Pastoral Livestock Facilitate Dispersal of *Prosopis Juliflora* in an Ethiopian Wildlife Reserve

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Prosopis juliflora is an important invasive species affecting rangelands worldwide. Work was conducted to determine patterns of dispersal, establishment, and ecological effects of *Prosopis* in and around the Allideghi Wildlife Reserve (AWR), which contains vital grassland for conservation of the endangered Grevy's zebra in the Rift Valley. The AWR is managed on a multiple-use basis that includes wildlife conservation and pastoral livestock production. Afar pastoralists have settled in the AWR as traditional grazing lands have been lost. Data collection included use of 10 driving transects and analysis of satellite images for vegetation mapping, seed bank assessments, and plot studies to characterize influences of *Prosopis* on herbaceous plants. Interviews and focus groups with local people documented *Prosopis* dispersal history and current prospects for control. *Prosopis* was introduced by expatriates in the 1970s as a shade tree in cotton plantations and later planted in degraded rangelands during government programs. Livestock fed on the pods and dispersed seeds across local landscapes; a 10% increase in tree cover due to *Prosopis* between 1973 and 2005 has been estimated from remotely sensed data across the entire district. Establishment of *Prosopis* at the AWR follows pastoral settlements and livestock activity. Over half of the AWR grassland is now at risk of *Prosopis* invasion. The conversion of the grassland to a woodland monoculture is probable because *Prosopis* dramatically reduces understory herbaceous cover and plant species richness. Recent attempts to control *Prosopis* have limited prospects for success. Changes in policy and government commitment are required for effective intervention.

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