

Community Conservation of the Far Eastern Curlew

Shorebird Habitat Restoration – Weed Removal

Each year migratory shorebirds make their way to the coastlines, estuaries, and inland wetlands of Australia, travelling huge distances along the East Asian Australasian Flyway. Migratory shorebirds, including the Eastern Curlew, arrive in Australia between September to April where they come to feed in preparation for their return to breeding grounds in the far northern hemisphere. Unfortunately, shorebird numbers are in decline due to loss of important habitat, in particular feeding and roosting grounds associated with estuaries and coastal wetlands.



Shorebird Habitat Requirements

Shorebirds require separate habitats for roosting and foraging. They are known to use sheltered beaches and saltmarsh in estuaries as roosts when the tide is too high for foraging. Lower on the shoreline they use tidal flats for foraging, including sand/mud flats and low saltmarsh. In both cases shorebirds require an open line-of-sight so that they can scan the environment for predators.

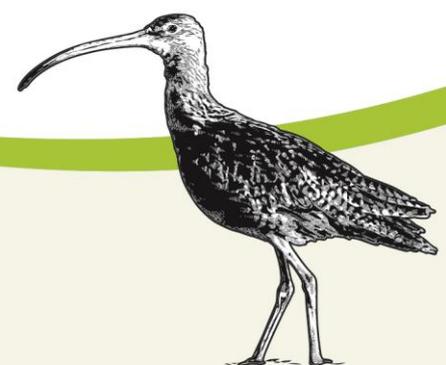
Impact of Weeds

One of the major factors impacting important shorebird habitat is weed invasion. There are three main culprits, which have been the focus of control efforts as part of the Community Conservation of the Far Eastern Curlew Project, these being Sharp Rush, Bitou Bush, and Groundsel Bush. These weeds dominate and modify shorebird habitat by excluding beneficial native vegetation, in particular saltmarsh species, and interfering with open lines of sight making shorebirds vulnerable to predators.

Sharp Rush (*Juncus acutus*)



Juncus acutus invades low-lying areas forming an impenetrable spiky ground layer impacting available roosting and foraging area, particularly within saltmarsh and mudflat habitat.



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Bitou Bush (*Chrysanthemoides monilifera*)



Bitou Bush creates tall dense thickets on coastal sands, excluding native groundcovers and reducing shorebird sight lines.

Groundsel Bush (*Baccharis halimifolia*)



Groundsel Bush invades low-lying areas, particularly in saltmarsh and wetlands, forming tall dense thickets excluding native groundcovers and reducing shorebird sight lines. Spreads via production of huge amounts of wind blown seed during autumn.

Control Methods

Best practice control techniques should be used to manage weeds within shorebird habitat. Local conditions and appropriate timing for control need to be considered when determining the most suitable treatment, and to minimise the risk of off-target impacts and disturbance to shorebirds. The following are some tips and suggestions for effective control of priority weeds in shorebird habitat.

- When applying chemicals in wetlands environments, only use products registered for use in aquatic environments (i.e. Round-up Biactive, Weedmaster Duo).
- Chemical treatment of Bitou Bush is most effective during Winter.
- Groundsel treatment should be undertaken between Winter and Summer, prior to seed dispersal in Autumn.
- Treatment trials have shown the most effective chemical application rate for *Juncus acutus* is 2% solution of Glyphosate 360.

Risk Management

- Obtain written approval from land manager to undertake works
- Use experienced operators/bush regenerators to undertake chemical spraying
- Only apply chemicals in accordance with label directions, state regulations, and relevant permits
- Ensure correct plant ID and supervision of volunteers when undertaking weed management
- Work from May – September when most shorebirds are in their Northern Hemisphere breeding grounds

Further Information

<https://conservationvolunteers.com.au/news/2017/03/restoring-shorebird-habitat-in-the-hunter-wetlands/>

http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0018/304344/Groundsel-bush.pdf

<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Pests-and-weeds/bitou-bush-management-manual-080465.pdf>