Note on the "Alpha" member of the Kaibab Formation

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NOTE ON THE "ALPHA" MEMBER OF THE KAIBAB FORMATION

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One of the interests of the geological section of the Research Institute of the Museum of Northern Arizona is a study of the Kaibab formation. McKee (1938) subdivided the Kaibab formation into three parts: the uppermost "alpha" member representing a time of receding sea, the "beta" member representing the time of most extended sea, and the lowermost "gamma" member, only locally developed, representing the time of advancing sea.

This formation has usually been considered as of Leonard age, largely on the basis of brachiopods. Undoubtedly this age is correct with regard to the "beta" part of the formation; but it has been suggested that the uppermost part, the "alpha" member, may well be of Lower Word age (Chronic, 1952).

Until about ten years ago, almost all the molluscan fossils of the "alpha" member then known were external and internal molds, which for detailed description are somewhat unsatisfactory. However, about 1950 the "Rimmy Jim Tank" exposure (Halka Chronic's Loc. 3) was discovered. The molluscs in this locality are completely silicified, and excellent collections of almost perfect specimens have been made. From this one locality, 15 new species of gastropods and four of pelecypods were described by Halka Chronic. Her suggestion of the possible Lower Word age of the "alpha" member (or at least the top of that member) of the Kaibab was based largely on these newly described species.

In the last three years, three other localities in the "alpha" member, where silicified molluscs occur and can be etched out, have been found.

One, about 6 miles south of St. Johns in the canyon of the Little Colorado, one 6 miles north of Show Low, and one on Faught Ridge on the northern edge of the Apache Indian Reservation. The faunas at these three localities show considerable differences owing to the differences in salinity, etc., but much more collecting and study of the various faunal assemblages is needed.

So far, I believe that it is safe to say that the forms recognized from these areas support, to some extent, the suggestion of Lower Word age for the uppermost strata of the Kaibab.

Areas with silicified fossils in the "alpha" member of the Kaibab:

1. Rimmy Jim Tank locality (Chronic's loc. 3), about 1 mile east of Gray Mountain Trading Post on Flagstaff-Cameron Highway, in sec. 5(?), T. 27N., R. 9 E.
2. St. John's locality, about 6 miles south of St. John in the canyon of the Little Colorado, secs. 14, 15, T. 28 N., R. 12 E. (best exposure immediately below ruin of stone shack on the rim of the canyon).
3. Faught Ridge locality, 2 miles west of Faught Ridge Lookout, on both sides of the road. Apache Indian Reservation south of Show Low.
4. Hog Wash locality, 6 miles from Show Low on road to Heber, about 30 feet above the creek on the right side.

REFERENCES CITED

Chronic, Halka, 1952, Molluscan fauna from the Permian Kaibab formation, Walnut Canyon, Arizona, Geol. Soc. America Bull., v. 63, n. 2, p. 95-166.

McKee, E. D., 1938, The environment and history of the Toroweap and Kaibab formations of northern Arizona and southern Utah: Carnegie Inst. Wash. Pub. 492, 268 p.