

Flora & Fauna Guarantee Action Statement

#6

This Action Statement was first published in 1991 and remains current. This version has been prepared for web publication. It retains the original text of the action statement, although contact information, the distribution map and the illustration may have been updated.

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Department of
Sustainability and
Environment, 2003

Published by the
Department
of Sustainability and
Environment, Victoria.
8 Nicholson Street,
East Melbourne,
Victoria 3002 Australia

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ISSN 1448-9902

Butterfly Community No.1



Butterfly Community No. 1
(Illustration by John Las Gourgues)

Description and Distribution

Butterfly Community No. 1 is an assemblage of flora and fauna characterised by the presence of a large number of significant, rare and extremely rare invertebrate species. It contains 20 species of butterflies, including the Large Ant-blue (*Acrodipsas brisbanensis* cyrilus Anderson and Spry 1897) and the Small Ant-blue (*Acrodipsas myrmecophila* Waterhouse and Lyell 1913), the Northern Dusky Blue (*Candalides hyacinthinus simplex* Tepper 1882), the Common Albatross (*Appias paulina* ega Boisduval 1836) and the Moonlight Blue (*Hypochrysops delicia* delos Waterhouse and Lyell 1914). It represents a unique co-occurrence of the Small Ant-blue and Large Ant-blue butterflies.

The main food plants on which these butterflies lay their eggs are tree lichens, rock lichens and fungi. An ant (*Iridomyrmex* sp. aff. *nitidus*) that has an interdependent relationship with the ant-blue butterflies, also feeds on the lichens and fungi.

The vegetation is a mosaic of open forest



Distribution in Victoria (SAC Database/DSE 2003)

and woodland. There is a mixed-age association of Broad-leaved Peppermint (*Eucalyptus dives*), Long-leaved Box (*Eucalyptus goniocalyx*), Red Stringybark (*Eucalyptus macrorhyncha*) and Messmate (*Eucalyptus obliqua*) with understorey shrubs and grasses.

The only known occurrence of this community is restricted to the immediate vicinity of Mt Piper, a steep and solitary mountain rising from 230 m to 456 m above an undulating plain between the Tallarook and Mt William ranges in central Victoria. The mountain is the most prominent feature of the area. It is a quartz plug or epithermal deposit of quartz and other minerals deposited by hot solutions. The quartz capping at the summit is localised. Mt Piper is surrounded by mostly cleared farm land. It thus forms an isolated refuge, or 'island', for a number of plant and animal species. The summit area of Mt Piper is an important habitat, especially as a breeding area, for eight butterfly species. Because of its suitable habitat and isolation from similar topographic features, Mt Piper is also a key

focus for the rare Genoveva Azure butterfly (*Ogyris genoveva araxes* Waterhouse and Lyell 1914), the Olane Azure butterfly (*Ogyris olane ocela* Waterhouse 1934) and *Theclinessthes miskini miskini* T.P. Lucas 1889. These species exhibit 'hill-topping' behaviour—that is, they are attracted to the top of the mountain—as part of their breeding behaviour.

Conservation Status

Current Status

Butterfly Community No.1 has received the Scientific Advisory Committee's preliminary recommendation for listing as a threatened community on Schedule 2 of the *Flora and Fauna Guarantee Act 1988*.

The Small Ant-blue and Large Ant-blue butterflies, which occur in this butterfly community, also have received preliminary recommendations for listing in Schedule 2.

Reasons for Conservation Status

Because of its restricted occurrence and current management, the community is significantly prone to future threats that are likely to result in extinction. Habitat disturbance has destroyed many food, breeding and shelter plants used by butterflies. Pests and domestic animals, the spread of introduced plants, visitors to the area, land clearing, fire, and the over-collection of significant species pose major threats to this unique community. At Mt Piper the summit is used as a triangulation (trig) station, and radio towers have been built. There has been a recent proposal to mine for gold at Mt Piper. Such mining would result in dust, vibration and vegetation clearance, and would seriously damage the community. The community is restricted to one small location; other previously known sites of the rare and uncommon butterflies of this community have been cleared and developed.

In its preliminary recommendations for listing in Schedule 2, the Scientific Advisory Committee determined that the community was:

- significantly prone to future threats that are likely to result in extinction; and
- very rare in terms of its distribution and recorded from only a few localities.

Major Conservation Objective

The major conservation objective is to prevent the extinction of this community. As the community is only known from Mt Piper, conservation efforts are concentrated in this area.

