



Epacris purpurascens var. *purpurascens*

The following information is provided to assist authors of species impact statements, development and activity proponents, and determining and consent authorities, who are required to prepare or review assessments of likely impacts on threatened species pursuant to the provisions of the *Environmental Planning and Assessment Act 1979*. These guidelines should be read in conjunction with the NPWS *Information Circular No. 2: Threatened Species Assessment under the EP&A Act: The '8 Part Test' of Significance* (November 1996) and with the accompanying "Threatened Species Information" sheet.

Survey

Epacris purpurascens var. *purpurascens* is best surveyed during the peak flowering period (July to September, Harden 1992) when it is easiest to identify, as non-flowering plants may easily be overlooked. This species has been confused in some surveys with *Woolsia pungens* and *Sprengelia incarnata* (ESP 1999). *Epacris* spp. have corolla lobes which are imbricate in bud whereas in *Woolsia pungens* the corolla lobes are contorted in bud. *Sprengelia incarnata* has large sheathing leaves relative to the small non sheathing leaves of *Epacris* spp.

E. purpurascens var. *purpurascens* may also be confused with *E. pulchella* which has smaller leaves, flowers and seed pods.

Initially, surveys should concentrate in relatively open areas. This should include drainage lines or depressions, skeletal soil areas such as sandstone outcroppings and areas possessing indurated laterite gravels or rock fragments. Populations of *E. purpurascens* var. *purpurascens* may occur locally as the dominant shrub with numbers exceeding 15,000 (Miller pers.

comm.), as localised small groupings, or be of high numbers/low frequency - the population being scattered over a wide area.

Life cycle of the species

Proposals which are likely to affect the life cycle of the species, such that a local population is put at risk of extinction, would include proposals that:

- result in total destruction of habitat;
- result in a partial destruction or modification (including changes to hydrology and nutrification of the soil substrate) of the habitat or the vegetation structure which may result in dense monospecific regrowth of large shrubs, trees or invasion of alien species;
- result in a requirement for frequent fire hazard reduction, so that the seedbank cannot be adequately replenished;
- increase vehicular, bike or pedestrian access to a population; or
- increase rubbish dumping and associated weed invasion or arson (for example, through adjacent residential development).

Threatening processes

"High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition" is listed in the NSW Threatened Species Conservation Act 1995 as a key threatening process. *E. purpurascens* var. *purpurascens* is fire sensitive and is therefore vulnerable to high frequency fires.

Clearing of native vegetation is listed as a key threatening process and is pertinent for the consideration of impact assessment for *E. purpurascens* var. *purpurascens*.

Other threatening processes currently affecting the species include, slashing, trampling and habitat modification, urban runoff, weeds, rubbish dumping, indiscriminant vehicular and pedestrian access.

Viable local population of the species

All populations should be considered viable unless proven otherwise ie. they consist of a few individuals in highly insecure, disturbed and weed impacted locales such as roadsides..

A significant area of habitat

All viable populations should be considered as occupying a significant area of habitat until such times as adequate and representative examples across the species range are conserved.

In metropolitan Sydney some population which could be considered non-viable may be important in maintaining genetic diversity and should be conserved, where possible, until such times that the species is adequately conserved

Isolation/fragmentation

The distance between groups of plants which creates isolation is unknown as pollinators are unknown. Wind and water dispersal of seed means that at least some interaction is likely over distances of up to 250m.

Regional distribution of the habitat

E. purpurascens var. *purpurascens* is restricted to the Sydney Basin Bio-region.

Limit of known distribution

E. purpurascens var. *purpurascens* has been recorded from Gosford in the north,

For Further Information contact

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References

Benson, D McDougall, L. (1995) Ecology of Sydney plant species Part 3. *Cunninghamia* 4(2):364.

Narrabeen in the east, Silverdale in the west and Avon Dam vicinity in the south.

Adequacy of representation in conservation reserves or other similar protected areas

E. purpurascens var. *purpurascens* is known from Brisbane Waters National Park, Ku-Ring-Gai Chase National Park and Berowra Valley Regional Park, and has been reported from Muogamarra Nature Reserve (ESP 1999). Unconfirmed records exist from Gulger Nature Reserve and Bents Basin State Recreation Area (NSW NPWS 1997). *E. purpurascens* var. *purpurascens* populations within these areas are either reported to be small or are undocumented.

Large populations exist in protected water supply catchment lands in the vicinity of the Picton Road. Although theoretically secure the species is not as yet afforded any specific management protocols and a number of populations have recently been impacted by utility service installation.

In Metropolitan Sydney a number of other sites are on Commonwealth, State and local government controlled lands where the intentions of the managers concerned remain unknown. Until protection of these populations is ensured, for example through the development of voluntary conservation agreements, this species must be considered inadequately conserved.

Critical habitat

Critical habitat cannot be declared for *E. purpurascens* var. *purpurascens* as it is not listed on Schedule 1 of the NSW *Threatened Species Conservation Act* 1995.

ESP Ecological Surveys & Planning P/L (1999) *Hornsby Shire Threatened Biota Conservation Plan*. Unpublished report.

Harden, G. H. (Ed.) (1992) *Flora of New South Wales Vol. 3*. UNSW Press, Kensington.

Miller, R. T. Cumberland Flora & Fauna Interpretive Services 13 Park Rd, Bulli, NSW 42846768

NSW NPWS (1997) *Urban Bushland Biodiversity Survey. Native Flora of Western Sydney*. NSW NPWS, Hurstville.

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