

History of a 45-Year Outbreak of Spruce Budworm in Minnesota

Michael A. Albers¹

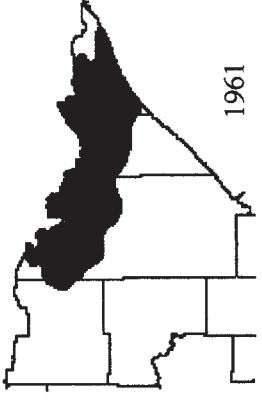
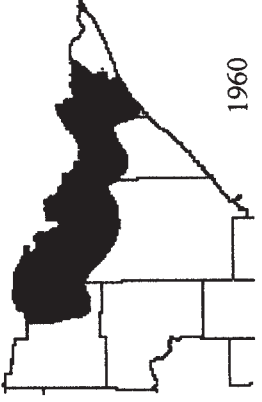
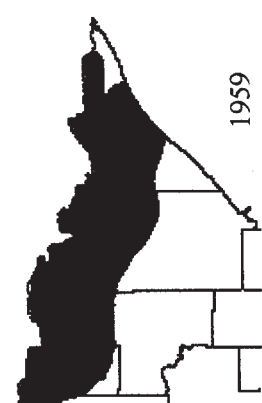
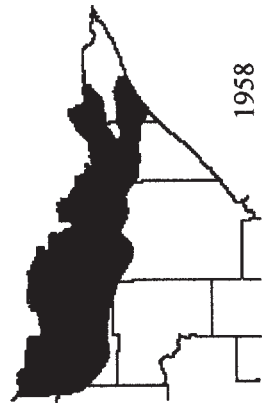
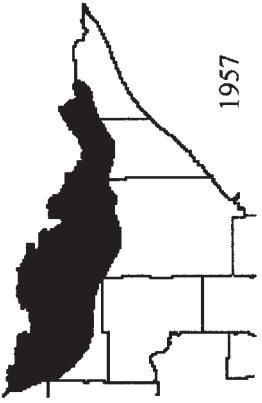
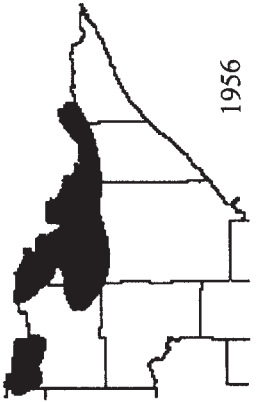
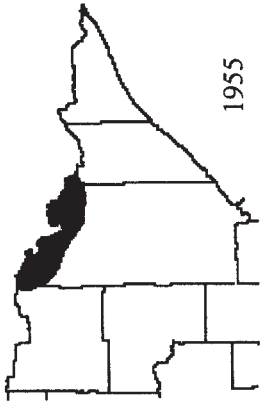
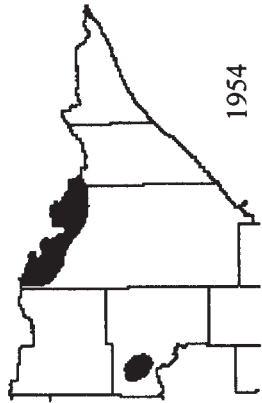
Throughout North America, spruce budworm usually exists at low endemic levels but periodically develops into large-scale outbreaks. The population stays in an outbreak state until much of its food source, mature and overmature balsam fir and spruce, is killed. The outbreaks in the past have generally lasted for about 8 to 15 years.

Northeastern Minnesota is experiencing its 45th consecutive year of a spruce budworm outbreak. This outbreak is unusual and possibly unprecedented in length. This poster documents the geographic location of spruce budworm defoliation and the number of acres defoliated during this outbreak on a year by year basis.