Management Issues

Ecological Issues Specific to the Community

The only known occurrence of the community, Mt Piper, is virtually an 'island' surrounded by largely cleared grazing land. A major part of the community is included within an Education Reserve for the Study of the Natural Environment established in 1980. The 55.7 ha reserve is

managed by the Department of Conservation and Environment. The lower slopes surrounding Mt Piper are privately owned. Freehold land also extends part of the way up the mountain on the eastern side. A narrow corridor of native vegetation on freehold land links habitat on Mt Piper with roadside vegetation to the north-west. Habitat management and fragmentation are important management issues.

There is an inter-dependency between the Small Ant-blue and Large Ant-blue butterflies and an ant, *Iridomyrmex* sp. aff. *nitidus*. The ant-blue butterfly eggs are laid on tree stumps or branches inhabited by the ant (Quick 1989), and when the eggs hatch, the larvae are tended by the ants in their nests.

In conducting fire management operations (prescribed burning and wildfire control), the habitat requirements and sensitivity of the flora and fauna in the butterfly community to fire needs to be considered. In particular, the persistence of the tree lichens, rock lichens and fungi, which are important food sources for both the butterfly larvae and the ant (Quick 1989), must be conserved; these lichens and fungi are easily destroyed by low-intensity fire.

The butterflies in this community at Mt Piper are vulnerable to over-collecting and habitat disturbance because the summit is very small, easily accessible and has a sparse vegetation cover.

Vegetation disturbance and clearing on adjoining private properties, especially on the mid-slope on the eastern side, would further reduce the available habitat of the community. Vegetation was cleared from the summit of Mt Piper when the trig station and radio communication facilities were installed by public authorities.

Trees are pruned and ground vegetation is disturbed regularly during maintenance of the facilities and access by Telecom and the Department of Property and Services, especially to maintain visibility between Mt Piper and other trig stations. The impact of people visiting the area, especially trampling vegetation and using campfires, vehicles, trail bikes and horses, could compromise the long-term conservation of some butterfly species by damaging food plants and habitat. Vehicles using the access tracks, and the numerous tracks formed by visitors walking to the summit, contribute to the dust problem that may affect the butterflies.

The composition and structure of the flora of the community are changing through the spread of introduced plants, particularly thistles and the South African Fireweed (*Senecio pterophorus*).

Grazing and ground disturbance caused by pest and domestic animals, particularly Goats (*Capra hircus*) and Rabbits (*Oryctolagus cuniculus*), severely affect plants used by insects for food, shelter and breeding. Illegal removal of timber for firewood destroys wildlife habitat at the site

Wider Conservation Implications

This community, so far as is known, does not occur outside Victoria. Conservation of this butterfly community at Mt Piper provides excellent educational opportunities, especially in relation to vegetation changes with altitude, aspect and soil types, geology, island biogeography, and butterfly ecology. It provides a unique opportunity to study the biology of the Small Ant-blue and Large Ant-blue butterflies.

Social and Economic Issues

There are potentially significant environmental impacts from mining and prospecting activities on Mt Piper, an area of considerable geological interest. Antimony was mined on a small scale from 1939 to 1945 but proved unprofitable, and exploratory shafts were sunk in search of gold. In 1989 a planning permit application for mineral exploration and prospecting over the area was lodged with the Shire of Broadford, but it was refused.

Relocating the Telecom and Department of Property and Services installations to suitable sites outside the community, or the use of different technology, will require a commitment of money and resources.

Management of the butterfly community on Mt Piper requires the co-operation of the local community; in particular, the owners of land containing native vegetation within and adjacent to the butterfly community. The Shire of Broadford is responsible for managing roadside vegetation, which is important for habitat continuity. Controlling visitor use and restricting vehicular access are important considerations for the future management of Mt Piper and its butterfly community.

Management Actions

Previous Management Actions

The butterfly community is partly protected because it occurs within the Education Reserve.

Feral Goats were controlled in 1988 and eradicated in 1990. Radio mast, cables, pipelines and a radio shed were removed by the Gas & Fuel Corporation in 1990.

Commitments

In December 1989 the Shire of Broadford advised the Minister for Conservation, Forests and Lands in writing that the shire council was unanimous in its strong opposition to an application for mineral exploration and prospecting. It also stated that the shire is committed to preserving Mt Piper and its environs and resolved to request that an appropriate zoning or designation be allocated to the land to prevent future exploration/prospecting and mining, on account of the state, regional and local significance of the site.

