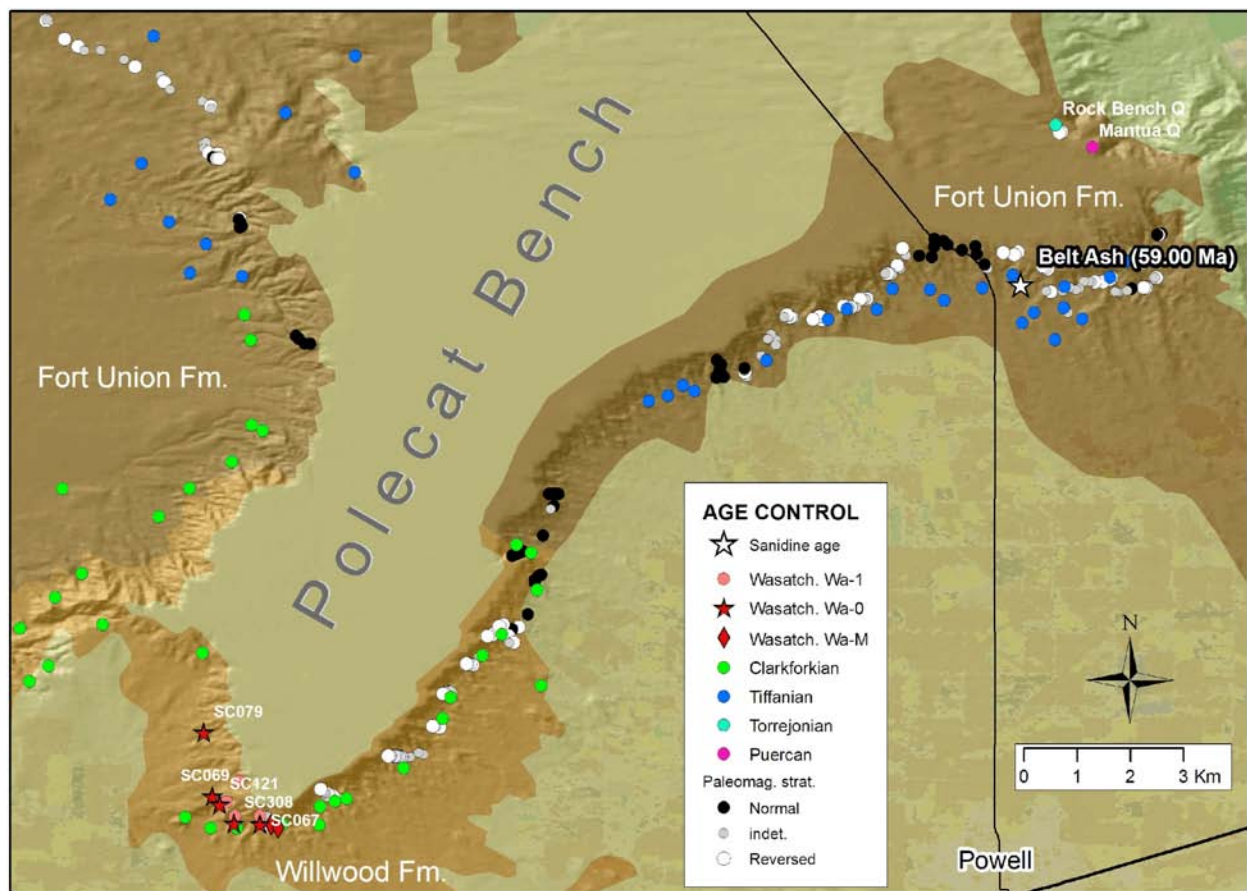


PALEOCENE-EOCENE TRANSITION: POLECAT BENCH

Philip D. Gingerich
University of Michigan



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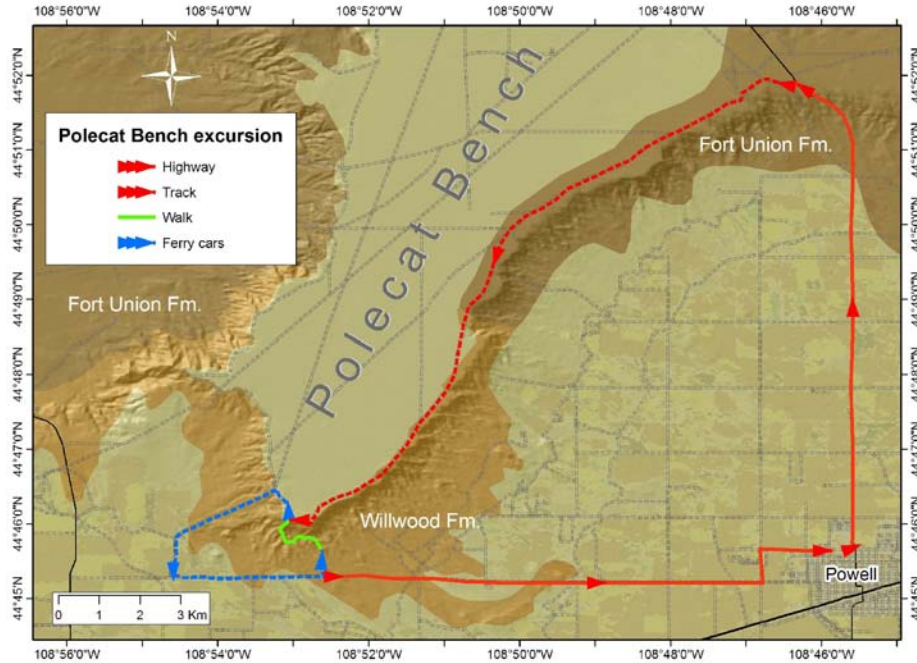


