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## SOME LOWER CRETACEOUS PELECYPODS FROM PRYOR, MONTANA<sup>1</sup>

BY TENG-CHIEN YEN                      ✓

The small collection of fresh-water pelecypods that is treated on the following pages was made by Dr. Barnum Brown, of the American Museum of Natural History, and his associates in 1931-1933. Dr. Brown's trip was primarily for the purpose of collecting vertebrates, and mollusks were taken where seen. The collection was partially identified by Dr. T. W. Stanton and Dr. John B. Reeside, Jr., of the United States Geological Survey, by whom two new species were recognized but not named. By permission of the authorities of the American Museum of Natural History, I am able to make these names available in the present paper.

The collection was made, according to the Museum label, in the "Cloverly formation, top of basal blue stratum, approximately 45 feet above top of Lakota, near *Hoplitosaurus* skeleton (A.M.N.H. No. 3016), Monument Creek, 7 miles north of Pryor, Montana." It contains the following five species, four in Unionidae and one in Sphaeriidae:

*Protelliptio douglassi* (Stanton)  
*Sulcatapex pryorensis*, new species

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*Unio reesidei*, new species  
*Unio natosini* McLearn  
*Eupera onestae* (McLearn)

***Protelliptio douglassi* (Stanton)**

*Unio douglassi* STANTON, 1903, Proc. Amer. Phil. Soc., vol. 42, p. 195, pl. 4, figs. 3, 4.

A single specimen at a young stage in the collection seems to agree well with this species. It is found in association with specimens of the following species. The characteristic features of this species are its ovately oblong outline of shell, moderate convexity of both valves, and distinctly concentric ribs on the umbonal region.

This species has been found in the Kootenai formation in Montana, at several places in the Cloverly formation in Wyoming, and in the Peterson limestone in Idaho and Wyoming. The specimens show variation in degree of development of the concentric ribs.

MATERIAL: A.M.N.H. No. 27618.

***Sulcatapex pryorensis*, new species**

Figures 1, 2

Shell ovately subtriangular in outline, of moderately thick substance, and having a convexity of about 28.0 mm. Beaks well shown, close to the anterior end and bearing two broad, radiating plications and granular sculpture subregularly arranged into radiating lines. These lines of granular sculpture are more or less restricted to the umbonal area and are clearly marked off from the remaining surface of the shell, on which only strong concentric lines of growth are visible. The hinge, as partly shown on some paratypes, is moderately developed, with two gently curved lateral teeth on the right valve. Presumably corresponding cavities are formed by the laterals on the left valves.

Length of shell 60.0 mm.; height 36.5 mm.

The species in general outline of shell and in the two broad radiating wrinkles in the umbonal area resembles *Sulcatapex cretaceus* Yen, which was originally described from the Cloverly formation near the Sage Creek dome near Lander, Wyoming. *S. pryorensis* differs by having granular sculpture in radiating

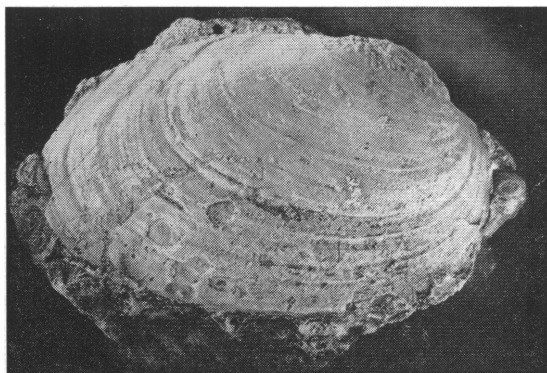


FIG. 1. *Sulcatapex pryorensis*, new species.

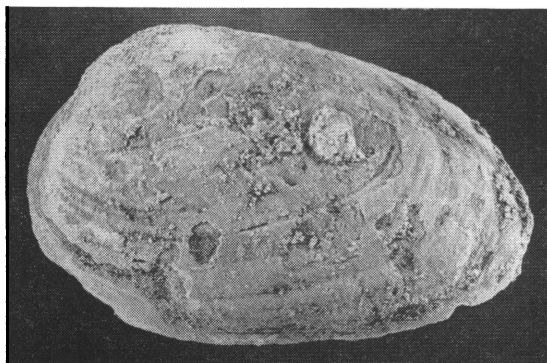


FIG. 2. *Sulcatapex pryorensis*, new species.

lines in the umbonal area, less prominent beaks, and a narrower hinge plate.

