

reveal some significant correlations between acres of land cleared, time settled, and other variables. Some interesting patterns between sample groups are apparent in terms of the strength of the relationship. In 1830 (Table 4.11) a significant negative correlation existed between clearing rate and time settled for three groups, while the strength of the relationship varied from one group to another.

Table 4.11 1830 Correlation Coefficients

<u>Variable</u>	<u>Population</u>	<u>Persistent Settler</u>	<u>Successful Settler</u>	<u>Persistent and Successful Settler</u>
Clear Land <sup>1</sup> / Oxen	.6486	.6396	.5230	.4543
Clear Land/ Family Size	.2480	.3715	.4301	----
Clear Land/ Farm Size	----	.5163	.8337	.7892
Clear Land/ Clearing Rate	.3835	.9216	----	.8607
Clearing Rate/ Time Settled	-.2123	----	-.8677	-.5619
Clear Land/ Livestock	.7355	.7083	.4452	----
Clearing Rate/ Farm Size	----	.4766	----	.6747
Farm Density/ Family Size	----	-.5211	----	-.7073
Clearing Rate/ Oxen	.2630	.5858	----	----
Farm Density/ % Male	----	.5938	----	.9070
Clear Land/ Females	----	----	.4500	----

Note : <sup>1</sup>Clear Land - acres

Variables significant at 0.01 level.

In 1841 (Table 4.12) the variables clear land (acres) and time settled were significantly associated only for the persistent settler group. Significant positive correlations between farm size and clearing rate were stronger in the sample groups as opposed to the general population.

Table 4.12 1841 Correlation Coefficients

<u>Variables Tested</u>	<u>Population</u>	<u>Persistent Settler</u>	<u>Successful Settler</u>	<u>Persistent and Successful Settler</u>
Clear Land/ Clearing Rate	.8381	.9769	.8759	.9602
Clear Land/ Farm Size	.4321	.5143	.8456	.8155
Farm Size/ Clearing Rate	.3759	.5416	.7847	.8383
Farm Density/ Family Size	-.1786	----	-.4496	----
Clear Land/ Horses	.6420	.7040	.4603	.4189
Farm Size/ Farm Density	.2718	.4039	.5769	.6366
Clear Land/ Time Settled	----	.4486	----	----
Clearing Rate/ Time Settled	----	.2740	----	----

Note : <sup>1</sup>Clear Land - acres

Variables significant at 0.01 level.

This trend continued in 1851 (Table 4.13) for the clear land-farm size relationship, the clearing rate-farm size correlations, and the farm size-wheat production association. In 1851, although no significant relationship between farm density and family size was found in the general population,

Table 4.13

1851 Correlation Coefficients

<u>Variables Tested</u>	<u>Population</u>	<u>Persistent Settler</u>	<u>Successful Settler</u>	<u>Persistent and Successful Settler</u>	<u>Wheat Production 300 bushels or more</u>	<u>Wheat Prod. less than 100 bu.</u>
Clear Land <sup>1</sup> / Wheat (bu.)	.7661	.7748	.7314	.7623	.7262	.3078
Clear Land/ Farm Size	.5681	.6258	.9606	.9721	.6801	.3047
Clear Land/ Family Size	.2475	----	----	----	.3892	----
Land Cleared (%) Farm Size	-.2348	----	----	----	-.5201	-.3954
Clearing Rate/ Wheat (bu.)	.4955	.7221	----	.7014	.4504*	----
Clearing Rate/ Time Settled	-.4449	----	-.5595	----	-.6874	-.5324
Clearing Rate/ Farm Size	.3778	.5962	.5835	.9578	----	----
Farm Size/ Wheat (bu.)	.4733	.5386	.6521	.7269	.4956	----
Farm Density/ Family Size	----	-.4780	-.5362	-.6289	-.5688	----

Note : <sup>1</sup>Clear Land - acres

Variables significant at 0.01 level, (\* -significant at 0.05 level).

quite strong negative associations were present in the various sample groups, with land cleared per family member tending to decrease with larger families.

In addition to demographic and statistical analysis of the sample groups, it is useful to map the pattern of settlement for persistent, successful, persistent and successful settlers, and top wheat producers in 1851. The 1830 maps (Figure 4.44) show that, with the exception of three or four settlers west of the Pigeon River, all sample group settlement was in the southeast portion of the township. The persisters were the largest group, and two clusters of settlement near Con.4-5, Lots 11-14, and near Con.1-2, Lots 11-15, alongside an early road (Figure 4.30) may mark the core of persistent settlers. The successful farmers were somewhat scattered, as were the persistent and successful group, with one cluster in the east portion of Con.1-2.

