

Agricultural Transformation in a Regional System:

a study of economic development and population
change in the Annapolis Valley, Nova Scotia

A proposal for dissertation research

submitted by

Hugh A. Blackmer

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Introduction

Anthropologists have generally been concerned with social organization at the level of the small community. The existence of higher-order organizational units has always been recognized, but very few empirical studies of such units have been undertaken; the data-handling task has generally been thought too ambitious or requisite of too much extra-^o anthropological expertise, and consequently the levels of organization intermediate between the face-to-face community and the society, ethnic group, or nation have been left to other disciplines. Recent work in marketing systems (eg, Skinner 1964-5, Smith 1971) and a current concern with the ecology of human populations (eg, Shimkin 1971) suggests that these limitations are artificial and unnecessary, given adequately developed models for the gathering and analysis of data.

The research discussed below draws upon recent work in economic and social geography and in population ecology, and seeks to examine the organization and operation of a region in Nova Scotia. Following current use of the concept in geography (Berry 1964, Grigg 1967), the term region refers to any partition of human activity-space made according to one of two criteria:

- 1) homogeneity of things to be included (producing a set of formal or uniform regions), or
- 2) internal unity of organization (producing a hierarchy of functional or nodal regions).

According to the first criterion, the region discussed below contains the main agricultural area of Nova Scotia; most of the fruits and vegetables produced in the province are grown within the region, and a sizeable proportion of provincial poultry, hog, and dairy enterprises are found within its boundaries. The region is therefore 'homogeneous'

in the sense that, relative to other parts of Nova Scotia, it forms a landscape unit which is specialized in the production of agricultural commodities for sale on national and international markets; this landscape unit is itself internally differentiated, and is 'uniform' only in relation to the remainder of the set of formal regions in Nova Scotia.

The organization and operation of the region will be examined from the point of view of its constitution as a functional region --a product of the partition of the landscape of Nova Scotia on the basis of human settlement and activity. According to this definition, the region consists of the transactional hinterland of Kentville, an important trade and service center and the largest town in this part of Nova Scotia. It is important to note that functional definition is explicitly concerned with both the internal organization of the region (eg. the network of settlement-pattern nodes dependent upon Kentville, the flow of commodities through this network), and with its relations to other nodal regions of the same and higher orders; following the model of central-place theory, the region centered on Kentville is seen as an integral part of the system of transactional regions centered on Halifax, the capital and largest city of the province.

Reference to maps I and II will clarify the above general statement; map I shows urban centers of 5000 and greater population in Nova Scotia and indicates the approximate boundaries of the study area, defined by the presumed transactional hinterland of Kentville. Map II shows towns and settlements of greater than 300 population which lie within the region to be studied; the accompanying first-order nearest-neighbor graph (Fig 1) indicates a first approximation to the central-place

structure of the region, based solely upon least-distance pathways connecting population concentrations. The degree to which the hierarchical organization of central places in the region suggested in Fig. 1 accords with reality is not known, but the spatial unit defined by this procedure has a number of useful and suggestive properties:

