

spindles constitute a considerable portion of, and a very characteristic feature of the rock. Though no analyses have been made, the rock is plainly an exceedingly acid one.

The fine grained phase is however the more common one and is not so easy of recognition. It has the same mineral constitution as the coarse, but largely or entirely loses the spindle quartz character. Intermediate grades however occur. In small dikes it becomes a very finely granular, flinty appearing rock, and, where such dikes occur isolated, there may be considerable question as to their proper reference.

The fact that the two are merely phases of the same rock is shown at several localities, typically perhaps on the west shore of Big Tupper lake between Grindstone and Black bays. Here are excellent exposures which show the typical coarse granite cutting augite syenite, with the fine grained type produced as a contact phase, and constituting only a small proportion of the whole mass of the granite. Other exposures show the two in varying proportion, though as a whole the coarse type is less abundant than the fine.

This Morris granite is the only granitic rock among the later intrusives which belongs to this very acid type, and this makes it easy of recognition when it is associated with rocks belonging to this group, since it is the youngest of them all, with the possible exception of some of the gabbros. But gneissoid granites are not infrequently found in the region which cut Grenville or Saranac rocks and with none of the distinctive later intrusives in the vicinity, granites of a very acid type. When these are of the fine grained sort, as is usual, it is impossible to tell whether they are of the age of the Morris granite or are much older, older than any of the later intrusives. Such granites are quite frequent in the region, and have perhaps a specially wide distribution in the vicinity of St Regis Falls. It is quite probable that there is more than one granite of this character in the region.

Gabbros. These are mostly black, basic, heavy rocks, and have a very widespread distribution, perhaps more so than any of the later igneous rocks, but occur mostly in dikes or small masses, very seldom in masses of such size as are common with the other intrusives. The dikes are without exception fine grained black rocks. The central parts of the bosses are much coarser, the