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Celtis: identification and control

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INTRODUCTION

Celtis, *Celtis sinensis*, also known as Chinese Celtis or Hackberry is an invasive tree growing up to 20 m tall. It is a native of China, Japan and Korea and was introduced into Australia as an ornamental and shade tree.

Celtis has become a major environmental weed in south east Queensland, expanding rapidly over recent years into major infestations along riparian zones in the Sunshine Coast hinterland and the Ipswich area. In north east NSW significant but controllable infestations occur in and near a number of urban areas. Old ornamental plantings act as a seed source, particularly around Kyogle where it was planted as an ornamental and shade tree some 50 years ago.

To address the potential problem in northern NSW, Celtis is now declared a W2 noxious weed.

DESCRIPTION

Celtis is a large tree, with a spreading, moderately dense crown. It has a smooth, mottled grey bark, with alternate, elliptical shaped leaves that are 4–7 cm long. The leaf margins are finely serrated in the upper half.

In northern NSW it is deciduous or semi deciduous in late winter and the dry early spring period.

Celtis produces thousands of fleshy fruits that are approximately 7–8 mm in diameter. The fruits turn reddish brown to orange when ripe in autumn and early winter. Celtis fruits during the same period as Camphor laurels and similar birds feed on both species. Observations in Brisbane indicate that flying foxes and possums may also assist its spread.

Celtis is reported to grow in a wide range of soils. Current infestations are largely in riparian zones in areas originally supporting subtropical and dry rainforests.

Celtis infestations initially develop in disturbed areas of riparian vegetation and in previously cleared and regenerating riparian zones. Such regenerating riparian areas, many infested with Camphor Laurel and Privet, are widespread along the NSW north coast.

DISTRIBUTION

Populations of Celtis have become established in northern areas of NSW, mainly the far north coast and parts of the mid north coast, where ornamental and shade trees have existed for many years. Most of these plantings are in urban areas in both private gardens and public areas. Significant but controllable Celtis infestations occur in bushland in and near Lismore, near Kyogle and in Coffs Harbour, along Coffs Creek. It has also been found growing along the Manning River, at Taree. Bush regenerators on Bellingen Island control seedlings spreading from several large trees in a nearby park.

Celtis growing as a mature street tree

The demonstrated ability of Celtis in south east Queensland to spread rapidly makes its control in north east NSW a high priority. Camphor laurel control activities are increasing in northern NSW. The failure to control Celtis infestations at the same time may lead to it partially or totally replacing Camphor Laurel in some areas.

WHY IS IT A PROBLEM?

Celtis is an invasive environmental weed and a potential weed of agriculture.

Compared to south east Queensland where it is quite widespread, northern NSW is still in a position to successfully control the existing limited infestations. To do this, coordinated control must begin now while the opportunity still exists.

ENVIRONMENTAL WEED

Invasive trees such as Celtis, are among the most damaging species to the natural ecosystem, as a result of their ability to become structurally dominant. Celtis is a serious potential environmental weed, which is recognised and listed as such by numerous bush regeneration, Council and NPWS groups. It rapidly colonises disturbed bushland and can form dense thickets and dominate riparian vegetation. It out-competes and replaces native shrubs and trees. It prefers moist riparian areas, but has been found growing in a range of habitats. It is a high priority tree for control and should not be planted.

SPREAD

Celtis seeds are spread by birds feeding on its fruit in autumn and early winter. Some of the same species of birds, also feed during the same period on fruit of Camphor Laurel. This may significantly enhance the dispersal of Celtis throughout the disturbed, regenerating riparian zones. Celtis has also been promoted and planted as a shade and street tree, which has certainly assisted its spread over the years. Hopefully its promotion as a useful tree has ceased due to the greater awareness of its weed potential.

DECLARATION

To prevent Celtis naturalising and becoming a serious weed in NSW it has been declared a W2 noxious weed. A W2 noxious weed must be fully and continuously suppressed and destroyed. The responsibility for control of noxious weeds on private lands rests with the occupier of the land. Failure to control noxious weeds can result in a notice being served; a fine and/ or your local Council may enter your land and eradicate plants; charging costs to the landholder.

Declaration of the plant will enable implementation of a coordinated control program. Declaration raises the profile of the weed species and will gain greater cooperation from Local Government, State agencies, community groups and landowners to undertake control.

CONTROL

The first step in a control program is to assess the weed problem and situation. You may need to consider, depending on the situation; revegetation with native species, control of other weed species that may be present (e.g. Privet, Camphor Laurel) and follow up maintenance and treatment of the site.