Figure 1. Route map for excursion, driving north from Powell onto Polecat Bench, then along a track on the southeast side to the south end of the bench. Here we will walk down through Wa-1, then Wa-0, then Wa-M, and finally Cf-3. Our cars will be waiting at the bottom. Polecat Bench is a Pleistocene river terrace marking an earlier course of the Shoshone River debouching from the canyon west of Cody.

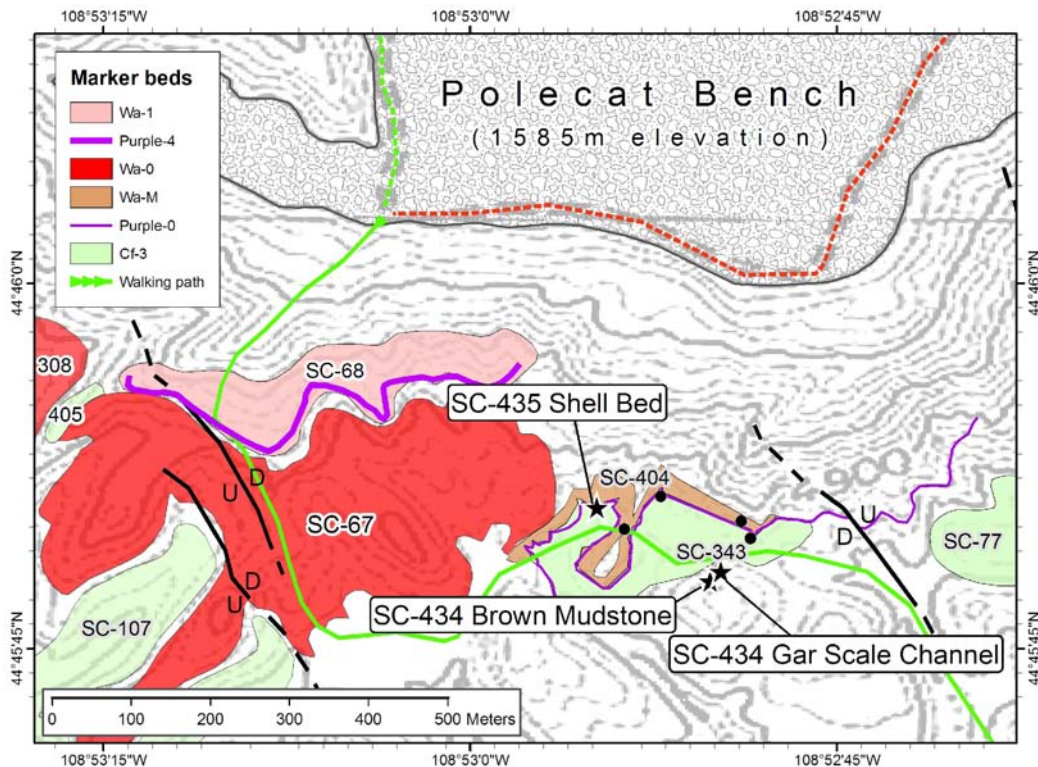


Figure 2. Detailed map of south end of Polecat Bench showing fossil localities. Follow the green line!



Figure 3. University of Michigan fossil localities at the south end of Polecat Bench. Lower drab sandstones and mudstones yield Clarkforkian latest Paleocene mammals. Thirty-meter-thick bright red interval yields Wa-0 mammals. Upper drab sandstones and mudstones yield Wasatchian early Eocene mammals. Note the excellent exposure and lateral persistence of fossil beds.

