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Ecology and management of subtropical invasive asparagus (*Asparagus africanus* Lam. and *A. aethiopicus* L.)

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Abstract
Two *Asparagus* species invasive in subtropical Australia are basket asparagus (*Asparagus aethiopicus* L.) and the orange-fruited, climbing asparagus (*A. africanus* Lam.). In Queensland, both species are Declared Class 3 Pest Plants under the *Land Protection (Pest and Stock Route Management) Act 2002*. This legislation prevents sale of the species and requires that landholders take responsibility for their control. Based upon invasiveness and frequency scores, both species are considered serious environmental weeds in south-east Queensland, with *A. africanus* ranked sixth and *A. aethiopicus* ranked 23rd of 200 environmental weed species (Batianoff and Butler 2002). Both species were introduced for ornamental purposes, with later naturalization and spread following dumping of garden waste, and seed dispersal by native birds.

Asparagus aethiopicus was introduced to Australia late in the nineteenth century and is still commonly grown in gardens as a ground cover and in outdoor hanging baskets. The species has a broad tolerance of environmental conditions and invades exposed headlands, woodlands, rainforests, frontal dunes, coastal heath, and sandy coastal fringes in south-east Queensland and coastal New South Wales. Frequently the species produces a dense mass of underground rhizomes and tubers and dense foliage, suppressing native plant species.

Asparagus africanus has been reported as naturalized in areas west of Ipswich since the 1940s. It is now distributed from Rockhampton to Lismore, New South Wales, and grows prolifically in remnant, semi-evergreen, vine thicket and brigalow forest communities, wetter eucalypt communities and moist gullies. It frequently climbs and covers native vegetation, reducing tree health and forming a dense ground cover that suppresses recruitment of native species. We present an overview of both species, including some aspects of recent research into their dispersal and seed bank ecology, and the outcomes of recent management trials in south-east Queensland.

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