Domnina (Mammalia, Soricomorpha) from the latest Eocene (Chadronian) Medicine Pole Hills Local Fauna of North Dakota

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ABSTRACT
Two species of soricids are present in the Chadronian Medicine Pole Hills Local Fauna, Domnina cf. D. thompsoni and a new species of Domnina described herein. The new species is the third Chadronian species of Domnina and differs from other species in being larger and in having the M₂ nearly the same size as the M₁. The most similar described material is from the Uintan Swift Current Local Fauna, but no taxonomic relationship is suggested. Neither the new species nor D. cf. D. thompsoni provide any biochronologic evidence for the age of the Medicine Pole Hills Local Fauna.

INTRODUCTION
The Medicine Pole Hills Local Fauna is a latest Eocene (Chadronian) assemblage preserving a particularly rich small vertebrate fauna from the Chadron Formation of southwestern North Dakota. A preliminary faunal list has been presented (Pearson and Hoganson 1995) but this list will change significantly with greater study. To date Smith (2006) has described the very diverse squamate assemblage and Schumaker and Kihm (2006) have described the multituberculate material. Although study of the mammalian fauna is still in the early stages enough material has been recovered to recognize two species of Domnina, including one new species described here. This study includes additional material and is the completion of preliminary work reported by Schumaker (2003).

The Medicine Pole Hills Local Fauna is from a series of poorly consolidated sandstones and mudball conglomerates which lie unconformably on the late Paleocene Tongue River Formation. These deposits cap a series of buttes, the Medicine Pole Hills, south of Rhamé in southwestern North Dakota. Murphy et al. (1993) correlated these deposits with the lowest member of the Chadron Formation in North Dakota, the Chalky Buttes Member. Schumaker and Kihm (2006) questioned the correlation with the Chalky Buttes Member, but agreed that the sediments can be assigned to the Chadron Formation, although the precise correlation is still uncertain. What relationship, if any, the beds at the Medicine Pole Hills have to the Chambers Pass Formation (Terry, 1998) is also uncertain. A more complete description of the geologic setting is given in Schumaker and Kihm (2006).

The age of the Medicine Pole Hills Local Fauna has been suggested as early Chadronian by Heaton and Emry (1996) based on the occurrence of Leptomeryx yoderi. Prothero and Emry (1996, 2004) have suggested a division of the Chadronian into four biochrons, and based upon L. yoderi, the Medicine Pole Hills Local Fauna would be considered late early Chadronian, although confirmation of the age should await further study of the mammalian fauna.

Following Repenning (1967) the term antemolar is used to refer to all teeth between the incisor and the first molar (Table 1). Of these, only the last, P₄, is given specific designation. The incisor is designated as the I₁, following Dannelid (1998). Measurements were taken using the orientations shown in Figure 1 and were made using an optical micrometer with an Olympus SZH 10 binocular microscope.

SYSTEMATIC PALEONTOLOGY

Class Mammalia Linnaeus 1758
Order Soricomorpha Gregory 1910
Family Soricidae Fischer de Waldheim 1817