The 1841 maps (Figure 4.45) illustrate a much more random settlement pattern. The persistent settler map reflects the presence of the Robinson immigrants and shows the somewhat divisive nature of the Pigeon River and impassable swamps. The two clustered groups of 1830 persisters were still present in an expanded form. The successful farmers were still clustered mainly in the southeast portion of the township, and a small cluster of successful settlers appears to have been developing near the site of the Omemee grist mill at Con.3, Lot 7. The persistent and successful settlers were all in the southeast of the township, mostly

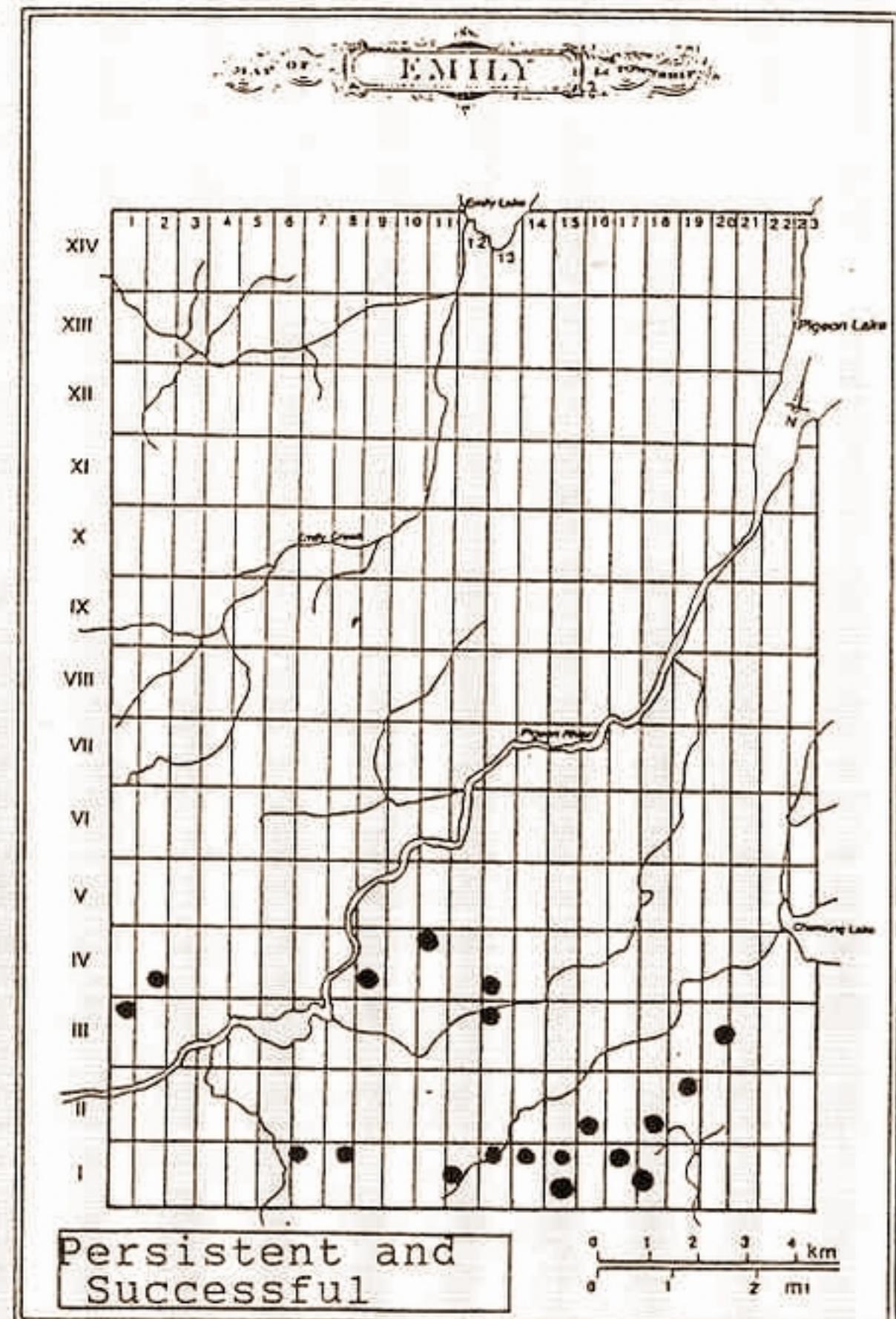
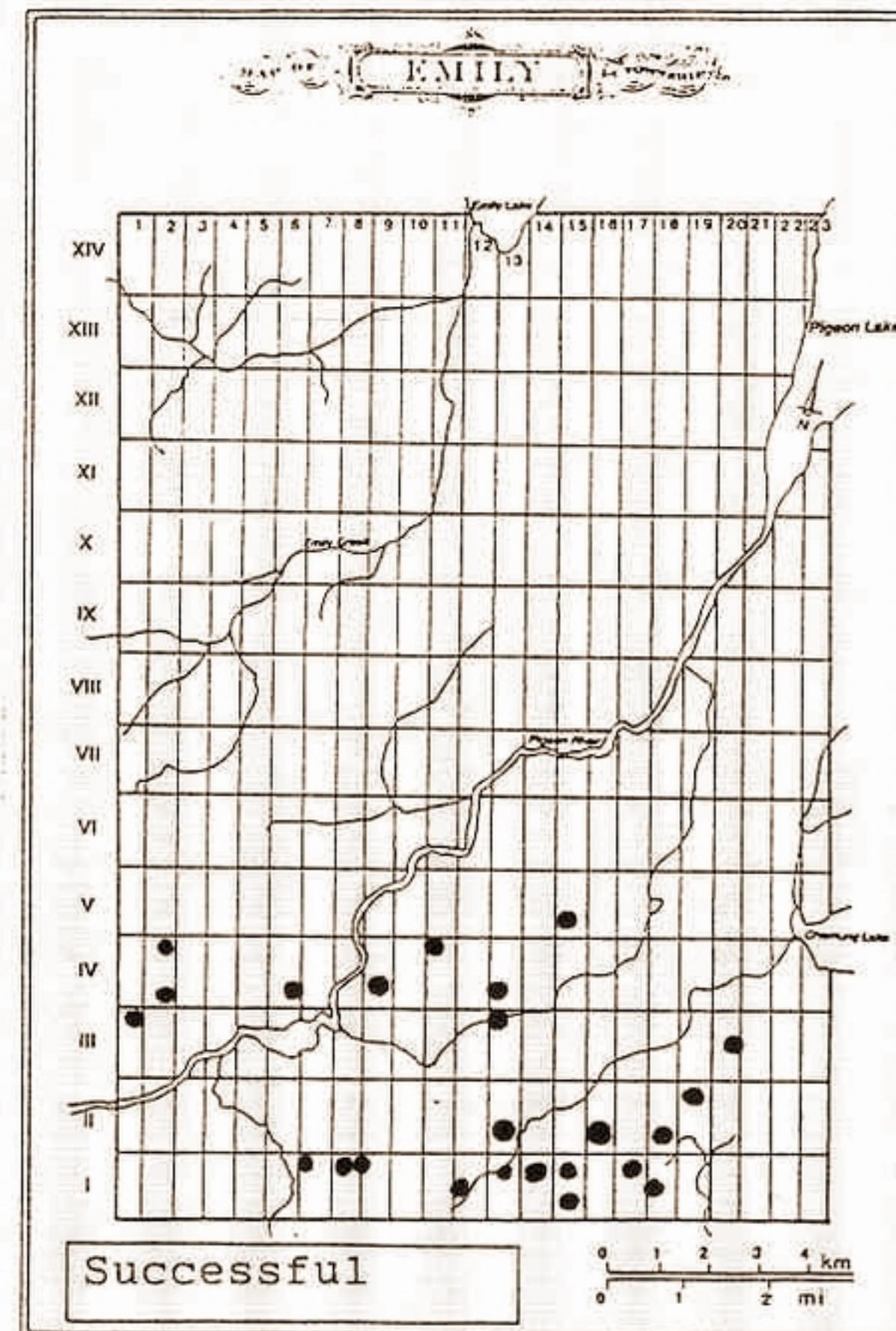
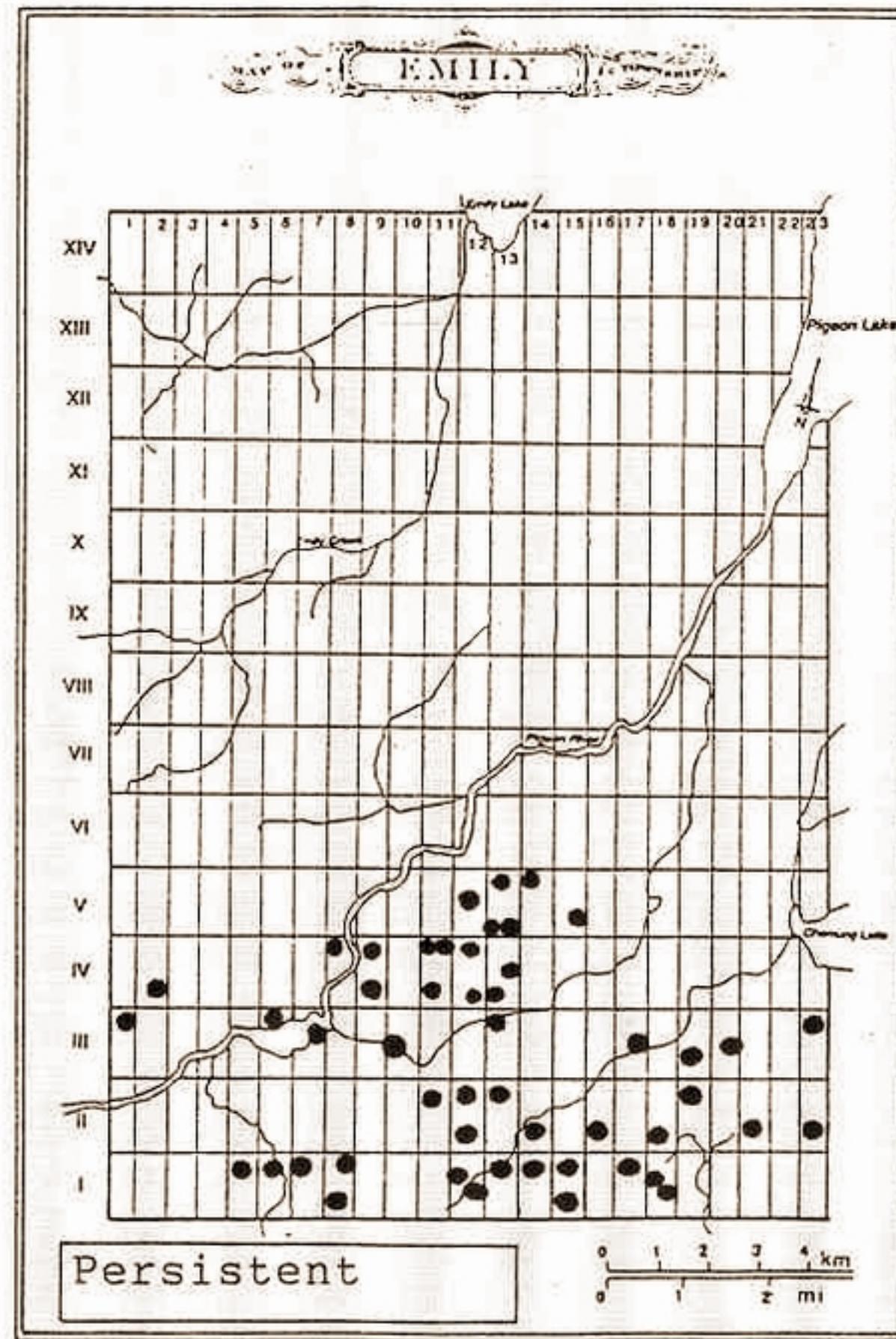