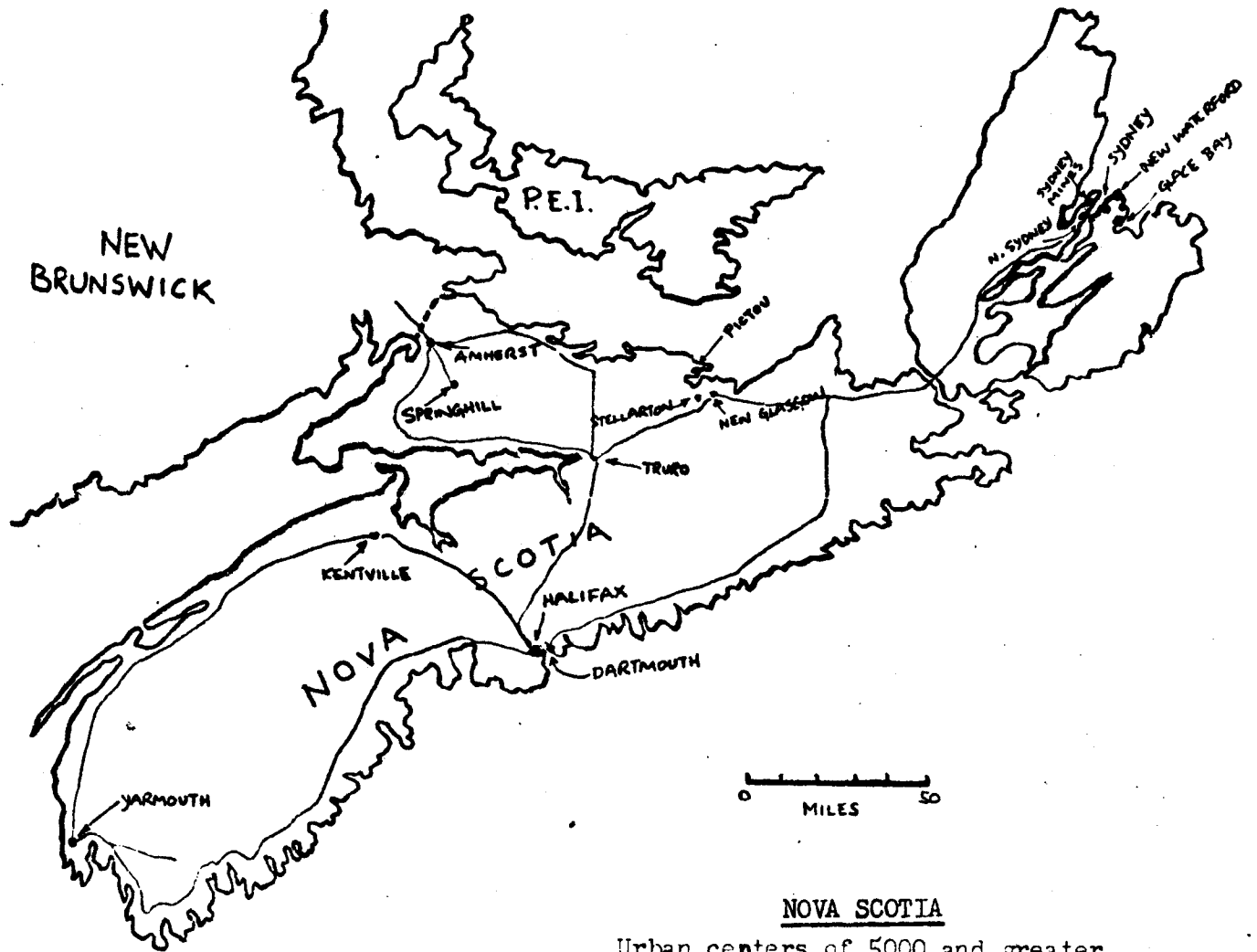
1. The nearest-neighbor unit centered on Kentville corresponds to a physiographically defined landscape unit, made up of the glacial valley which lies between North Mountain and South Mountain (drained by the Annapolis and Cornwallis rivers) and the tidal lowlands on an arm of Minas Basin (drained by the Avon river). An important part of the proposed research will be concerned with analysis of the effects of the distribution of physiographic characteristics (topography, soils, hydrology, parent-rock) upon settlement- and land-use patterns.
2. The unit corresponds almost exactly to a set of nine Census Subdivisions (Annapolis a-d, Kings a-d, Hants West), greatly simplifying aggregate decennial comparison of Census variables. Such comparisons can be presented as rates of change, and will be used to define the outlines of system-trajectories within the regional unit.
3. The unit corresponds to a locally-recognized and named spatial entity --the Annapolis Valley. Although individual notions of the exact boundaries of the Annapolis Valley would certainly vary somewhat (and probably along interesting dimensions), it seems reasonable to assume that the unit constitutes a significant level of social organization in the minds of its inhabitants. At least one agency of the Provincial government (the extension service of the Department of Agriculture and Marketing) considers the unit to be a single social entity.

The region thus contains a population (people whose primary economic and social orientation is to Kentville rather than to another town of equal or greater size), a set of resources (primarily arable land and woodland), and a productive system (an economy which organizes the allocation and exploitation of resources by the population). The proposed research is concerned with the effects of the post-World War II transformation in the production system of the region. These effects may be observed in three related spatial systems: the distribution of

population in the region, the system of land-use and physical resources, and the system of central places and organizations and institutions concerned with production, marketing, sales, and service activities.

