

Abstract

The inhibition of germination by leaf canopies was investigated in *Bidens pilosa*, a widespread tropical colonizing weed species. Seeds of this species were sown in the shade of four natural vegetation types: early colonizing stage of an old field succession, a later stage of the same sere, short grass, and long grass. There were four control treatments: full sunlight on open soil, banana-leaf shade, 'neutral' shade under white paper, and darkness. Since the temperature regimes under the canopies differed, the effect of temperature on the germination of the seeds was investigated. The results show that the leaf canopies of the vegetation types investigated are markedly effective in inhibiting germination of this species in the field. Inhibition by unfavourable temperatures could have been only a contributory factor. It is suggested that seed sensitivity to leaf canopy shade may be of importance in effecting changes in species composition in early successional stages, and in excluding open-habitat species from closed vegetation generally.