REFERENCES

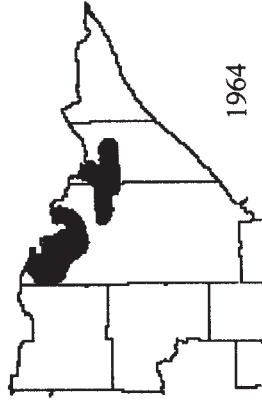
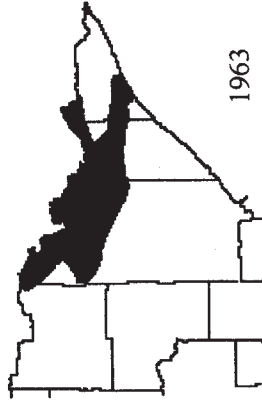
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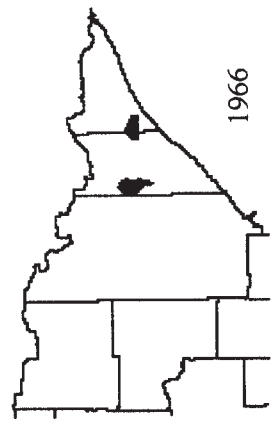
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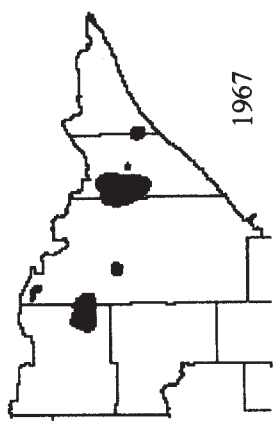


