

Importance of the soil seed bank of disturbed sites in Chilean matorral in early secondary succession

Jiménez, Héctor E.

Armesto, Juan J.

Abstract. The dynamics of the seed bank may provide clues to the process of recovery of the vegetation of disturbed sites. The role of the seed bank may be more important in areas with a seasonal climate than in areas where seedling recruitment is not limited to one season. We studied the seed bank and the seed rain in three sites of the Chilean mediterranean climate region (33° 48'S) which differed in the degree of anthropic disturbance: a closed canopy, second-growth forest; an open matorral; and an old-field. Additionally, we tested the germination of seeds from the soil and from the current-year seed crop. The seed bank varied considerably between the two years of study, although no change in the vegetation could be observed. Seed density and species richness were lower in 1989 than in 1988. The seed bank of the second-growth forest changed less between years, while the old-field showed the largest change. The highest seed rain occurred under shrub patches in the open matorral, whi