stream. We saw 17 of the flatworms: 11 on guano in a section of stream with gravel substrate; 4 on guano in an area of stream with solid bedrock bottom and no gravel; and 2 on gravel substrate in a section of stream directly upstream from the bat guano pile. These collections represent a range extension of 280 km to the west for this species, which remains a Missouri endemic. Other aquatic fauna present included *Caecidotea* and 2 amphipods (Crangonyctidae), *Bactrurus* and *Crangonyx forbesi*.

The distribution of planarians in Missouri caves is poorly known. Species such as *Macrocotyla glandulosa* Hyman, 1956 and *M. lewisi* Kenk, 1975 occur in a single cave and 2 caves, respectively (Hyman, 1956; Kenk, 1975; Peck and Lewis, 1978). Our new records for *D. americana* and *S. evaginata* suggest that the known distribution of cave planarians in Missouri reflects collecting effort. Difficulties associated with preserving specimens, lack of sexually mature individuals, and limited access to taxonomic experts also compound the problem. Indeed, we collected planarians from several additional caves that were inadequate for identification.

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RARE EGG CAPSULE PRODUCTION IN THE INVASIVE TERRESTRIAL PLANARIAN *BIPALIUM KEWENSE*

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ABSTRACT—The invasive terrestrial planarian *Bipalium kewense* is found worldwide in tropical and warm temperate zones. The rate of spread and ecological impact of the flatworm will depend in part on its reproductive strategies. Members of this species reproduce primarily by fission of posterior body fragments. Herein we report, for only the second time in over 120 years of international study, the production of a fertile egg capsule by *B. kewense*. The capsule was produced by a flatworm from Texas, hatched in 21 days, and it contained 7 juveniles. Although the capsule structure, incubation period, and litter size were similar to those characteristic of the sexual species, *B. adventitium*, the *B. kewense* capsule was larger (112 mg) and produced larger offspring.