Southern Fleurieu Peninsula coastal butterfly species assessment

A revision of the Butterfly Section of the Southern Fleurieu Coastal Action Plan and Conservation Priority Study 2007

Report Prepared for Hills and Fleurieu Landscape Board

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Ento Search
PO Box 196 Meningie SA, 5264
E: alex@entosearch.com.au
W: www.entosearch.com.au

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Summary

The Southern Fleurieu Peninsula supports a total of 34 recorded butterfly species and a further six possible vagrant species. Seventeen species are determined as localised with eight of local conservation significance and restricted to specific habitats.

Since the 2007 SFCAP report, additional butterflies and species distributions have been recorded including those of conservation concern. These include recent records for *Anisynta cynone cynone* (Mottled Grass Skipper) and *Lucia limbaria* (Chequered Copper).

Habitat quality across all surveyed coastal conservation assessment cells has not seen significant changes since the 2007 report and continue to support the associated species that depend on their ecosystems.

Conservation efforts for increasing habitats through plantings of *Gahnia filum* for *Hesperilla flavescens* (Yellowish Sedge Skipper) have been undertaken at Tokuremoar Reserve, Hindmarsh Island and Goolwa Township.

Recommendations for specific butterfly species habitat creation is also presented.

Introduction

This report provides the current snapshot of species present within the coastal cells and region, their habitat conditions and revises the species habitat management proposal.

The 2007 SFCAP report presents the butterfly species of conservation significance and their associated habitats across the 27 coastal cells from the Murray Mouth (SF1) to Sellicks Beach (SF27). Several species have been identified in need of protection with their associated habitat through restoration proposals.

These species are specialists in their larval host plant use and selected habitat preferences being localised with limited distributions within the Southern Fleurieu coast.

Several species that have localised populations are limited in capacity for dispersal and/or colonisation of new sites. The lack of suitable habitats and interconnectivity corridors prohibits such movements and therefore creates localised isolation of populations. Furthermore, the urbanisation of coastal areas reduces the efficiency of species movements that otherwise occur. Several species are now restricted to pockets of isolated habitats resulting in some being vulnerable to population collapse.

Habitats for many of these species continue to be under pressure from factors such as but not limited to;

- Slow but continuous habitat degradations, mainly through increased exotic weed presence
- Increased grazing pressures of larval hosts by both native and domestic animals
- Fire - both natural, ecological and fuel reduction burns
- Coastal developments

Limited habitat improvements have been undertaken for species of conservation significance. Some efforts, at this stage, have failed or are insufficient to provide positive or significant responses.

A concerted landscape approach is necessary to consider the species requirements of adequate habitat size and localised on ground works for long term positive outcomes.

Methodology

Species lists, habitats and their associated cells were compiled using existing data in the SFCAP 2007. Species names were checked for taxonomic updates using Australian Faunal Directory and Australian Virtual Herbarium.

Additional butterfly species records were sourced from iNaturalist, Atlas of Living Australia and Green Adelaide Butterfly Survey Reports in 2022-2024.

Priority species for conservation significance works were identified based on the current status of these species and their restricted habitats with a realistic approach to the possibilities of successful habitat restoration outcomes.

Cells were assessed using data from existing and new reports, aerial photography as well as site visits undertaken to cells where possible.

Results

The assessment found that habitats and their quality within the cells had no significant change for use by butterfly species (Appendix 1).

Butterfly species of conservation significance and their larval food plants are presented in Table 1. These include a number of species where conservations efforts can be undertaken to reduce threats and are further discussed below.

Priority sites and proposed restoration activities for species conservation and restoration is presented in Appendix 2.

A number of highly specialised species requiring specific habitat and larval host parameters require protection in their existing habitats and include; Erina hyacinthina simplex (Western Dusky-blue), *Hesperilla idothea clara* (Flame Skipper), *Hesperilla trimaculata trimaculata* (Dingy four-spot Sedge-skipper) and *Geitoneura acantha* (Ringed Xenica). These four species whilst having patchy and disjunct populations in the Hills and Fleurieu Landscape region are only found in the coastal conservation assessment cell SF18 at Deep Creek National Park.

