Discussion of broom impacts

One of our main interests in understanding impacts of broom is in having the information needed to support decisions as to whether to, or how much, we should invest in efforts to manage it. In site-based settings, private industrial foresters clearly believe that control is necessary, although the documented amount of their annual investment in such control is modest. Federal land managers are also investing in site-specific control in conservation efforts other than for forest regeneration, and we can observe other examples of site-based attempts at controlling broom. Coordination of large-scale management of broom is, however, lacking. Individuals and organizations make local decisions on broom control, but rarely do they cooperate on management projects even though there is consensus that problems associated with its spread are increasing.

While there is evidence that there is justification for a coordinated project targeting broom, one deterrent is that, in relation to other issues and problems, broom is not a priority with most landowners and managers. Even limiting discussion simply to weed issues, broom would not have highest priority, as other species, particularly European blackberries (*Rubus* spp.), generate more interest and concern.

The one opportunity for coordinated efforts directed at broom control that seems practicable at the present time is biological control. Throughout western North America, successful control of tansy ragwort has put biological control in favour, and there is general support for organizing and sustaining a biological control project aimed at broom. Both public and private interests have supported research to date through modest contributions to a control fund, and prospects for continued support are encouraging.

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Status of broom in New Zealand

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Summary

Broom (*Cytisus scoparius* (L.) Link) is the only broom species that is a declared noxious weed in New Zealand. It was first recorded in the wild in 1872 and is now widespread and abundant on a range of soils (esp. of alluvial or colluvial origin), particularly the drier eastern side of the South Island and in central North Island. The range expansion of broom has been most dramatic over the last 50 years, but it continues to invade new areas. Broom grows more vigorously in many parts of New Zealand than in its native range, obtaining a greater maximum age and a larger size. It occupies open habitats, from sea level to 1200 m, invading native tussock grassland, introduced pasture, riverbed and wasteland throughout productive and conservation areas. Broom causes economic losses to agricultural and forestry operations, and detracts from conservation values. Establishment costs of exotic pine forests are increased by the need to clear broom from plantation sites, and reinvasion by the weed reduces the rate of pine growth. Broom is a serious invader of pastoral land, particularly in drier hill country areas, where substantial losses to agricultural production may result. In the South Island it has been estimated to occupy 0.92% of farmable land. In some situations grazing management can contain broom, and where further control is necessary, herbicides, although expensive are effective. Cutting and burning have also been recommended in certain situations. Habitat of nesting native birds on open riverbeds is threatened when broom and other scrub species invade and provide cover for predators. On the positive side, broom is regarded as a useful pollen source by New Zealand beekeepers. In some environments it can play a role in encouraging succession to native bush, and in some areas it may provide an important spring food source for the native pigeon. However, its negative environmental effects are much greater than its positive effects, and a recent update of the cost-benefit analysis for biological control of broom in New Zealand showed a clear net benefit from its control.