

CONTACT
Dr. Felipe N. Soto-Adames
Illinois Natural History Survey
Prairie Research Institute
University of Illinois
(217) 244-4552
fsoto@illinois.edu

FOR IMMEDIATE RELEASE: September 30, 2013

BIG DISCOVERIES OF TINY NEW SPECIES IN ILLINOIS CAVES Little Critters are Big Surprise for Biologists

(CHAMPAIGN, IL) – Scientists from the Illinois Natural History Survey at the Prairie Research Institute at University of Illinois have discovered four new species of springtails - minute ancient relatives of the insects - in the caves of the Salem Plateau in southern Illinois. The four new species: *Onychiurus pipstellae* (the Bat Cave Springtail), *Pygmarrhopalites fransjanssens* (Janssens' Globular Springtail), *Pygmarrhopalites salemsis* (the Salem Plateau Springtail) and *Pygmarrhopalites incantator* (the Wizard Springtail) are described in a paper published recently in the *Journal of Cave and Karst Studies* – URL: <http://www.caves.org/pub/journal/PDF/v75/cave-75-02-146.pdf>

“The vast diversity of the natural world is far from completely cataloged, even here in the middle of the United States,” said Dr. Felipe Soto-Adames, a springtail expert and lead author of the study. “These animals may be small, but they represent a unique piece of the wondrous diversity of life on our planet as well as an important part of our state’s natural history,” he said.

In their surveys of the Salem Plateau caves, Soto-Adames and co-author Dr. Steve Taylor found 49 species of springtails, including the 4 new species and five additional species that had never before been documented in Illinois. As caves in other regions of Illinois are studied more thoroughly, the researchers expect to find other new species and state records.

“Illinois caves are unique yet fragile environments that are very vulnerable to contamination from changing land use practices, such as urbanization,” said Taylor, a cave biologist. “Understanding that our own state harbors previously unknown organisms found nowhere else in the world is fascinating and compels us to become responsible stewards of this often overlooked part of our natural heritage,” he said.

Springtails (Order Collembola) are tiny, insect-like animals, typically less than 6 mm (0.24 in) long; the four new species range in size from 0.65 mm (0.03 in) to 2.2 mm (0.09 in). The name springtail comes from the furcula, a forked, tail-like appendage capable of propelling an individual up to 10 cm (3.9 in). Springtails are most commonly found in soil and leaf litter, but they have invaded other specialized habitats, including caves. Often overlooked because of their small size and subterranean habitats, there are approximately 8,000 known species of springtails worldwide. As decomposers and nutrient recyclers, springtails are an important part of many ecosystems.

Established in 1858, the Illinois Natural History Survey (INHS) mission is to investigate and document the biological resources of Illinois and other areas, and to acquire and provide natural history information that can be used to promote the common understanding, conservation, and management of these resources. With a staff of over 200 scientists and technicians, it is recognized as the premier natural history survey in the nation.

The Prairie Research Institute at the University of Illinois at Urbana-Champaign is the home of the Illinois State Scientific Surveys: the Illinois Natural History Survey, the Illinois State Archaeological Survey, the Illinois State Geological Survey, the Illinois State Water Survey, and the Illinois Sustainable Technology Center. Established by statute July 1, 2008 it builds on the Surveys' reputations for basic and applied research and service. With 700 employees and a budget of more than \$65 million in applied science, the Institute is one of the largest institutes within the University. Prairie Research Institute scientists work to support economic development and natural and cultural resource sustainability for Illinois and beyond.
www.prairie.illinois.edu

###

Sources:

Dr. Felipe N. Soto-Adames
Illinois Natural History Survey
Prairie Research Institute
University of Illinois
(217) 244-4552
fsoto@illinois.edu

Dr. Steven J. Taylor
Illinois Natural History Survey
Prairie Research Institute
University of Illinois
(217) 244-1122
sjtaylor@illinois.edu

Digital version and images available at

<http://www.inhs.illinois.edu/resources/press-releases/springtail-press-release/>