Figure 4.44: Persistent, Successful, and Persistent and Successful Settlers - 1830

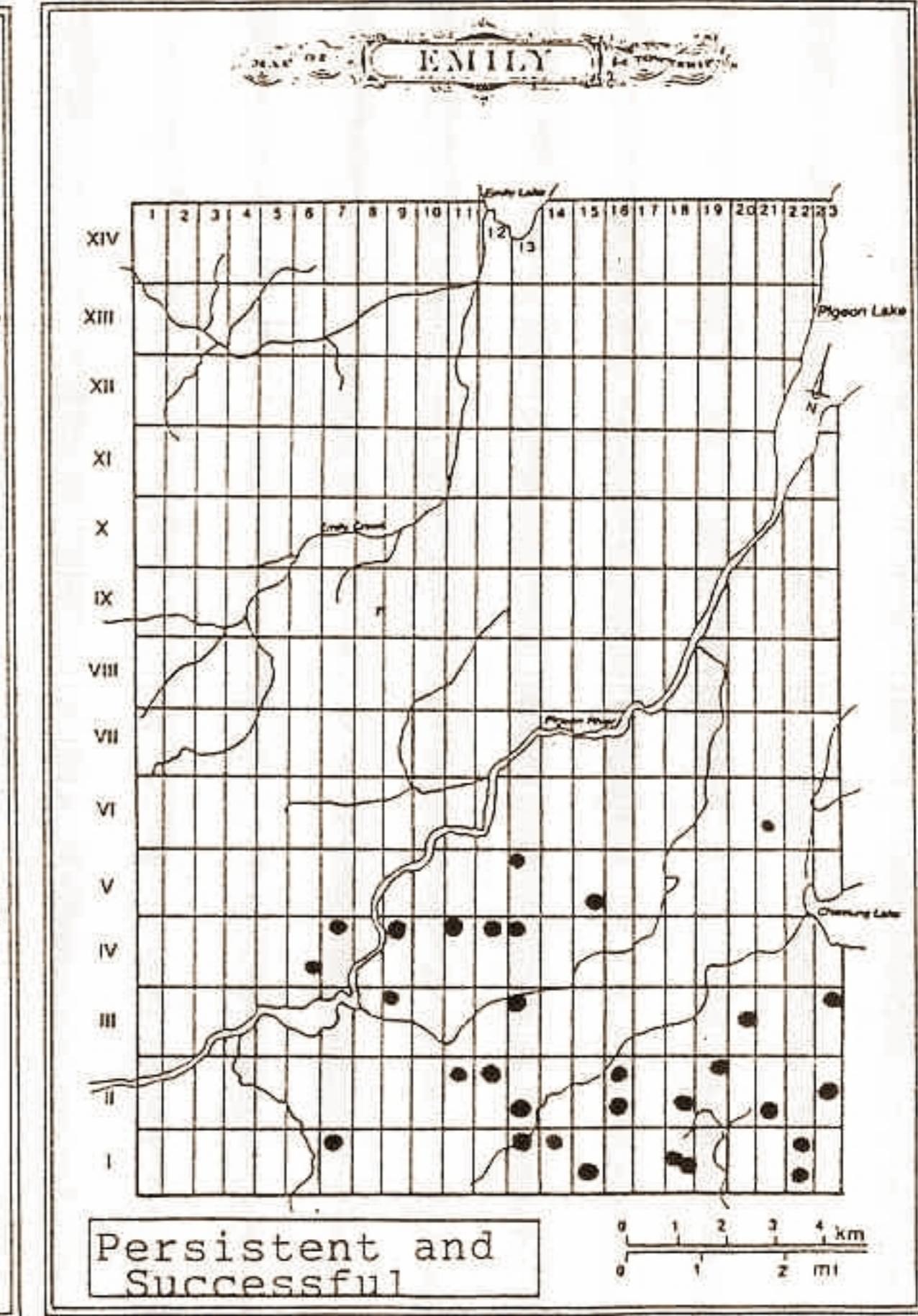
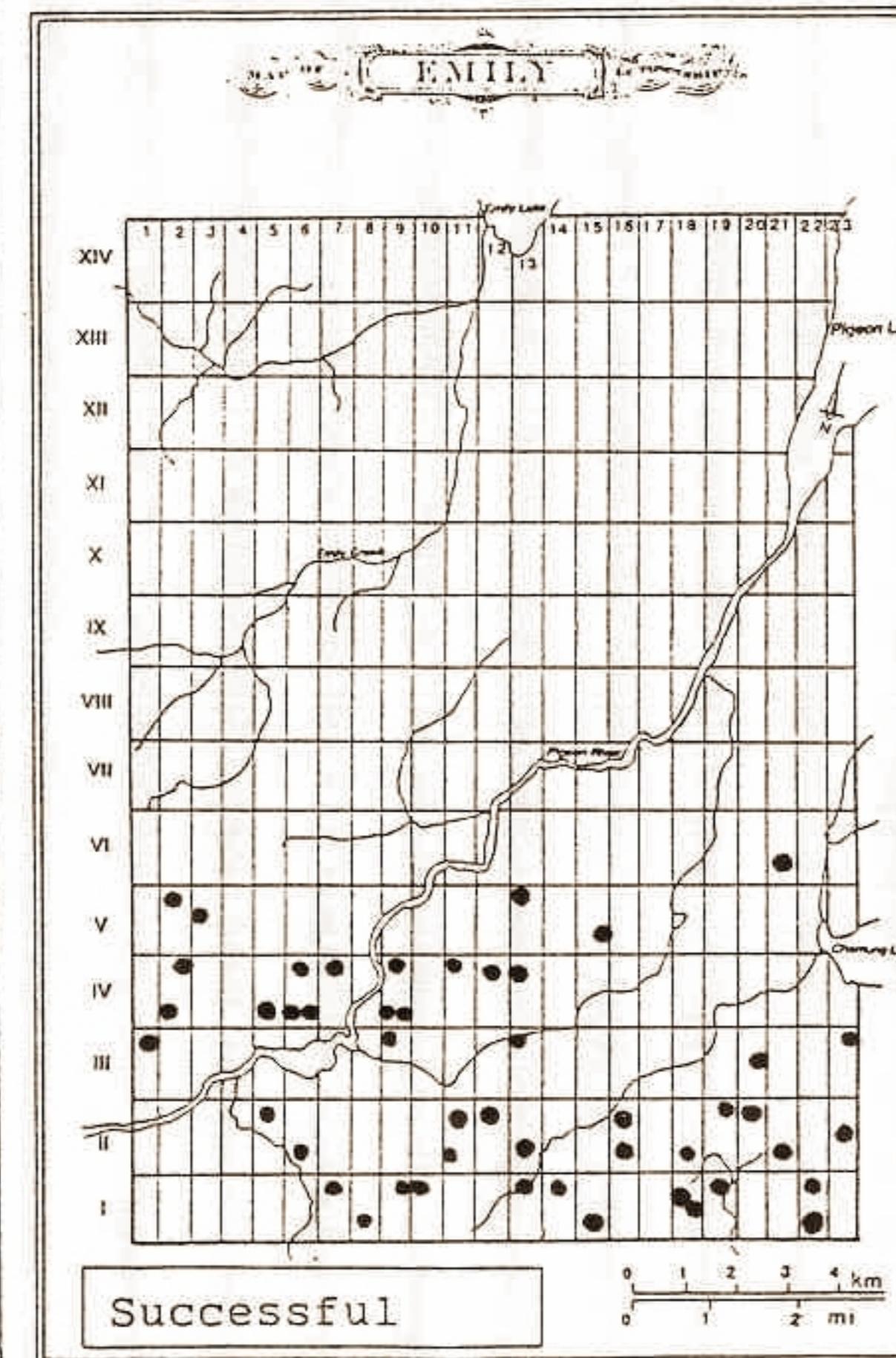
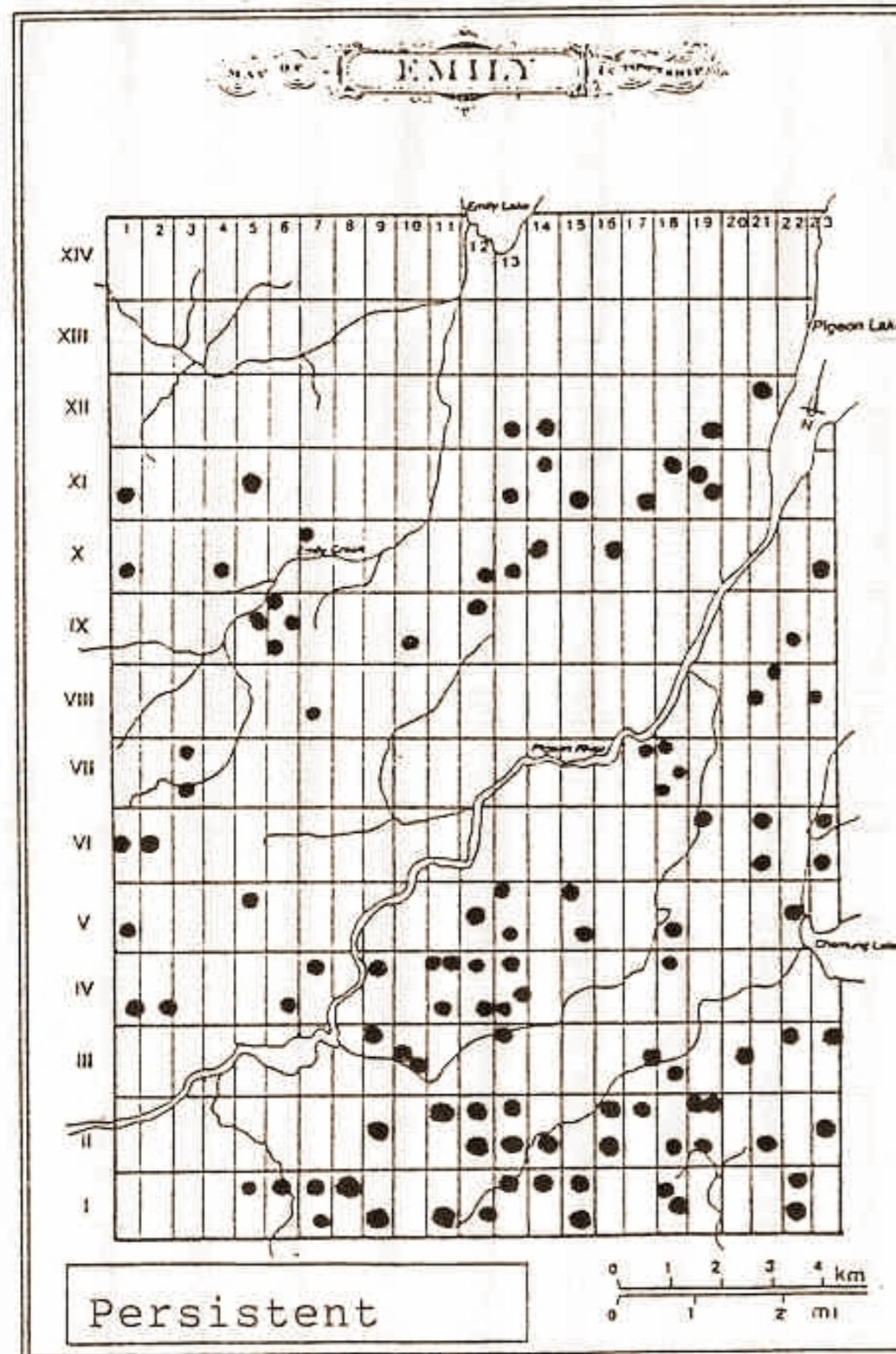


