

Lodgepole Needle Miner

Coleotechnites milleri (Busck)

Lepidoptera: Gelechiidae

Stark, R. W. 1952. Sequential sampling of the lodgepole needle miner. *Forest Chronicle* 28: 57-60.

Objective: To develop a sequential sampling plan for classifying populations of *C. milleri*.

Abstract: The lodgepole needle miner is an important defoliator of lodgepole pine, *Pinus contorta* Dougl., in the western USA. Infestations cause severe growth loss and extensive tree mortality as is evidenced in the Ghost Forest of Yosemite National Park. A sequential sampling program for estimating *C. milleri* populations was developed. Four to eight branch tips were sampled from the lower and upper crown in each tree until a classification was reached. Populations were classified as either light (≤ 5), medium (15-25), or heavy (≥ 35 larvae per branch tip).

Sampling Procedure: Collect an equal number of branch tips from the upper and lower crown of lodgepole pines. Although there is no fixed sample size, it is recommended that four to eight branch tips be sampled per tree, taking four from the upper crown and four from the lower crown. Cut back branch tips to include 5-year old needles and record the number of viable larvae. Continue sampling trees until the cumulative number of larvae, when plotted, crosses one of the four lines on the sequential graph (Plate 1). Error estimates are 5% for medium and heavy infestations, and 10% for light infestations.

Figure:

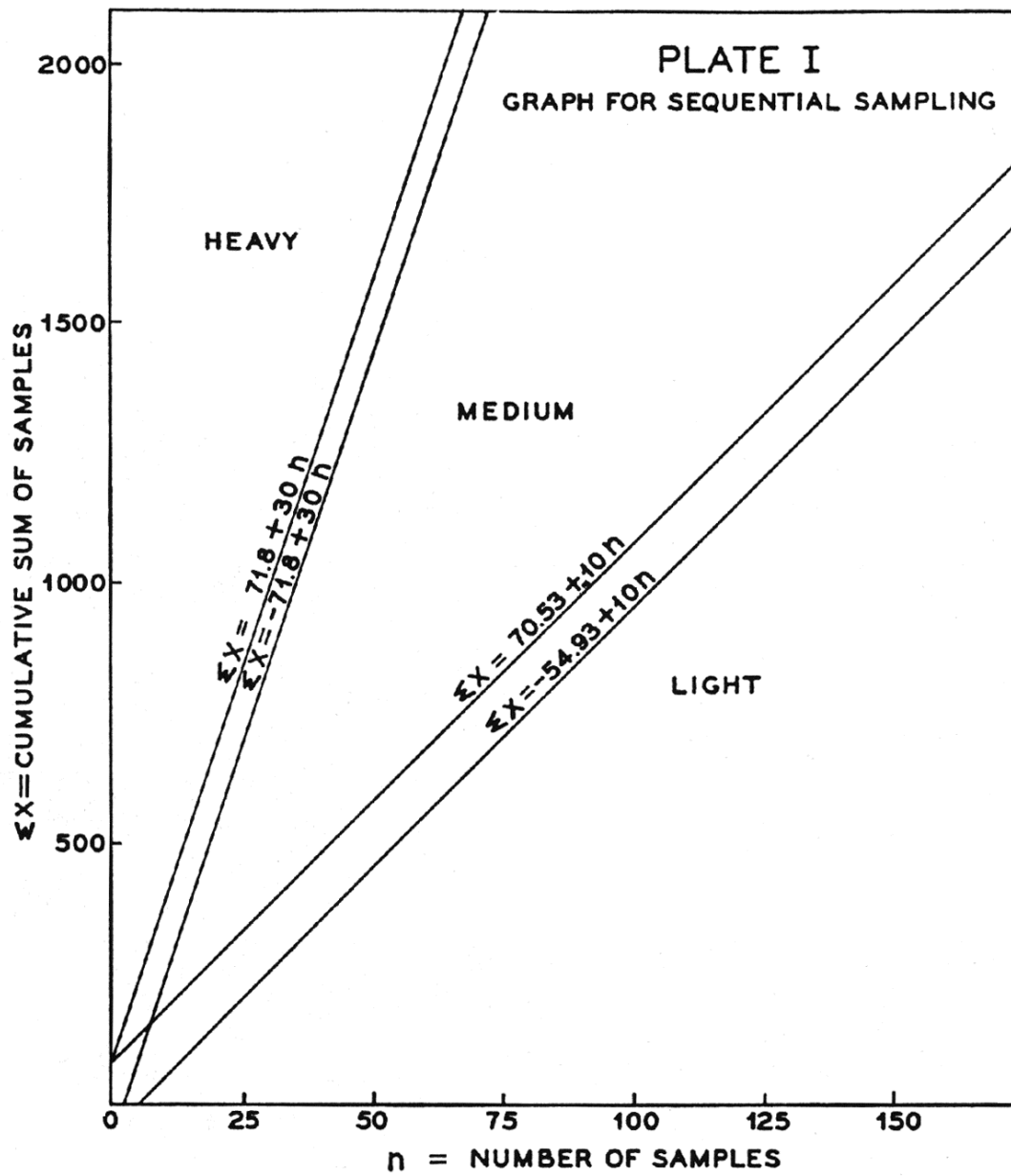


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