are practically absent over considerable areas, and, where they
do occur, are mostly few and small. Yet such rocks are re-
peatedly found shading locally into others with much less ap-
parent gneissoid structure, with feldspar augen quite frequent
and with definite cataclastic structure; rocks whose original
igneous textures are sufficiently well preserved to show their
origin beyond a doubt.

In some cases, notably at Little Falls and Middleville in Herki-
mer county, where outliers of these rocks occur and where the
augen are bigger and more numerous than at any other known
localities, the rock seems to have originally been rather coarsely
porphyritic. But for most of the rock in the region this does not
seem to have been true.

Mineral composition. At the type locality, Loon lake, the rock
is a quartzose augite syenite, and, since this is the prevailing
character over much of the region, the description of the type
will serve well for a general description of the rock.

In the Loon lake rock microperthite and oligoclase feldspars,
augite and hypersthene (or bronzite), hornblende, magnetite,
quartz, garnet, apatite and zircon are always present, and
locally biotite, titanite, pyrite and allanite appear in addition.
The rock is essentially composed of microperthite, augite and
hypersthene, with quartz, oligoclase and garnet always present
in varying and usually slight amount.

The feldspar is mostly microperthite. A little plagioclase
always appears and seems universally to be oligoclase. Most of
the plagioclase present is intergrown with orthoclase in the
microperthite, and the chemical analysis indicates that this must
be albite. The feldspar is usually perfectly fresh and contains
to some extent minute, dustlike inclusions, as well as including
small zircons, apatites and titanites and occasionally small
augites and quartzes also. Orthoclase is only present as a con-
stituent of the microperthite.

Both augite and hypersthene are usually present, the former
mostly predominating. Parallel growths of the two frequently
occur, often of repeated fine lamellae, the contact faces being as
usual. The augite is deep green in thin section, quite like the
green of the hypersthene.