

of this present article—and the Purcell Lava, the extrusive phase of the Purcell Sills also Pre-Cambrian in age. The lavas consist mainly of basalt with minor amounts of rhyolite, breccia, and tuff, with a thickness of about 300 feet. They occur higher up in the series than the sills and since they are of the same composition as the sills, therefore, the sills and lavas are believed to be representatives of the same magma.

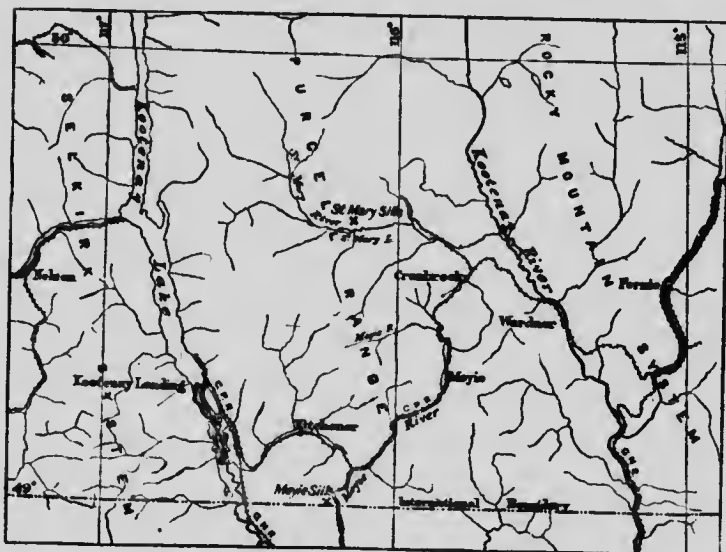


FIG. 1. Map showing the position of the Purcell Sills.

The Purcell Sills are generally confined to the oldest known member of the Purcell series and occur as tabular intrusive bodies, varying from 6 to 2,000 feet in thickness. They are of two kinds: (1) *simple*, formed almost entirely of gabbro; and (2) *composite*, formed of granite (micropegmatite), gabbro, and intermediate rock types. In the case of the composite sills, the material is stratified according to density, the granite (micropegmatite) occurring at or near the upper contact of the sill, and grading downwards into gabbro. That in the case of the composite sills, these two rock varieties have a common