1 . . -34in the open and woodland permanent pastures of Danville, North Hatley, and Philipsburg. The results in the open pastures indicated that: 2. (a) The Philipsburg limestone soils were the most fertile in total number of species and percentage of desirable species; (b) The North Hatley podsolized soils were the least fertile in percentage of desirable species, although intermediate in total number of species; (c) The Danville brown earth over serpentine rocks was moderately fertile in percentage of desirable species, but lowest in number of species. 3. The woodland association indicated that Danville and North Hatley were in the boreal forest belt, and Philipsburg in the lake forest belt. 4. Groups of indicator plants were suggested for the three different soil types as follows: (a) The Philipsburg limestone soils were marked mainly by the bladder fern, Cystopteris bulbifera, the variety of Boraginaceae, the growth of Leguminosae in general and the ever-present Geranium Robertianum; (b) The North Hatley podsol soils were marked first by the conspicuous hummocks of Polytrichum commune, and the presence of oxylophiles such as Larix laricina, Linnaea borealis, Streptopus roseus, Oxalis Acetosella, and Mitchella repens;