TYPE MATERIAL: <sup>lyn</sup> Holotype and paratypes, A.M.N.H. No. 27616; paratypes, U.S.N.M. No. 106981.

### ***Unio reesei*, new species**

Figure 3

Shell trapezoidal oblong on outline, moderately convex, bearing strong concentric lines. The lines are 18 to 20 in number, angulated towards the posterior end; they are well interspaced and extend over the entire surface of the shell. The hinge structure is not known.

Length of shell 62.5 mm.; height 29.5 mm.

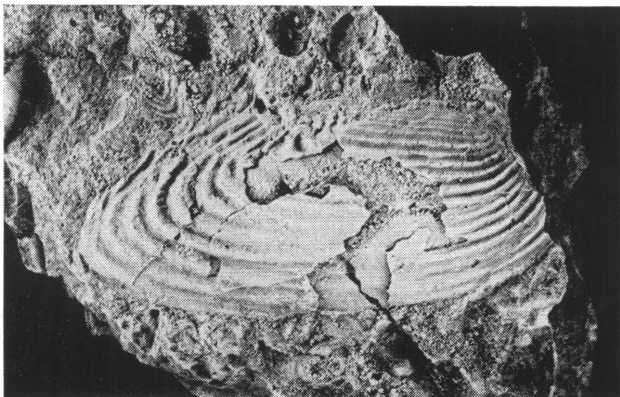


FIG. 3. *Unio reesidei*, new species.

The sculpture of concentric ridges over the entire shell readily distinguishes *U. reesidei* from other species of *Unio* in the assemblage. In addition to the type locality, this species has been found in the Kootenai formation exposed on the south side of a main highway, at the north end of a prominent ridge along Railroad Creek about 5 miles southwest of Glacier Park station, Montana. It has been found also in several other Lower Cretaceous beds in Montana and Wyoming, at which localities it has been previously included in *Unio douglassi* Stanton.

TYPE MATERIAL: Holotype, A.M.N.H. No. 27617; paratype, U.S.N.M. No. 106982.

### ***Unio natosini* McLearn**

#### Figure 4

*Unio natosini* McLEARN, 1929, Bull. Natl. Mus. Canada, no. 58 (geol. ser. 50), p. 73, pl. 13, figs. 7-9.

The species was described on immature and imperfectly preserved specimens, so that the sculpture on the late developmental stages of the shell is not clearly shown. The specimens here considered show close resemblance in the sculpture of the younger stages to that of *U. natosini*, but the concentric rows of tubercles near the umbo in the later stages become much more strongly developed, and they are gradually fused into more or less solid and prominent ridges that form a subregularly ar-

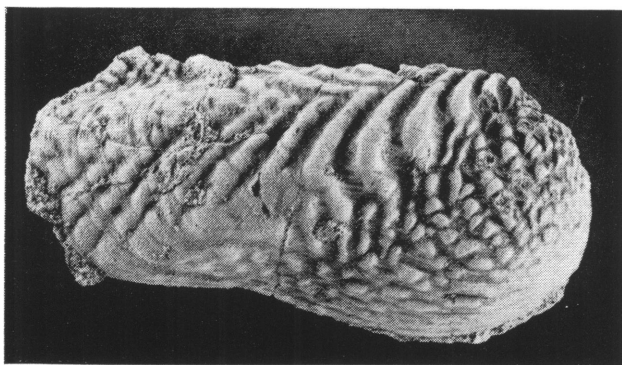


FIG. 4. *Unio natosini* McLearn.

ranged chevron with the ridges on the cardinal part of the valves.

FIGURED SPECIMEN: A.M.N.H. No. 27619.

***Eupera onestae* (McLearn)**

*Corbula? onestae* McLEARN, 1929, Bull. Natl. Mus. Canada, no. 58 (geol. ser. 50), p. 75, pl. 14, figs. 1-4.

This species is common in the matrix containing the valves of *U. natosini* and *Sulcatapex pryorensis*.

It seems to be widely distributed in the Lower Cretaceous beds: specimens have been found in the Kootenai formation near Harlowton and south of Dillon, Montana; in the Cloverly formation near the Sage Creek dome northwest of Lander, and in Teton County, Wyoming.

MATERIAL: A.M.N.H. No. 27620.

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