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New Species of the Tardigrade, *Milnesium*, Discovered on Rooftop in Central Illinois

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Poster Presentation 20

**NEW SPECIES OF THE TARDIGRADE, *MILNESIUM*,
DISCOVERED ON ROOF TOP IN CENTRAL ILLINOIS**

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Commonly referred to as one of the lesser-known phyla of invertebrates, Tardigrada is a group of organisms that can be characterized as microscopic aquatic or semi-aquatic animals. All have four pairs of bilobed legs, a sucking pharyngeal bulb and the ability to go into a hibernation like state called cryptobiosis. Tardigrades can live in marine or freshwater aquatic environments or in limno-terrestrial environments such as mosses and lichens. The ability of tardigrades to suspend their metabolism and enter a cryptobiotic state when environmental conditions are not favorable, has enabled these animals to survive in a variable environment. Multiple specimens of eutardigrades were collected from lichens and mosses taken from the roof top of a house in Bloomington, IL. Specimens were examined using both light and scanning electron microscopy in order to establish species' identification. Detailed analysis of morphological characteristics was completed for each specimen of *Milnesium*. Based on comparisons with descriptions of known species of the genus *Milnesium* a new species has been recognized. To date only one species of this genus has been reported for central Illinois and the United States. This new species is distinguished by a distinct three branched and two branched claw on each leg. Point ratios, comparative measurements of multiple aspects of the buccal apparatus, are also provided in order to establish a more precise description of the species in this genus.