Table 1. *Southern Fleurieu: Butterfly species and larval foodplants, species of conservation significance.*

[FAMILY] Species	Common Name	Status (A. Stolarski)	Larval Food Host
[HESPERIIDAE] (Skippers)			[Skipper butterflies are entirely dependent on tussock grasses, Poaceae and Cyperaceae]
Anisynta cynone cynone	Mottled Grass Skipper	Vulnerable	Native & introduced grasses, incl. e.g. *Brachypodium distachyon*, Ehrharta calycina*, E. longiflora*, Poa spp.*
Hesperilla chrysotricha cyclospila	Golden-haired Sedge-skipper	Vulnerable	*Gahnia deusta; G. filum; G. sieberiana; G.trifida*
Hesperilla donnysa donyssa	Varied Sedge Skipper	Local	*Gahnia ancistrophylla; G. deusta; G. filum; G. sieberiana; G.trifida*
Hesperilla flavescens	Yellowish Sedge Skipper	Vulnerable	*Gahnia deusta; G. filum; G. trifida*
Hesperilla idothea clara	Flame Sedge Skipper	Rare	*Gahnia clarkei; G. radula; G. sieberiana; G.trifida*
Hesperilla trimaculata trimaculata	Dingy four-spot Sedge-skipper	Rare	*Lepidosperma carphoides; L. viscidum: L. semiteres (unpub.)*
Antipodia atralba	Diamond Sedge Skipper	Local	*Gahnia ancistrophylla; G. deusta; G. lanigera (G. lanigera preferred)*
Sub-family [SATYRINAE] (Browns)			
Geitoneura acantha	Southern Ringed Xenica	Local	*Microlaena stipoides; Poa tenera; Themeda triandra*
[LYCAENIDAE] (Coppers & blues)			
Lucia limbaria	Chequered Copper	Rare & Local	*Oxalis perennans, O. exilis, O. corniculata ssp. corniculata**
Erina hyacinthina simplex	Western Dusky-blue	Local	*Cassytha melantha*
Ogyris amaryllis meridionalis	Amaryllis Azure	Local	*Amyema melaleucae; A. miquelii; A. pendula ssp. pendula; A. preissii.* Larvae attended by small ants
Ogyris genoveva	Genoveva Azure	Rare	*A. miquelii; A. pendula spp. pendula.* Larvae attended by sugar ants (Camponotus)
Theclinesthes albocincta	Bitter-bush Blue	Local	*Adriana* quadripartita.
Jalmenus icilius	Icilius Hairstreak	Rare	*Acacia* spp. incl. *A. pycnantha, A. retinodes, A. uncifolia.* Larvae attended by small black ants

*Exotic weed species

Additionally, three *Ogyris* species; *O. olane, O. genoveva* and *O. amaryllis meridionalis* require *Amyema spp*. (mistletoes) as their larval hosts and if not available would not be able to exist. It is recommended that mistletoes should be retained in the environment and where possible additional seeding of mistletoes is undertaken across cells to enhance localised *Ogyris* populations.

Additional observation records of two species of conservation significance have been made and include increased distribution of *Anisynta cynone cynone* (Mottled Grass Skipper) across a number of cells and *Lucia limbaria* (Chequered Copper) in cells SF5, SF15 & SF26. A further observation of *Candalides heathi heathi* (Rayed Blue) adjoining cell SF24 is also included based on the species larval host presence within the cell boundary and the species ability for extensive dispersion and colonisation in favourable years.

A further six species have very limited supportive habitats and include; *Hesperilla flavescens* (Yellowish Sedge Skipper), *Hesperilla chrysotricha cyclospila* (Golden-haired Sedge-skipper), *Hesperilla idothea clara* (Flame Skipper), *Hesperilla trimaculata trimaculata* (Dingy four-spot Sedge-skipper), *Antipodia atralba* (Black and White Skipper), and *Theclinesthes albocinctus* (Bitter-bush Blue). These species have specific habitat and larval host requirements, being limited to remnant vegetation areas on the Southern Fleurieu Peninsula.

Currently the realistic potential of habitat restoration of sites exists only for three of the discussed species; *H. flavescens, H. chrysotricha cyclospila* and *Theclinesthes albocinctus* where the ability to propagate required larval hosts and creation of habitats is possible.

The enhancement of existing and creation of new habitats for *Hesperilla flavescens* have been undertaken at Encounter Lutheran College (ELC) grounds (adjacent to Cell SF10), Tokuremoar Reserve (Cell SF4), Hindmarsh Island (Cell SF1 and Captain Sturt Parade area) and the Goolwa Township (Cell SF2 & SF3). Additional habitat enhancement works are recommended for Watsons Gap (Cell SF10), adjacent Chiton wetlands at Hayborough (Cell SF10) and suitable areas of Tokuremoar Reserve (Cell SF4).