Manual Control

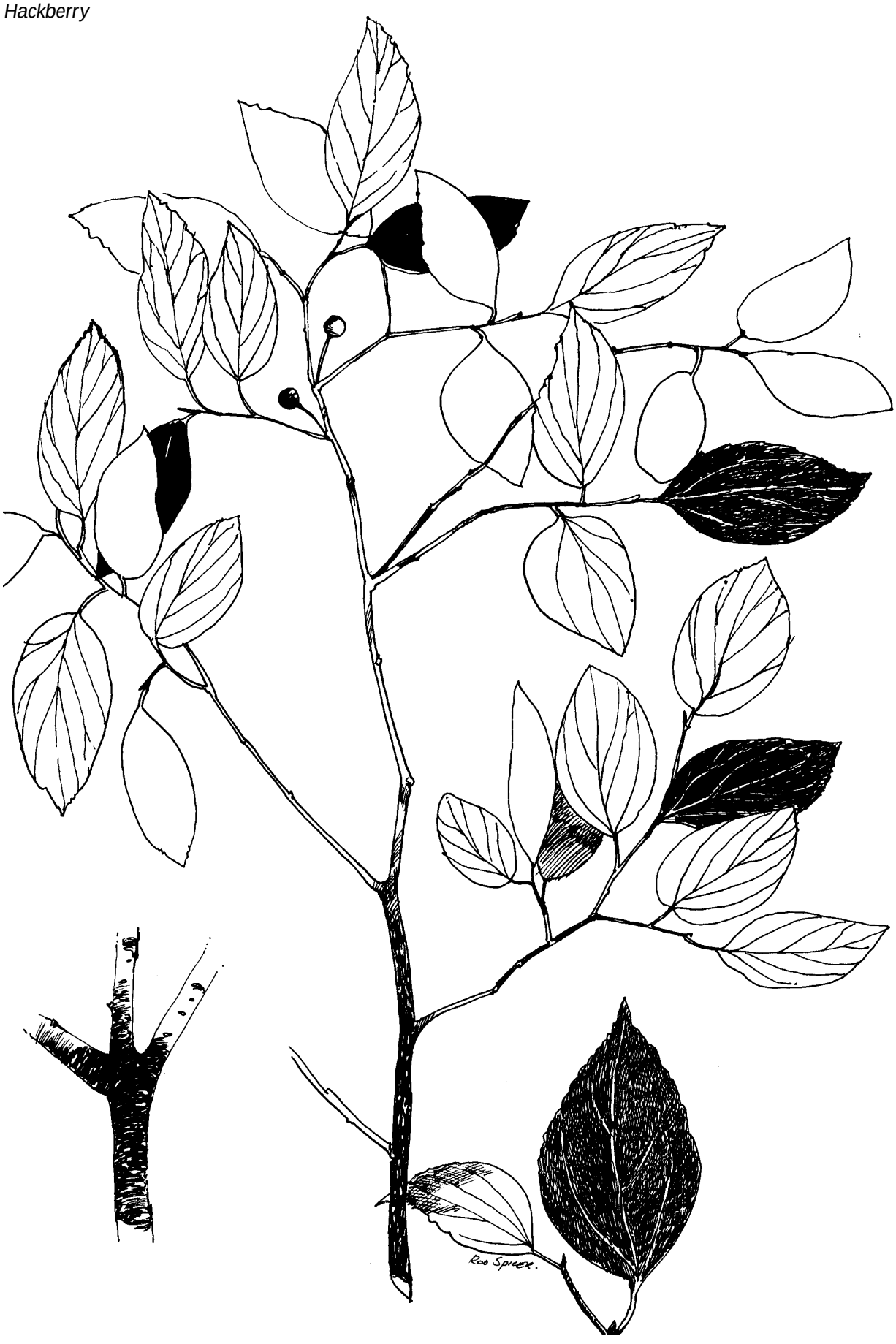
Manual removal of isolated small seedlings can be attempted by hand pulling or digging them up. This is only practical for a small number of plants. Large trees may also be cut down and the stump dug up and removed. Care should be taken to avoid moving fruit when manually controlling mature trees.

Herbicide Control

Herbicide control is effective using the cut stump or stem injection techniques. The method used depends on the site situation, tree size, access and personal preferences. Currently in NSW there are no registered herbicides for Celtis control. However there is a pesticide permit from the National Registration Authority that allows for herbicide control.

Celtis seedling. Photo: Ian Turnbull

Celtis sinensis, also known as Chinese Celtis or Hackberry



Celtis leaf and branch structure. Photo: QLD Dept of Natural Resources and Mines

Please read the relevant permit before treatment and consult *NSW Agriculture's Noxious and Environmental Weed Control Handbook* for further information.

FURTHER INFORMATION

For further information contact your local council Weeds Officer or your nearest office of NSW Agriculture

ACKNOWLEDGMENTS

The author acknowledges the following sources:

Csurhes,S. and Edwards, R. (1998) Potential Environmental Weeds in Australia. National Weeds Program.

Ross, J. (2001) Celtis Regional Weed Control Plan – North Coast of NSW. North Coast Weeds Advisory Committee.

Rod Spicer, Greater Taree City Council for the line drawings of Celtis.

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