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## **Morphology and cytogenetics of leafy spurge**

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There is a wide range of taxonomic opinion as to the number of species which make up the leafy spurge group (*Euphorbia esula* and its allies). The species concept in this group is discussed from a historical perspective. Field and greenhouse observations on morphological variation are discussed. Cytological observations indicate that most of the material examined was  $2n = 60$  (*esula* type) or  $2n = 40$  (*cyparissias* type). One narrow-leaved population from lower Austria had  $n = 23$  and two lagging chromosomes. Some material from eastern Ontario also exhibited laggards. The most abnormal population was from Willow Creek, Teton Co. ( $n = 30$ ) which exhibited a high proportion of multivalent formation. A survey of pollen stainability from herbarium sheets in the Department of Agriculture herbarium indicated that stainability was high.

Thirty crosses have been carried out involving *E. esula* (broad-leaved), *E. esula* (narrow-leaved), and *E. cyparissias*. Capsule development appears normal. Meiosis in the  $F_1$ 's will be analyzed.