

Compression of rocks in the zone of fracture may give rise to jointing which follows the shearing planes. There would be two different joint sets, which would cut the surface parallel to each other. Such joints would be inclined instead of vertical, the amount of inclination depending on how largely the shear was determined in direction by preexisting planes of weakness, such as bedding or foliation planes. In simple folding both sets of such joints would be parallel with the strike of the beds, one dipping with, and one against them.

The Adirondack Precambrian rocks are much jointed. It is however a difficult region in which to obtain accurate measurements of the hade of the joints, though observations on the strike are easily obtained.<sup>1</sup> Moreover, in much of the district the rocks are igneous and poorly foliated, baffling any efforts to determine the structural significance of the joints. The writer's observations have been mainly made in such districts and are not yet sufficiently extended and worked out. Certain things are however clear.

The Precambrian rocks are much more conspicuously jointed than are the overlying paleozoics, implying a time of joint formation prior to the deposition of the latter.

Joints are not equally conspicuous in all of the Precambrian rocks, being least prominent in the limestones, and most so in the great igneous masses, implying some joint formation while the rocks were at sufficient depth to render the weak limestones somewhat plastic, though the igneous rocks were thoroughly rigid.

Four sets of joints are usually to be made out in the Precambrian rocks, though all four are seldom present in any given exposure. Though varying considerably in direction from place to place, they can be apparently referred to two main sets, the one consisting of a pair of north-south and east-west joints and the other of a pair of northeast and northwest joints, both sets swerving in direction through 15° or 20°. In some exposures one set is the more prominent, in some the other set; in many at least three of the four show, and not infrequently all four. The north and east joints are usually vertical, or nearly so, while the others frequently show a greater hade. Not uncommonly, specially in the

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<sup>1</sup>As in the case of a fault, the hade is the angle of inclination from the vertical.