A Late Blancan Local Fauna From Northern Idaho

Marlena Blua  
*Eastern Washington University, mblua@eagles.ewu.edu*

Jonathon Welch  
*Eastern Washington University, jwelch13@eagles.ewu.edu*

Neville Magone  
*Eastern Washington University, nmagone@gmail.com*

Follow this and additional works at: [https://dc.ewu.edu/srcw_2020_posters](https://dc.ewu.edu/srcw_2020_posters)

**Recommended Citation**
Blua, Marlena; Welch, Jonathon; and Magone, Neville, "A Late Blancan Local Fauna From Northern Idaho" (2020). *2020 Symposium Posters*. 55.  
[https://dc.ewu.edu/srcw_2020_posters/55](https://dc.ewu.edu/srcw_2020_posters/55)

This Poster is brought to you for free and open access by the 2020 Symposium at EWU Digital Commons. It has been accepted for inclusion in 2020 Symposium Posters by an authorized administrator of EWU Digital Commons. For more information, please contact jotto@ewu.edu.
Abstract
Mammal specimens from a new Pleistocene-age locality near Priest River, Idaho have been identified from at least nine different taxa including muskrat, beaver, porcupine, deer, horse, pronghorn antelope, canid, lynx and bear. A right mandible containing 11 and m1-m2 is of an Ondatra sp. of muskrat. The m3 is significantly shorter, narrower and the L/W ratio smaller than that of extinct and extant O. zibethicus. Yet the m3 length and width are both larger than either O. idahoensis and O. amentis. The beaver is represented by an isolated incisor, two lower molars and one upper molar. All three molars share the S enamel occlusal pattern seen Castor, contrasting with the occlusal pattern of Dipoide. The one external striid and three internal striids on the lower molars that are unequal in length indicate Castor californicus rather than C. canadensis. The p4 and m1 of a species of Erethizon porcupine are significantly larger than the p4 and m1 of E. edwardsii or E. dorsatum. The deer specimens include a complete right M2 and a near complete m3. The M2 has four distinct main cusps, a prominent paracone, a paracone rib, a metastyle and a very small entostyle, suggesting that this is a species of Brezia, albeit smaller than B. pseudalces. A P2, D3 and dp3 of Plessius idahoensis is also present. Finally, a m1 of Capromeryx, a buccal half of a right P3 assigned to Lynx sp., the buccal half of a left p3 assigned to Ursus sp. and a right m1 of a non-extant Canis sp. are also present. The Priest River fauna cannot be older than 2.58 Ma or the beginning of Blancan V (= early Pleistocene) because of FAD for Erethizon from South America at GABI1. The Priest River I.f. cannot be younger than 1.72 Ma (end of Blancan V) as Plessius has its LAD in Froman Ferry I.f. at the end of Blancan V. Capromeryx tauntonensis was previously restricted to Blancan IV and the Taunton I.f. from central Washington and C. tauntonensis would be a time range extension into the Blancan V NALMA sub-age, which argues against the Priest River I.f. being younger than Blancan V. This is the first mammalian fauna known from northern Idaho as previously known Cenozoic faunas from the Inland Northwest region are the early to late Blancan faunas, from the Glenn’s Ferry Fm. in southwestern Idaho, some 570 miles south of the new site and the early to mid- Blancan faunas from the Ringold Fm. in south central Washington, 225 miles southwest of the new site.

Introduction
The Northwestern United States is home to two known Blancan-aged (Early Pliocene to Early Pleistocene: 4.7 Ma to 1.4 Ma; Barnosky et al., 2014) fossil sites where fossilized mammal remains have been found (Gustafson, 2015). A newly discovered site (JW) near Priest River, Idaho yields early Pleistocene-age fossil mammals. Numerous teeth and bone fragments have been recovered from an oxbow paleohabitat cropping out of sediments exposed along the Pend Oreille River. Here, we propose a new Blancan fossil site and local fauna from Priest River, Idaho where the fossilized remains of nine species of fossil mammals (muskrat, beaver, porcupine, deer, horse, pronghorn antelope, canid, lynx and bear) have been recovered and subsequently identified via their dentition.

Fossil Descriptions
Plessius idahoensis – This equid (horse) species is represented by an adult right upper P2 and two deciduous premolars a dp3 and a dp3. The size, shape and occlusal pattern such as lack of plication on the internal enamel ridges of the upper premolar teeth are very similar to this species from the Early Pleistocene deposits in southwest Idaho.

Castor californicus – Is represented by isolated teeth a lower incisor (i1), two lower molars (m1) and one upper molar (m2). The teeth appear to that of an extinct beaver, Castor californicus. The three molars all share the common S enamel occlusal pattern of Castor (Fig. 3). Another genus of castorid beaver, Dipoide, is also frequently found among Castor fossils and also shares the S enamel occlusal pattern. The S pattern in Dipoide is more elongated and apparent than the Castor enamel occlusal pattern (Shottwell, 1970). Characteristic of C. californicus, is the one external striid and three internal striids on the lower molars that are unequal in length (Samuels and Zanccanella, 2011) (Fig. 4). Although there is more wear on the upper molar, the inward curvature is indicative of upper molars in Castor species (Shottwell, 1970). C. californicus first occurs in North America in the late Hemphillian extending to the Blaanck and beyond.

Ondatra sp. - This right mandible containing 11 and m1-m2 is of an muskrat. The m3 is significantly shorter, narrower and the L/W ratio smaller than that of extinct and extant O. zibethicus. Yet the m3 length and width are both larger than either O. idahoensis or O. amentis from late Blancan (2.5 Ma – 1.4 Ma) faunas or O. amentis from early Irvingtonian faunas (1.4 Ma – 0.6 Ma).

Bretzia sp. - Numerous cervid (deer) teeth found at the Priest River site are incomplete due to freeze/thaw of the local environment, the neck and crown are mostly intact with but enough complete molars to identify the partial teeth. An upper right 2nd molar (RM2) is selenodont and brachyodont, common to most Cervidae (Gustafson, 2015) and smaller in size than - Brezia pseudalces from early Blancan faunas with a conical crown measurement of 14.18 mm (mesial-distal) and 9.24 mm (buccal-lingual) and a crown height of 8.84 mm which are are smaller in dimension than for (Fig. 5). Tooth has four distinct main cusps and prominent paracone, paracne rib, and metostyle. An entostyle is present on lingual side of tooth (see won LM2).

Literature cited

Conclusion
The Priest River local fauna cannot be older than 2.58 Ma or the beginning of Blancan V (= early Pleistocene) because of First Appearance Datum (FAD) for Erethizon from South America at GABI1. The Priest River I.f. cannot be younger than 1.60 Ma (age of Froman Ferry I. f.) as Plessius has its LAD in Froman Ferry I. f. at the end of Blancan V. Capromeryx tauntonensis was previously restricted to Blancan IV and the Taunton I. f. from central Washington and C. tauntonensis would be a time range extension into the Blancan V NALMA sub-age, which argues against the Priest River I. f. being younger than Blancan V. The Priest River I. f. would seem to fit in the time frame between between Grand View I. f. (2.56 Ma – 2.08 Ma) early Blancan V and the Froman Ferry I. f. (1.6 Ma – 1.4 Ma) end of Blancan V, both from Southwest Idaho.