



Shale-Gravel Transition Forest



NPWS/M. Cufer 2001

Conservation Status

Shale-Gravel Transition Forest is listed as an endangered ecological community under the *Threatened Species Conservation Act 1995*.

Description

Shale-Gravel Transition Forest is an open forest community. Its canopy is dominated by broad-leaved ironbark (*Eucalyptus fibrosa*). Other canopy trees include grey box (*E. moluccana*) and forest red gum (*E. tereticornis*), which occur less frequently.

Paperbark (*Melaleuca decora*) is common in the small tree layer. The composition of the shrub and understorey varies with the influence of shale or gravel, and often includes blackthorn (*Bursaria spinosa*), *Daviesia ulicifolia*, and peach heath (*Lissanthe strigosa*). Understorey grasses and herbs include kangaroo grass (*Themeda australis*), weeping meadow grass (*Microlaena stipoides* var *stipoides*), whiteroot (*Pratia purpurascens*) and Australian bluebell (*Wahlenbergia gracilis*).

Distribution

Shale-Gravel Transition Forest mainly occurs in the northern section of the Cumberland Plain in the Richmond, Marsden Park and Windsor districts.

In the east, Shale-Gravel Transition Forest appears in the Liverpool/Holsworthy area, and there are small occurrences at Bankstown,

Yennora and Villawood. Isolated remnants occur in the Wallacia/Kemps Creek area. The extent of the better condition remnants of Shale-Gravel Transition Forest is now reduced to 1,721 ha which is 31.7% of its original distribution, with a further 29% remaining as scattered trees (NPWS 2002a, NPWS 2002b). Shale-Gravel Transition Forest mainly occurs in the Liverpool, Penrith, Blacktown, Hawkesbury, Baulkham Hills, Fairfield, Auburn and Bankstown local government areas.

Examples to see

Good examples of Shale-Gravel Transition Forest can be seen at Windsor Downs Nature Reserve, Agnes Banks Nature Reserve, Castlereagh Nature Reserve and Scheyville National Park.

Ecology

Shale-Gravel Transition Forest is a transitional plant community, made up of species from both clay and poorer gravel (alluvial) soils. Gravel soils include ironstone and are the remnants of an ancient river system. Shale-Gravel Transition Forest occurs where these gravel deposits overlay shale soils. It grades into Cumberland Plain Woodland

where the influence of gravel soil declines. In areas where gravel deposits are thick, it grades into Cooks River/Castlereagh Ironbark Forest or Castlereagh Scribbly Gum Woodland.

The shrub understorey includes a number of listed threatened species in the 'pea' flower group, such as *Dillwynia tenuifolia*, *Pultenaea parviflora* and *Pultenaea pedunculata*. The plants in this group rely on nitrogen fixing root nodules and soil/root fungi to extract nutrients from the poor soils. There are periodic fires in Shale-Gravel Transition Forest and most species are able to regenerate from lignotubers and buds beneath the bark, as well as seed stored in the soil.

Threats

A major threat to Shale-Gravel Transition Forest is clearing for agriculture and rural/urban development. Other threats are mining for gravel, and weeds.

Recovery and management

The recovery of this ecological community is being addressed as part of the Cumberland Plain Endangered Ecological Communities Recovery Plan which is currently being drafted.

High conservation value Shale-Gravel Transition Forest remnants will be identified in the recovery plan and recommended for protection through a range of mechanisms including reservation, environmental protection zoning and development control processes. Other protection measures can be through plans of management and voluntary conservation agreements. These measures will enable the remnants to be better managed for conservation and vegetation corridors to be formed. All vegetation layers should be maintained as the removal of the understorey followed by slashing/mowing encourages weeds. Strategies to control weeds along disturbed margins should be implemented and, where possible, natural bushfire cycles be allowed to maintain species diversity.

For further information contact

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References

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NPWS (2002b) Interpretation Guidelines for the Native Vegetation Maps of the Cumberland Plain, Western Sydney, Final Edition, NPWS, Sydney.

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