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## **Comparison of restriction fragment length polymorphisms in the chloroplast DNA of five leafy spurge accessions**

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Chloroplast DNA (cpDNA) restriction fragment length polymorphisms (RFLPs) were analyzed to assess genetic variation and relatedness among selected individuals representing North America and Eurasian leafy spurge. Leafy spurge accessions from Nebraska, Montana, Russia, Italy, and Austria were evaluated. Total DNA was extracted from young leaves and digested with the restriction endonuclease, Eco RI. CpDNA fragment patterns were determined by Southern blot analysis using mung bean (*Vigna radiata*. L.) cpDNA probes. Colinearity between the mung bean and leafy spurge chloroplast genomes was indicated by the observation that common overlapping fragments were hybridized by pairs of adjacent probes. Estimates of chloroplast genome size for the five leafy spurge accessions, which ranged from 130 to 132 kb, were within the size range of most terrestrial plants. Structural colinearity and reasonable estimates of chloroplast genome size provided evidence that the mung bean cpDNA library was suitable for characterizing leafy spurge cpDNA. Eight of the 13 mung bean probes hybridized to polymorphic leafy spurge cpDNA fragments. Based on number of polymorphisms unique to each Eurasian accession, the Austrian accession appeared to be most divergent followed by the Italian and Russian. The North American accessions seem to be most closely related to each other and to the Russian leafy spurge accession.