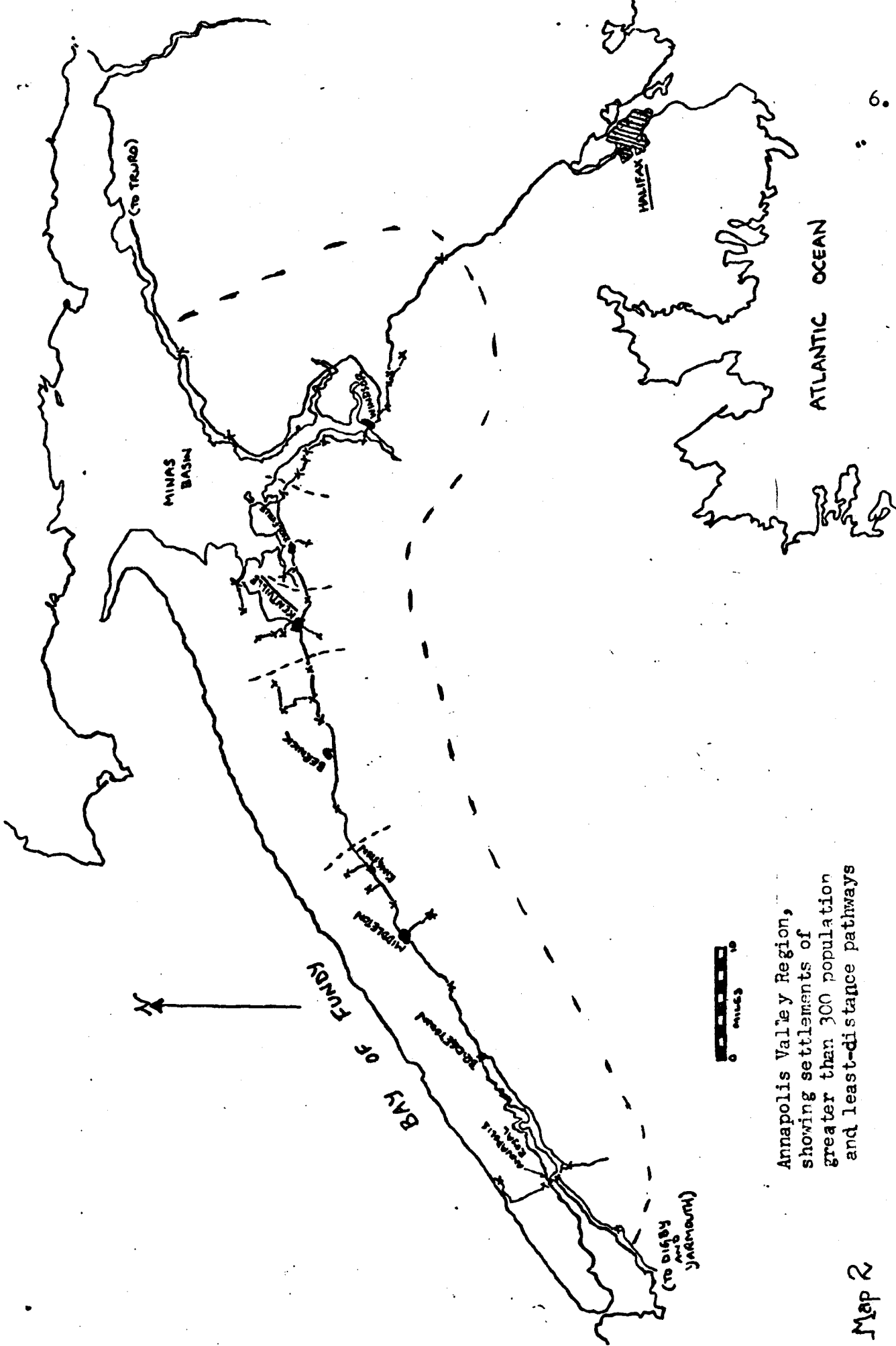
The following topics will be taken up in this proposal:

1. Regional systems in anthropology and geography: a brief polemic
2. Farming systems: anthropological approaches, new directions, and the current state of agriculture in North America
3. The area: discussion of the spatial and historical contexts of the research site
4. The research task: analytical subsystems and their interrelations
5. Methodological appendix: data structures and data analysis.