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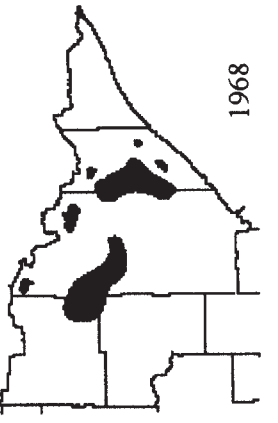
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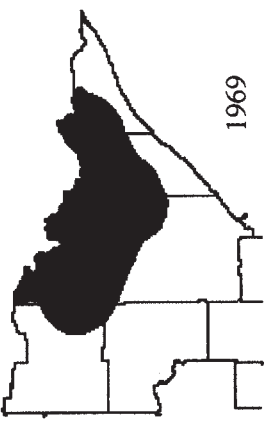
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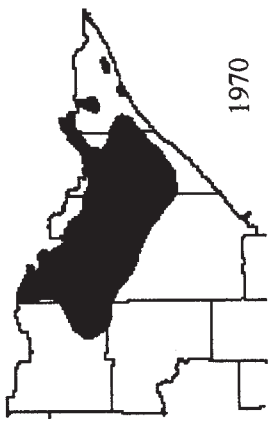
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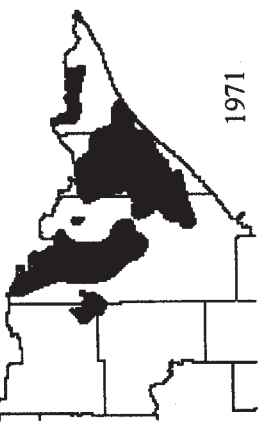
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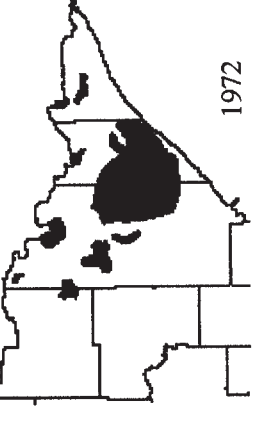
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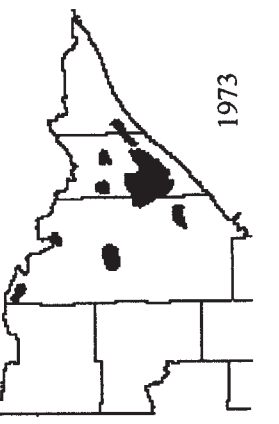
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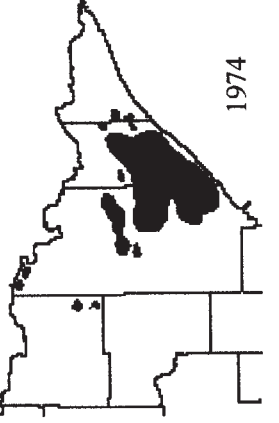
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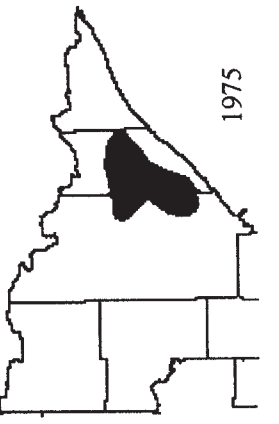
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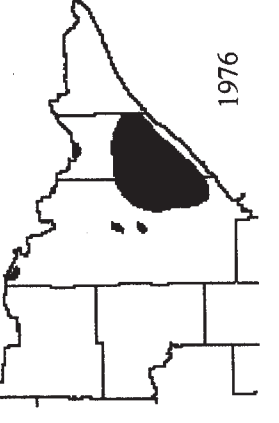
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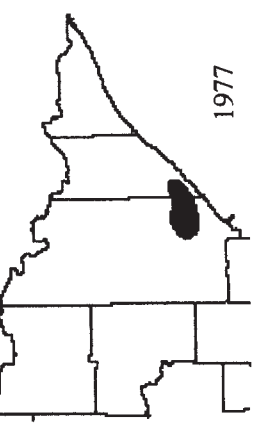