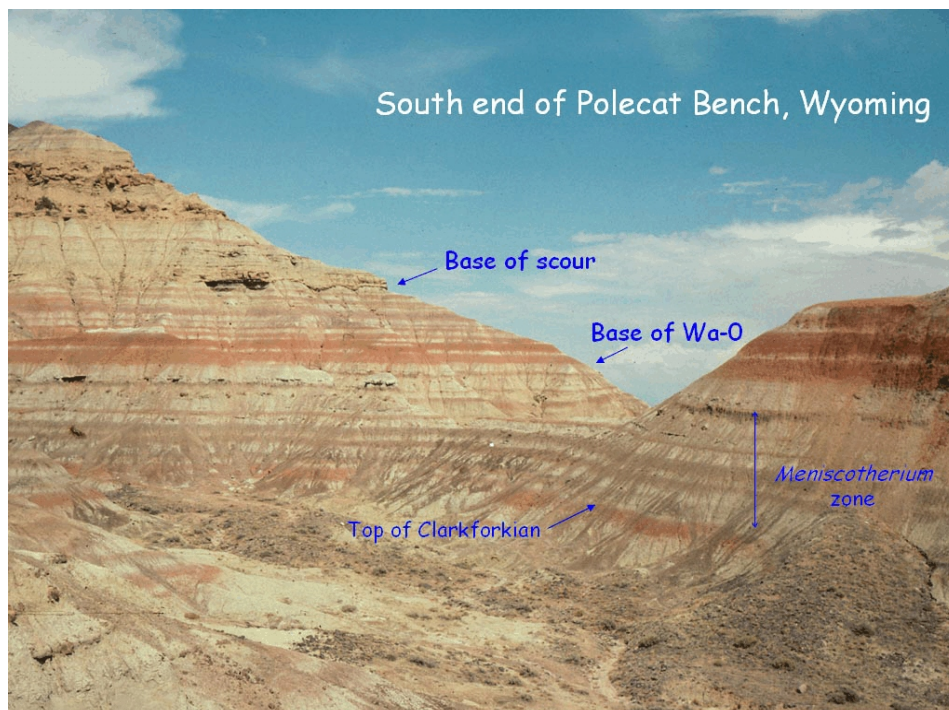


Figure 4. Onset of CIE is just above bed marked “Top of Clarkforkian” (Purple-0). Brown paleosol above this yielded a Clarkforkian fauna from a shell bed out of the picture to the left. Meniscotherium comes from the second brown paleosol above this. Wa-0 mammals appear in the white sandstone and overlying “Lower Double Red” mudstones. Upper part of Wa-0 section here was removed by scouring.

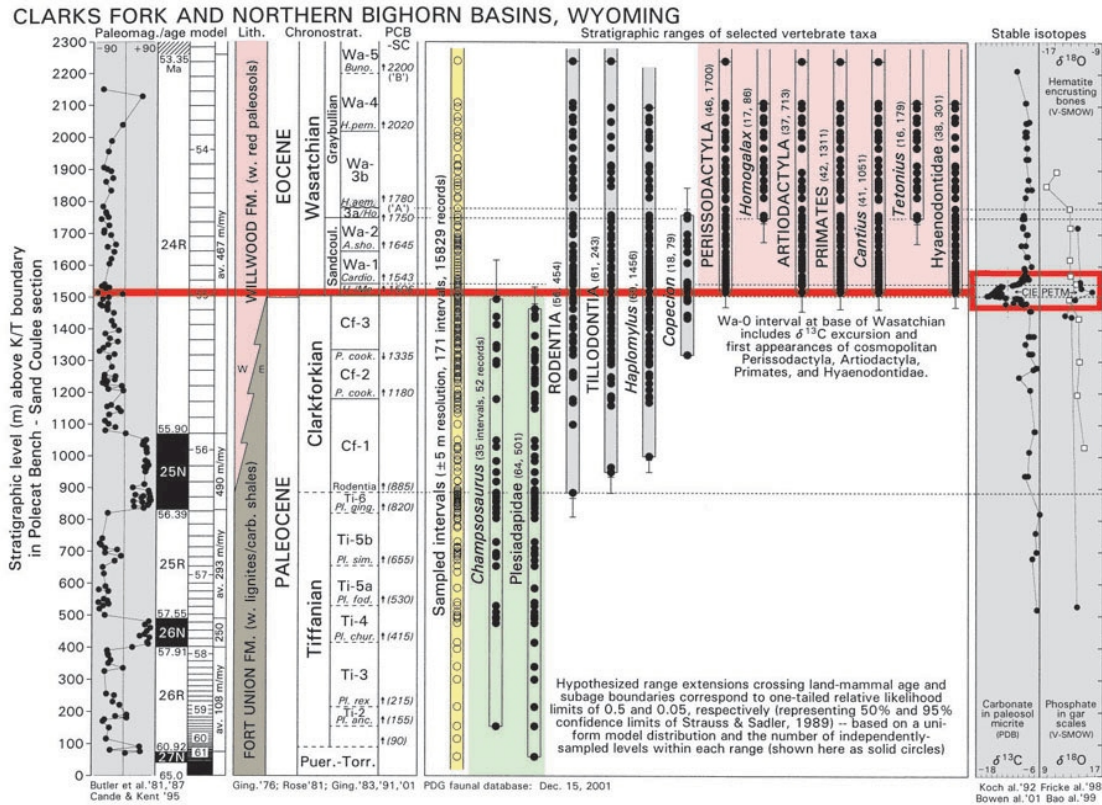


Figure 5. Summary of age control on faunal change at the Paleocene-Eocene boundary in the northern Bighorn Basin. Solid red line corresponds to the Wa-M + Wa-0 CIE and PETM interval at Polecat Bench.

Some relevant literature

Bowen, G. J., et al. 2001. Refined isotope stratigraphy across the continental Paleocene-Eocene boundary on Polecat Bench in the northern Bighorn Basin. In P. D. Gingerich (ed.), Paleocene-Eocene stratigraphy and biotic change in the Bighorn and Clarks Fork basins, Wyoming, University of Michigan Papers on Paleontology, 33: 73-88.

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