Intended Management Actions

Research and Monitoring

Liaise with entomologists and university researchers to encourage research on the habitat requirements and biology of the rare and uncommon butterfly species and the community at Mt Piper, and to encourage intensive, systematic monitoring of butterfly species and populations.

Survey

Implement a survey to endeavour to locate other sites where the community may occur.

Critical Habitat

Identify and document the critical habitat of the community.

Zoning of the Butterfly Community

Liaise with the Shire of Broadford to ensure that a protective zoning of the habitat is provided in the new Shire of Broadford Planning Scheme; in particular, that it prohibits mining and mineral exploration, controls vegetation clearance, and includes sympathetic land use and management adjoining Mt Piper.

Regulations

Gazette regulations for the Mt Piper Education Reserve.

Environmental Education and Awareness

Implement an awareness, education and information program for the owners of adjoining land, the local community, council, visitors and public authorities about the significance of the butterfly community and Mt Piper, and encourage the sympathetic use and management of land adjoining the community.

Fencing

Liaise with owners of adjoining land to ensure adequate fencing around the perimeter of the Mt Piper Education Reserve. Encourage, and where possible assist, landholders to fence around the community on freehold land.

Community Involvement

Involve local individuals and interest groups, such as the Broadford Environmental Action Movement, in removing introduced plants by hand and monitoring butterfly populations.

Pest Plant and Animal Control and Eradication

Co-operate with owners of adjoining land in implementing controls on Rabbits, South African Fireweed and thistles.

Alternative Technologies or Sites for Communication Facilities and Trig Station

Investigate alternative technologies or sites for facilities required by public authorities. Relocate remaining facilities outside the community and remove other structures on the summit that are no longer used.

Access road

Implement soil conservation works and revegetate the access road in Mt Piper Education Reserve with indigenous ground cover plants. Maintain the access road as a slashed track for fire control and walking.

Revegetation

Promote natural revegetation of all disturbed areas and tracks by scarifying the soil surface and minimising use and compaction.

Visitor Management

Restrict vehicle and horse access in Mt Piper Education Reserve to formed tracks on the lower slopes; prohibit trail bikes from the reserve.

Visitor Information

Provide an interpretation display and brochure in Mt Piper Education Reserve which highlight the importance of the butterfly community and explain how visitors can best enjoy the area while minimising the environmental impacts caused by their activities.

Fire Management

Initiate appropriate fire management by prohibiting the unauthorised use of fire (including campfires) at Mt Piper, restricting fuel-reduction burning and identifying and maintaining strategic fire control lines outside the community to protect it from wildfire.

Implement a fire management program for wildlife and habitat management only in accordance with specific objectives and prescriptions relating to the habitat requirements and long-term survival of the community and the rare or threatened species.

Law Enforcement

Implement regular patrols for managing the site and increasing public awareness about the significance of the community.

Wildlife Corridors

Conserve and enhance native vegetation corridors linking Mt Piper with other areas of natural vegetation, to mitigate the long-term 'island' effects on the community at Mt Piper, and elsewhere if it is found.

Other Desirable Management Actions

Relocation of Facilities

Relocate Telecom and Dept of Property and Services installations outside the butterfly community.

Rabbit Fencing

Investigate the need for rabbit fencing, and its cost.

Permanent Protection

Pursue options for permanent protection of private land adjoining Mt Piper Education Reserve that supports the butterfly community, through co-operative agreements or conservation covenants and the Shire of Broadford Planning Scheme.

Establishment of another Community

Efforts will be made to establish the community at a suitable site if available.

Legislative Powers Operating Legislation

Conservation Forests and Lands Act 1987

Country Fire Authority Act 1958

Crown Land (Reserves) Act 1978

Fire Authorities Act 1989

Flora and Fauna Guarantee Act 1988

Land Conservation Act 1970

Shire of Broadford Planning Scheme

Vermin and Noxious Weeds Act 1958

Planning and Environment Act 1987

Licence or Permit Conditions

All flora within the community is protected after the community is listed in Schedule 2. The Large and Small Ant-blue butterflies will also be protected fauna after listing in Schedule 2. Strict controls will be implemented on collecting permits for flora and invertebrate fauna in the area and on any activities that involve habitat disturbance.