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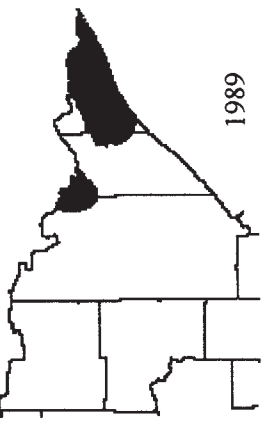
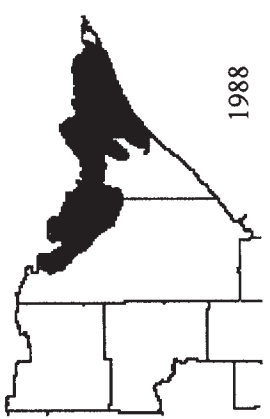
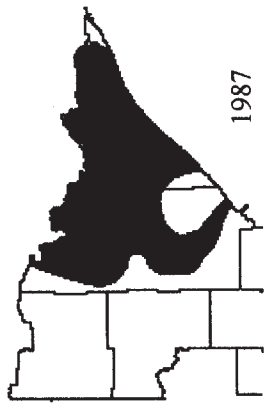
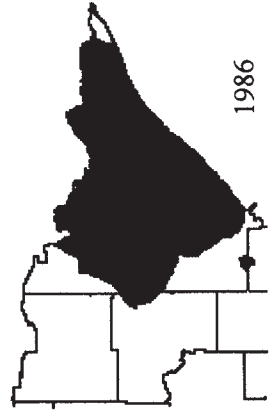
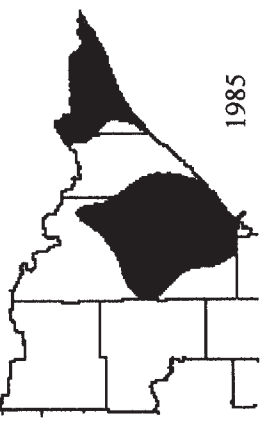
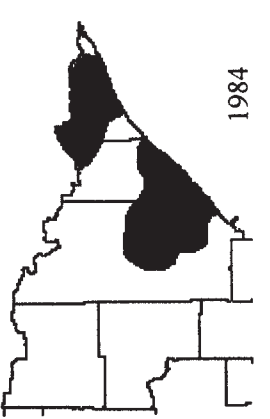
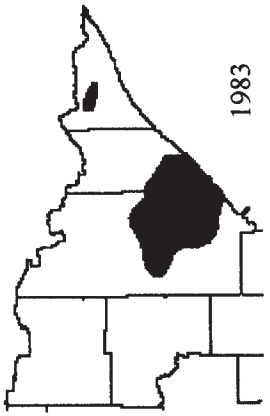
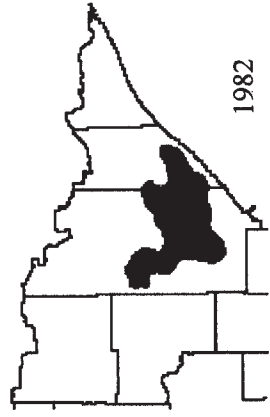
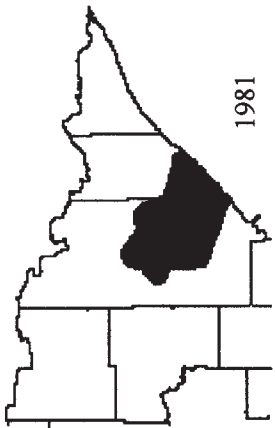
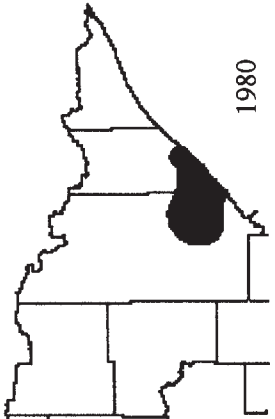
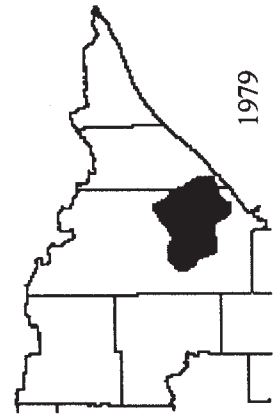
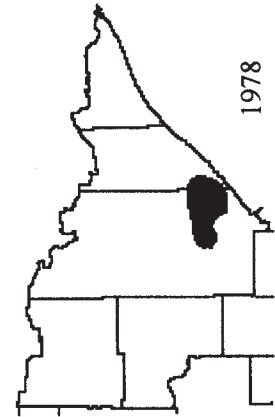
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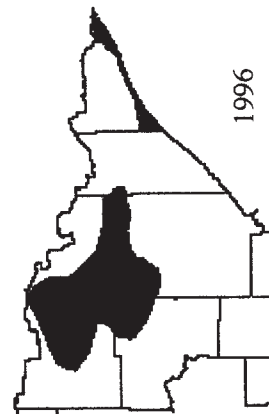
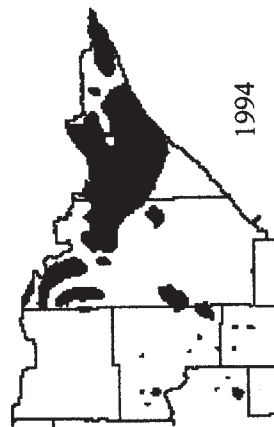
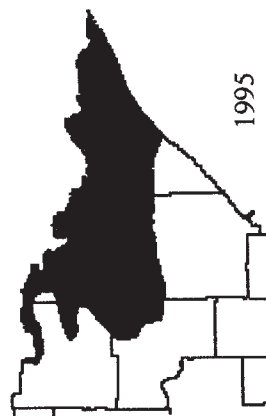
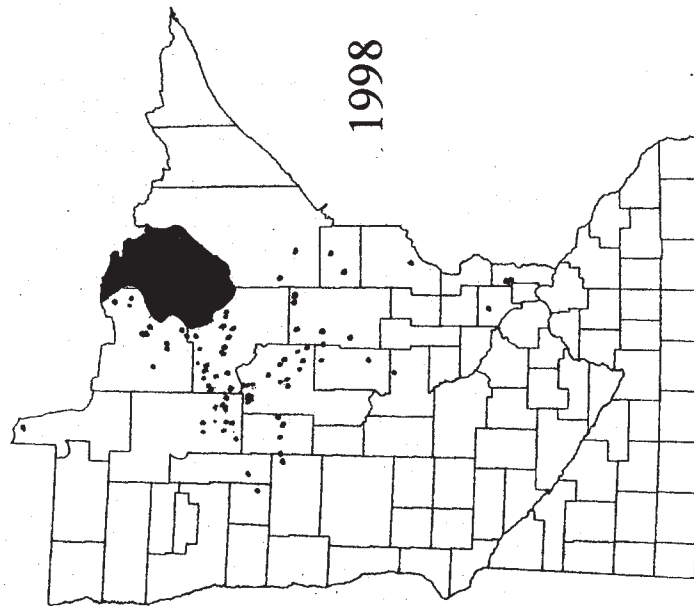
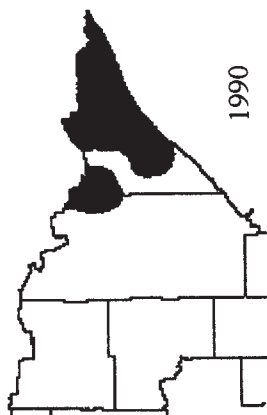
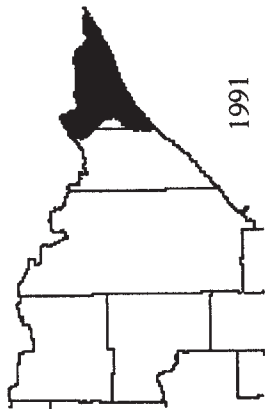
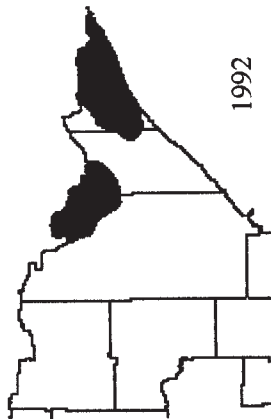
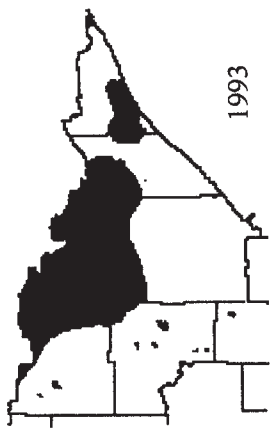


