Some cytomorphological evidence for synthesis of interspecific hybrids between *Brassica juncea* and autotetraploid *B. fruticulosa*.

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Abstract : Four successful interspecific hybrid plants were obtained through sexual hybridization between *Brassica juncea* cv. Rohini, Laxmi, and Varuna (2*n*=4*x*=36, AABB), and an autotetraploid *B. fruticulosa* (2*n*=4*x*=32, FFFF) induced by colchicine using the latter as a pollen parent. Morphological and cytological analyses were carried out to confirm the hybrid nature of F_1 plants. The F_1 plants (2*n*=34) were intermediate for most of the morphological attributes. Although, the F1s showed poor pollen fertility, nevertheless, few seeds were obtained from open pollination. Meiotic analysis of F_1 plants showed a predominance of univalents, a typical feature of hybrids. The occurrence of bivalents, trivalent, and quadrivalent in PMCs of the F_1s indicated homeologous pairing among the three genomes. The study suggests that *B. fruticulosa* has partial genome homeology with *B. juncea* which could be exploited in crop improvement programmes, particularly breeding for biotic stress especially, tolerance/resistance to the mustard aphid.

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