Figure 4.45 : Persistent, Successful, and Persistent and Successful Settlers - 1841

dispersed, with a fairly large group located in the first and second concessions between lots eleven and eighteen.

The 1851 maps (Figure 4.46) show the decline in the number of pre-1830 persisters, as well as their dispersed settlement pattern. The successful settlers were dispersed, and a number of Robinson settlers, to the north and west of the Pigeon River as well as north of the sixth concession, east of the river had joined the ranks of the successful. Persistent and successful settlers were well spread out, with no more than two farms adjoining each other - most were south and east of the river.

#### 4.8 Tests for Association 1841-1851

The results of the 1841-51 chi-square statistical tests are summarized in Table 4.14. The tests indicate that the measure of a successful settler - land cleared (%) was significantly associated with time settled in both 1841 and 1851. We now have a continuous record of significant association between the two variables for the years 1821 through 1851, strongly supporting hypothesis I. Soil type was significantly associated with land cleared (%) for the year 1841, giving us a continuous record of significant association for the years 1826 through 1841, strong support for hypothesis II.

Both time settled and land cleared (%) were found to be significantly associated with distance from a road in 1841. Five of eight settlers with over 40% land cleared were located beside a road and all eight were within one mile of a road. Fifty-three of fifty-seven settlers with

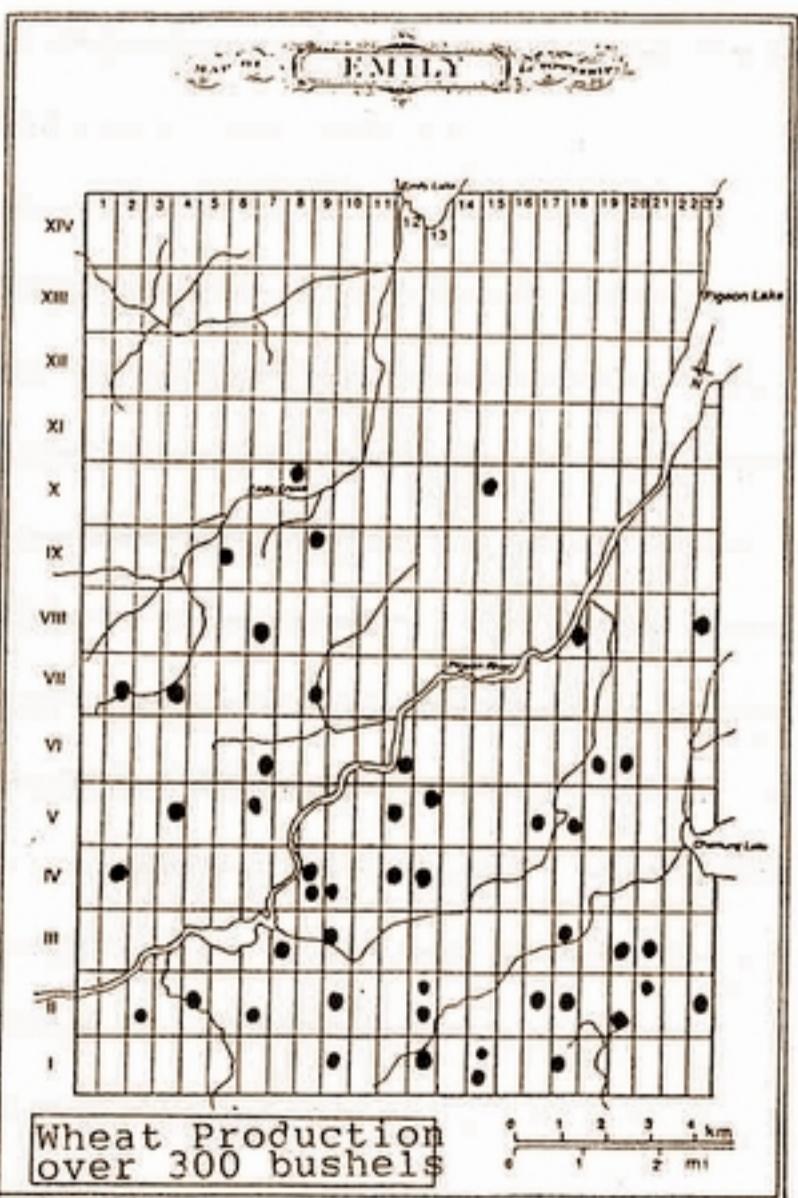
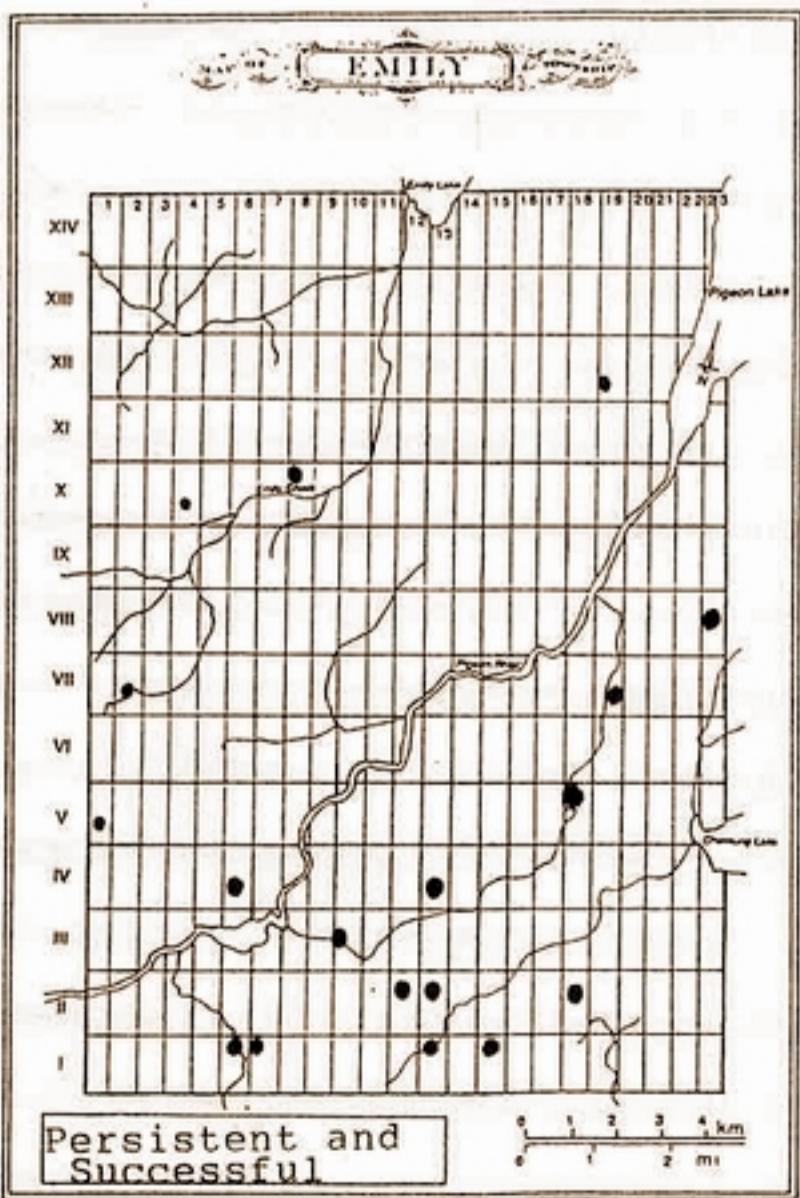
