40% of Rocky Outcrop Shrubland / Herbland mosaic have been cleared.

Rocky Outcrop Shrubland / Herbland Mosaic
Threatened in the Goulburn Broken Catchment

Figure 1. An example of Rocky Outcrop Shrubland / Herbland mosaic in healthy condition.

Figure 2. An example of Rocky Outcrop Shrubland / Herbland mosaic in healthy condition.

Figure 3. An example of Rocky Outcrop Shrubland / Herbland mosaic in healthy condition.
Rocky Outcrop Shrubland / Herbland Mosaic

Description
Rocky Outcrop Shrubland / Herbland mosaic occurs on sites of exposed sheets of rock with no soil and low moisture availability (except in the cracks between rock surfaces).

Vegetation comprises a dense and diverse low shrub layer (particularly in sites with minimal exposed rock) comprising of Common Fringe-myrtle, Daphne Heath, Nodding Blue-lily and Varnish Wattle and occasional eucalypts (usually Blakely’s Red Gum).

There is also a sparse cover of Green Rock Fern, Rock Isotome (a key feature), Common Centaury, Creeping Cudweed, Austral Cranesbill, Common Raspwort, Small St. John’s Wort and Spoon Cudweed. There is usually a high moss and lichen (briophyte) cover on the rock.

Species To Look Out For
Flora: Dookie Daisy (v), Hairy Hop-bush (r), Spur-wing Wattle (r) (in east of catchment), Crimson Spider-orchid (Ve), Yellow Hyacinth-orchid (e) and Grey Rice-flower (v).
Fauna: Powerful Owl (v), Bandy Bandy (n), Carpet Python (e) (Warby Ranges and Mt. Meg) and Turquoise Parrot (n) (Warby Ranges and Mt. Meg).

Why Rocky Outcrop Shrubland / Herblands are Threatened
More than 40% of Rocky Outcrop Shrubland / Herbland Mosaics in the Goulburn Broken Catchment have disappeared since European settlement. Many of the plants and animals that rely on this habitat are now also threatened, and some are extinct. Over 27% of this remains on private land. Therefore, the support of private landholders is essential for the ongoing conservation of Rocky Outcrop Shrubland / Herbland Mosaic.

Current threats include, isolation (restricted movement of fauna, difficult to maintain healthy gene pool), lack of native understorey and ground layer (which attracts insect eating birds helping keep the overstorey healthy, and improve soil health through fixing nitrogen), lack of natural regeneration, soil disturbance (eg. ploughing and pugging, favouring weed species), weed invasion, pest animals and loss of tree and ground habitat (through timber harvesting, tidying-up of fallen timber and firewood collection).
**Rocky Outcrop Shrubland / Herbland Mosaic**

Threatened in the Goulburn Broken Catchment

**Management Tips**

- Install nest boxes in surrounding woodland
- Leave fallen timber and loose rocks for reptiles and other fauna
- Revegetate around remnants to buffer from pasture and link to other remnants
- Restore native understorey by replanting in crevices
- Encourage natural regeneration by controlling rabbits and removing stock

**Figure 11.** An example of a degraded Rocky Outcrop Shrubland / Herbland. Exotic perennials dominate the crevices between the rocks.

*May require expert input in decision making and planning. See your local DSE or CMA representative for further advice.*

- No grazing
- Weed control - develop an action plan.
  - Spot spray or use species specific herbicide to prevent seed set of target weeds.
  - Crash grazing while weeds are in flower (before seed-set) over successive years can help control annual and perennial weeds.
  - Mosaic or patch burning weedy, open areas in autumn (may be too risky at other times), could be an option.
  - Soon after fire spot spray weedy grasses with a grass-specific herbicide, avoiding native grasses.

**Figure 12.** Another example of Rocky Outcrop Shrubland / Herbland Mosaic in degraded condition

*May require expert input in decision making and planning. See your local DSE or CMA representative for further advice.*
Conservation Status

Rocky Outcrop Shrubland / Herbland Mosaic is threatened in the Goulburn Broken Catchment:
Central Victorian Uplands bioregion: Least Concern
Northern Inland Slopes bioregion: Vulnerable
Highlands - Northern Fall bioregion: Rare
Victorian Alps bioregion: Rare

References:
Berwick, S. (unpublished) Pre-1750 EVC mapping, Goulburn Broken CMA, Department of Natural Resources and Environment, Benalla
Department of Sustainability and Environment (2004) EVC Bioregional Conservation Status Table, a support document to: Department of Natural Resources and Environment (2002) Victoria’s Native Vegetation Management - A Framework for Action Support Data, NRE.

Acknowledgments:
This project was a partnership between the Goulburn Broken Catchment Management Authority and Department of Sustainability and Environment, and funded by NAP: Australian Governments and local communities working together to prevent, repair and manage rising salinity and declining water quality across Australia. Thanks to comments from Alison Oates, Biodiversity & Natural Resource Division, DSE and Glen Johnson, Water and Biodiversity Team, North East DSE; Jenni Nunan, GIS team, DSE, Benalla for producing the maps; for feedback and comments from the Biodiversity Team in the Goulburn Broken and NorthEast, DSE; the DPI LINKS officers and CMOs, the GBCMA waterways and vegetation officers and to all who contributed photographs and support.

Compiled by: Mary Titcumb, Department of Sustainability and Environment
For further information about this publication, contact:
Department of Sustainability and Environment or Goulburn Broken Catchment Management Authority
Benalla (03) 5761 1611
© The State of Victoria, Department of Sustainability and Environment, May 2005.
ISBN 1-920742-11-5
Disclaimer
This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.