1. Monoploid maize meiosis. Monoploid meiosis was studied in some fifty plants obtained from Dr. S. S. Chase. Details of irregularities were noted in relation to chiasma-formation, bivalents, homologous vs. nonhomologous pairing, pachytene configurations, secondary association, and irregular spores. Zygotene and pachytene strands were observed to be double. Foldbacks and pairing between two non-homologous chromosomes were noted and discussed. Bridges, fragments, bivalents and chiasmata were also noted and discussed.