The Department of Conservation and Environment will oppose applications to clear native vegetation within the community under the Native Vegetation Retention provisions of the *Planning and Environment Act 1987*.

Conditions will be placed on licences held by the Department of Property and Services and Telecom to minimise impacts on the community until new locations or new technologies can be found.

Consultation and Community Participation

Entomologists will continue to be consulted about the biology, habitat requirements and population monitoring of important butterfly species.

An environmental awareness, education and information program will be implemented for owners of adjoining land, the local community and council, visitors, and relevant public authorities about the significance of Mt Piper and its wildlife communities.

Local individuals and interest groups, such as the Broadford Environmental Action Movement, will be encouraged to help remove introduced plants by hand and monitor butterfly populations.

Implementation, Evaluation and Review

The Flora and Fauna Guarantee Officer for the Alexandra Region of the Department of Conservation and Environment will be responsible for co-ordinating the implementation of this action statement and monitoring the effectiveness of actions taken.

Progress in achieving the aims of the action statement will be assessed annually. This action statement will be reviewed in 1996.

Contacts

Species and Community Management

Flora & Fauna Guarantee Officer, Alexandra Region, DCE

Biology

D.F. Crosby and N. Quick (consultant entomologists) c/o Flora and Fauna Div., DCE, East Melbourne

Local Field Naturalists

Broadford Environmental Action Movement

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Further information

Further information can be obtained from Department of Sustainability and Environment Customer Service Centre on 136 186.

Flora and Fauna Guarantee Action Statements are available from the Department of Sustainability and Environment website: <http://www.dse.vic.gov.au>

References

Scientific Literature

- Ashton, D.H. (1976) The vegetation of Mount Piper, Central Victoria: a study of a continuum. *Journal of Ecology* **64**: 463-83.
- Barnard, F.G.A. and French, C. (1913) Notes on a visit to Mt Piper. *Victorian Naturalist* **29**: 186-9.
- Common, I.F.B. & D.F. Waterhouse (1981) *Butterflies of Australia*. Angus & Robertson, Sydney.
- Crosby, D.F. (1988) The entomological significance of Mt Piper, Broadford. Report to the Department of Conservation, Forests and Lands (unpubl.).
- DSE (2003) Atlas of Victorian Wildlife (Electronic Fauna Database). Parks, Flora & Fauna, Department of Sustainability & Environment, East Melbourne.
- Dunn, K.L. (1982) Notes on an important extension to the distribution of *Theclines thes miskini miskini* (T.P. Lucas) (Lepidoptera:Lycaenidae). *Vic. Entomologist* **12**(5): 53-5.
- Nicholas, W.M. (1875) A report on the geological features of the country near Mt Piper. *Prog. Rep. Geol. Surv. Victoria* **2**: 121-5.
- Quick, W.N.B. (1989) The Victorian "Ant-blues"-*Acrodipsas* spp. (Lepidoptera:Lycaenidae). Report to the Department of Conservation, Forests and Lands (unpubl.).
- Valentine, P.S. (1982) *Ogyris genoveva gela* Waterhouse (Lepidoptera:Lycaenidae) feeding at sapflow, and the first record of this subspecies in Victoria. *Aust. Ent. Mag.* **8**(6): 92.
- Waterhouse, G.A. & Lyell, G. (1913) Description of a new lycaenid butterfly, with notes on its life history. *Vic. Nat.* **29**(10): 156-60.

Newspaper Articles

- Carruthers, John 1989, 'Mine "threat to butterfly" ', *Herald*, 26 Sept.
- *Kilmore Free Press* 1989, 'Serenity may be a new battleground', 4 Oct.
- *Kilmore Free Press* 1989, 'The Minister, Mt Piper and those butterflies!', 8 Nov.
- *Kilmore Free Press* 1989, 'Objections-Shire skittles Mt Piper mining', 13 Dec.
- *Kilmore Free Press* 1989, 'Friends of Mt Piper', 13 Dec.
- *Kilmore Free Press* 1990, 'Mt Piper's future in a plan', 4 July.
- *Kilmore Free Press* 1990, 'Nominated for listing', 10 Oct.
- Longo, Enrica 1990 'Fears that gold search could kill butterflies', *Age* 4 Oct.
- Robinson, Penny 1989, 'Locals fear exploration will destroy oasis of wildlife', *Australian* 9 Oct.
- *Seymour Telegraph* 1989, 'Threat to rare butterflies?', 3 Oct.