Centarurea solstitialis and the Water Balance Research

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Centaurea solstitialis is altering the water balance of California's ecosystems. Soil samples were obtained under invaded grassland, pristine grassland, native summer-persistent annuals, and a common garden of native perennial grasses. Soil moisture was analyzed using then-nocouple psychrometers and on a volumetric basis. Centaurea dried both shallow and deep soils to approximately the same extent as the native species. In contrast, early-season annuals generally do not extract soil moisture below 75 cm. The difference in residual soil moisture availability between stands of Centaurea and stands of the early-season annuals has important ecosystem consequences.