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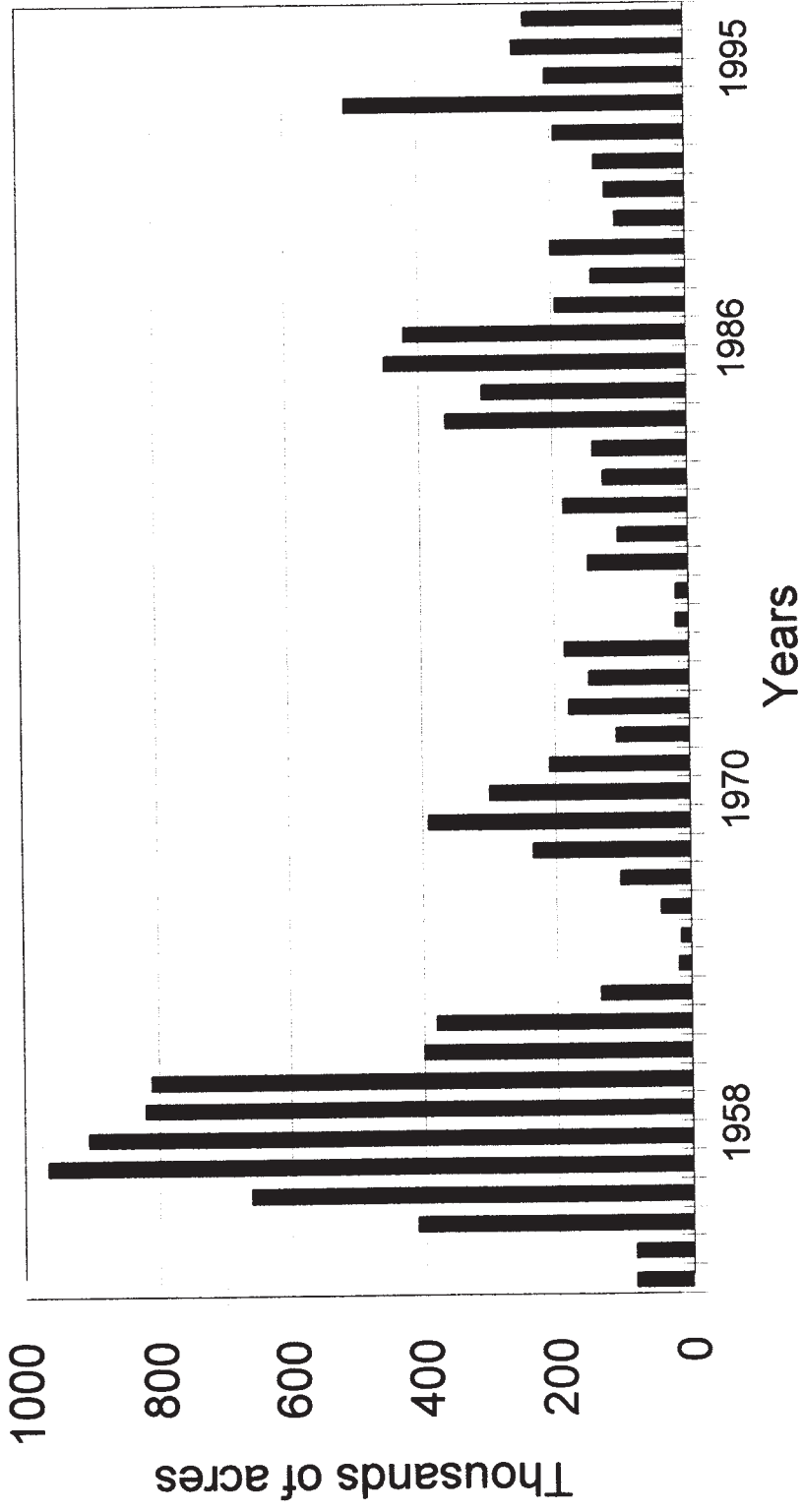
1977





Spruce Budworm Defoliation

in Minnesota, 1954-1998



Acres estimated for 1962 and 1965, no survey maps available.