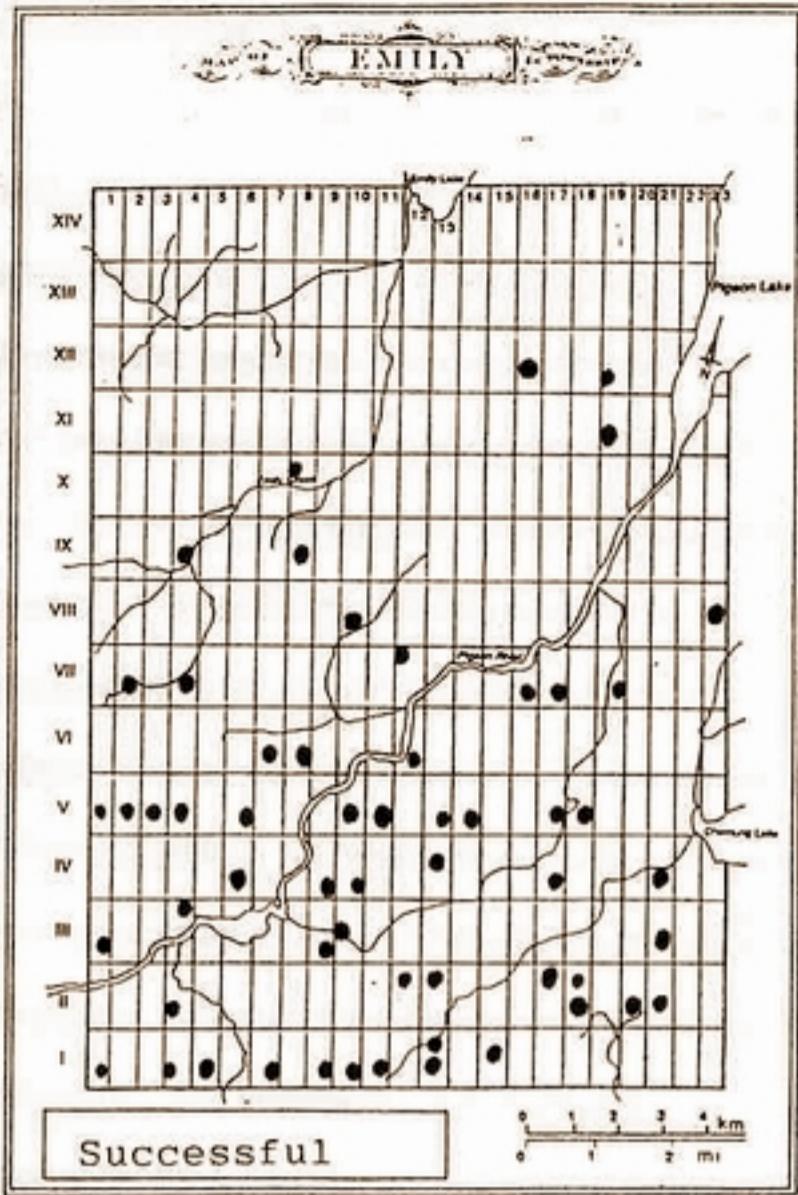
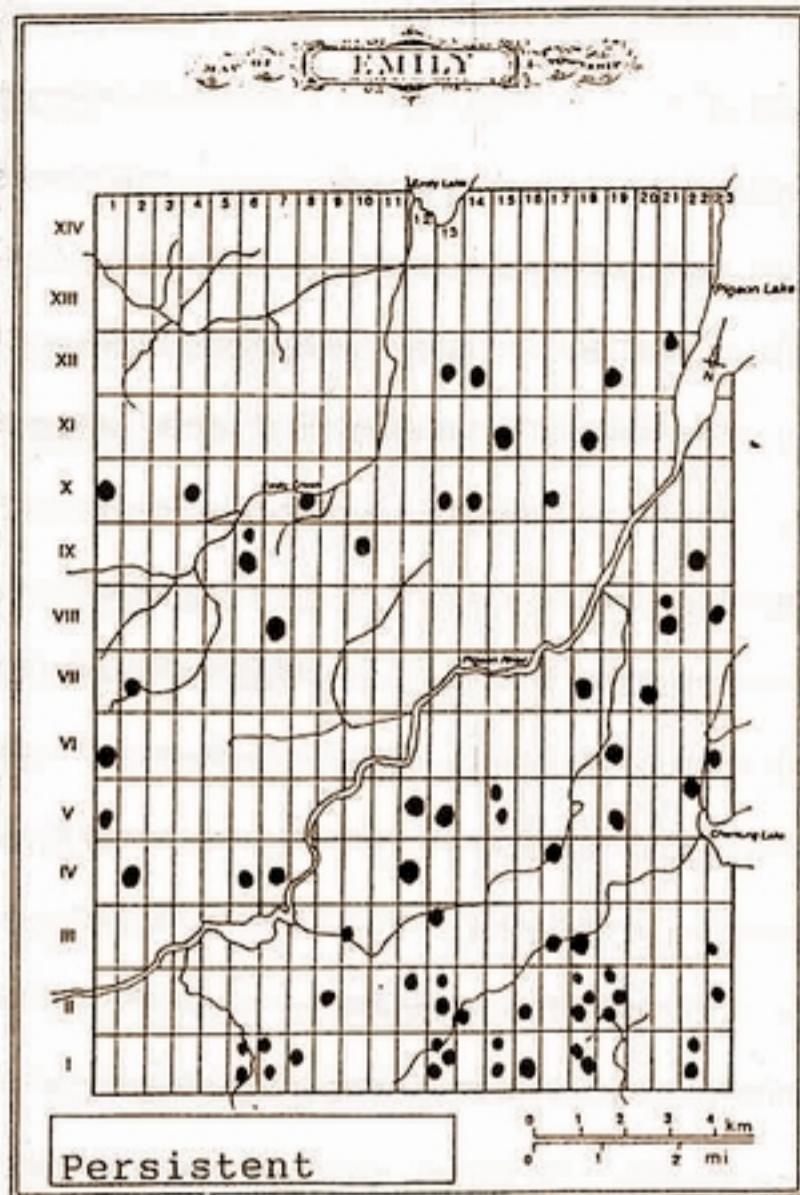


Figure 4.46 : Persistent, Successful, Persistent and Successful Settlers and Top Wheat Growers - 1851

Table 4.14

Summary of Chi-Square Tests 1841-1851

<u>Variables Tested</u>	<u>Time Settled</u>	<u>Family Size</u>	<u>Farm Size</u>	<u>Distance to Mill</u>	<u>Horses</u>	<u>Land Cleared (%)</u>
<u>Land Cleared</u> (%)	1841 1851	1841	1841 1851	1851	1841 1851	----
<u>Time Settled</u>	----	1841	1841 1851		1841 1851	1841 1851
<u>Soil Type</u>	1841					1841
<u>Distance to Road</u>	1841					1841
<u>Present Next Census</u>	1841					
<u>Wheat Crop (% of clear land)</u>				1851		1851
<u>Wheat Crop (bushels)</u>		1851				

Note : Year denotes census year pairs of variables tested and found to be significant at 0.05 level.

Soil Type - Class I,II,III, vs. Class IV,V,VI soils.