greater smoothness is owing principally to this added length of
time during which it was undergoing wear. Its irregularities are
comparatively few and small; it seems a quite typical peneplain.
On the north the irregularities are many and often considerable;
are the rule rather than the exception. The surface is quite
hummocky and hilly, and the contact line an irregular one. The
supposed evidence is perhaps exaggerated in importance, owing
to the possibility of undetected faults in certain localities, but is
abundant even should all doubtful evidence be eliminated. It
does however seem to be true that the irregularities are mostly
of a minor order of magnitude, so that, when the tremendous
thickness of rock material which was removed in this Pre-
cambriç interval is taken into account, with the several up-
lifts, and the quite respectable altitude at times which are thus
indicated, the surprise is not that the surface is so rough, but that
it is not vastly rougher. Maximum differences of level of but
a few hundred feet are all that are involved, and these comparati-
vately seldom. Whether the surface were not sufficiently smooth
to be worthy of the name peneplain, is merely a matter of the
personal conception of such a surface which different individuals
may hold.

The writer has shown that, in the Little Falls region, the present
inclination of this old surface is about 100 feet per mile toward
the south. The Beekmantown and Trenton rocks which rest on
it have a present dip in the same direction of about 70 feet to the
mile; whence, if we assume that they were deposited in a hori-
Zontal attitude, we obtain a slope of 30 feet to the mile as that
which the old surface possessed at the time when the Paleozoic
rocks were deposited on it. While this is a gentle slope, it is too
steep for one graded by stream action and suggests that the move-
ment of depression itself resulted in some further tilting of the
surface. Little or no direct evidence has been obtained in other
districts as to its amount of slope.

Paleozoic topography

If the Utica sea overswept the entire region, and all the available
evidence seems to indicate that it did, then the region arose from
beneath sea level with a smooth, constructive surface whose slopes
depended mainly on the character of the uplift. But of this we