5. G bands in haploid maize.

Haploid seeds were germinated and actively growing root tips were excised and pretreated in .05% colchicine for four hours. The root tips were then fixed in aceto-alcohol fixative for 18-24 hours and stored in 70% ethanol at 0°C until use. A modification of Sumner's technique for human chromosomes was applied. When the prometaphase and metaphase chromosomes were studied, it was found that the long arm of chromosome 7, the terminal region of the short arm of chromosome 9 and the short arm of chromosome 6 had strikingly prominent bands. In addition, less intense bands were visible along the lengths of different chromosomes. Chromosome 1 had three bands, one of which appeared at the proximal end of the long arm and the others in the middle of each of the two arms. Chromosome 2 had bands on both sides of the centromere. The preparation of a complete karyotype is currently in progress.

Parallel with this treatment, the aceto-carmine squash technique was also employed. The darkly staining G bands on chromosomes 7 and 9 were found to occupy regular knob positions. The G band on the short arm of chromosome 6 was in the nucleolar organizer region. The other G bands were not shown by this technique.

Since the Giemsa technique brings out more bands than the common aceto-carmine squash technique, new knowledge of the relationship among different varieties of maize may be gained as more studies are carried out.

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1. Collapsed endosperm-1 (cp_1) location.

An endosperm mutant linked to gl_1 was previously described under the symbol cl (M.G.C.N.L. 40: 77-78, 1966). In a further report (M.G.C.N.L. 44: 93, 1970) the mutant symbol has been modified from cl