NOVA SCOTIA

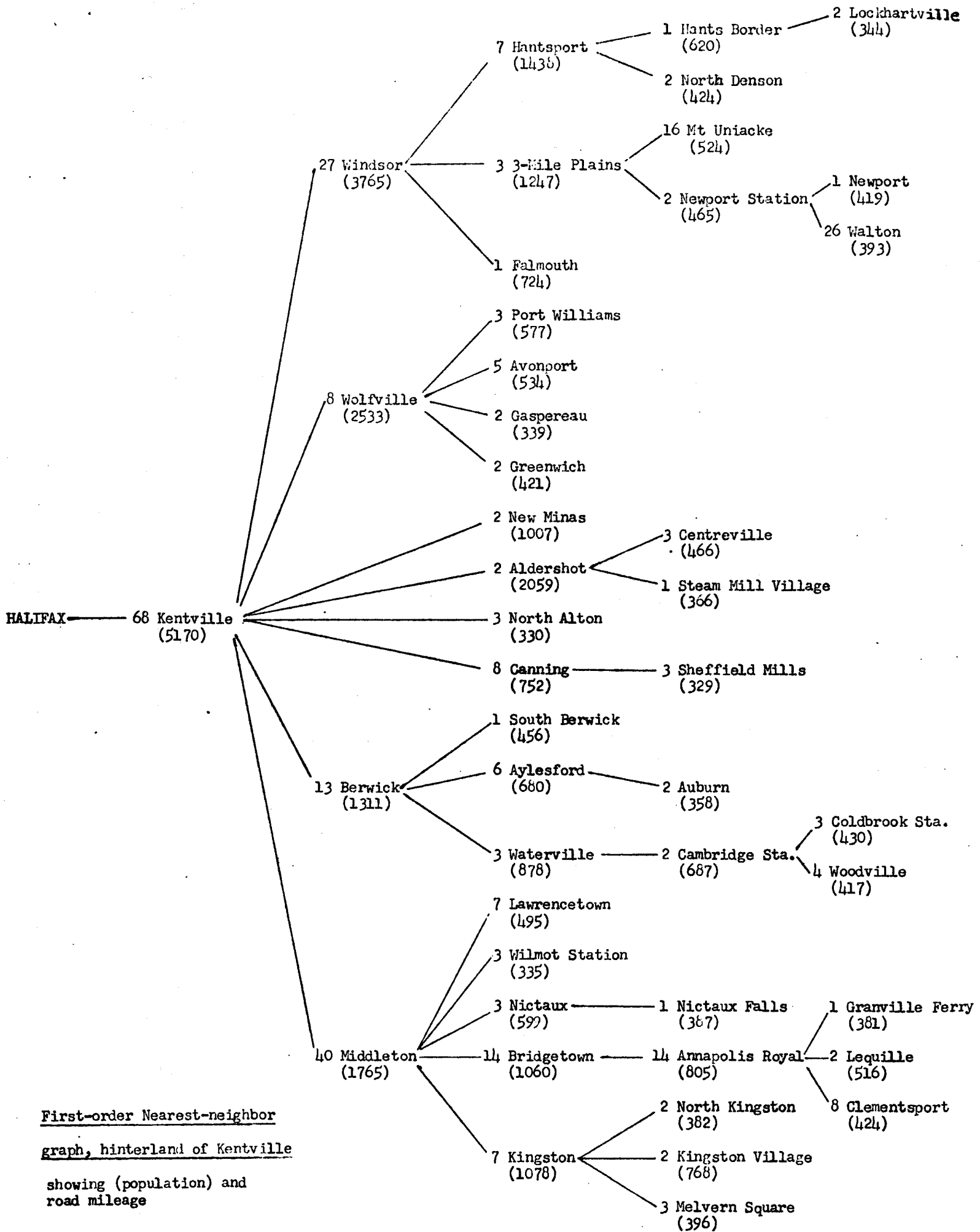
Urban centers of 5000 and greater population, with major highways



Annapolis Valley Region, showing settlements of greater than 300 population and least-distance pathways

--- approximate boundary of study area

Map 2



First-order Nearest-neighbor graph, hinterland of Kentville
 showing (population) and road mileage