Hesperilla flavescens has been subject to trial conservation efforts through translocation introductions into ELC grounds from the Hindmarsh Island population without success. Further habitat enhancements at ELC grounds were recommended and once completed further attempts for translocations will be undertaken.

Cell SF10 that encompasses Watsons Gap wetland and further inland through the adjacent Chiton Wetlands at Hayborough through to ELC grounds provides and extensive habitat restoration and enhancement opportunity for *H. flavescens*.

Hesperilla chrysotricha cyclospila with its current Fleurieu Peninsula extant of four known population sites; Stipiturus CP, Myponga River Gorge private property (PP), and Deep Creek PP is considered as locally vulnerable. Opportunities have been identified in the following cells; SF15, SF21, SF22, SF23 and SF24 for the restoration of the species habitats in view of introduction into sites.

Theclinesthes albocinctus whilst locally common at times is subject to restricted population sites supporting *Adriana quadripartita,* its only larval host plant and if not available would not be able to exist. The butterfly is restricted to cells SF4, SF15, SF19, SF23 & SF24 and requires additional habitat enhancement through plantings of *Adriana* in suitable soils in cells SF23 & SF24. The facilitation of host plant propagations and habitat creation supports extensive habitat and site interconnectivity across many cells for securing this species into the future.

Whilst the opportunity for habitat enhancement and/or creation exists for *Antipodia atralba* in many cells where suitable soil parameters exist, currently this possibility is restricted due to the inability of successfully propagating *Gahnia lanigera* plants, the larval host.

Two butterfly species of conservation significance; *Ogyris halmaturia waterhousei* and *Ogyris otanes otanes*, whilst historically recorded from the Fleurieu are now regarded as locally extinct as have not been observed for over 100 years. The possibly of habitat rehabilitation and reintroduction of these two species is not feasible due to the species specific requirements (Table 2).

Additional species information is available in Appendix 3.

Table 2. *Southern Fleurieu: Locally extinct butterfly species.*

[FAMILY] Species	Common Name	Status (A. Stolarski)	Larval Food Host	Comments
[LYCAENIDAE] (Coppers & blues)				
Ogyris halmaturia waterhousei	Large Bronze Azure	Locally extinct	*Camponotus terebrans* ant larvae.	The species requires large open heath or woodland habitats with the presence of *Camponotus terebrans* ants. No suitable habitat remains on the Fleurieu Peninsula or areas suitable for habitat creation for the reintroduction.
Ogyris otanes otanes	Small Bronze Azure	Locally extinct	*Choretrum glomeratum*, larvae attended by Camponotus terebrans.	The species requires *Choretrum glomeratum* plants growing in open woodland habitats with the presence of *Camponotus terebrans* ants. No suitable habitat remains on the Fleurieu Peninsula or areas suitable for habitat creation for the reintroduction.

A number of vagrant species have been identified that may be observed on the Fleurieu Peninsula and are listed in Table 3. These species will have sporadic occurrences with possibilities of localised temporary population establishments during favourable years, should the butterfly find the necessary larval hosts.

Table 3. *Southern Fleurieu: Vagrant butterfly species.*

[FAMILY] Species	Common Name	Larval Food Host	Comments
[PIERIDAE] (Whites & Yellows)			
Eurema smilax	Small Grass-Yellow	*Senna spp.*	Common at times, occasional coastal population establishment where suitable Senna spp. is present.
Belenois java teutonia	Caper White	*Capparis spp.*	A migratory species periodically observed in large numbers. Able to sustain temporary local populations on exotic *Capparis spinosa* in town gardens.
[NYMPHALIDAE] (Browns)			
Charaxes sempronius	Tailed Emperor	*Brachychiton spp., Acacia spp.*	A vagrant species, rarely observed and able to establish localized populations during favourable years.
[PAPILIONIDAE] (Swallowtails)			
Papilio anactus	Dainty Swallowtail	*Citrus spp.*	A species that is able to establish temporary localized populations on cultivated *Citrus spp*. at times.
Papilio aegeus aegeus	Orchard Swallowtail	*Citrus spp.*	A vagrant species rarely seen during favourable years.
Papilio demoleus sthenelus	Lime Swallowtail	*Cullen australasicum*	A vagrant species often commonly encountered during favourable years. Able to establish temporary localized populations on *Cullen australasicum* in gardens and landscape settings.

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Appendices

Appendix 1. *Summary of known butterfly species present in SFCAP region and distribution amongst cells (SF1-SF27) with host plants present*

BUTTERFLY	COMMON NAME	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	SF19	SF20	SF21	SF22	SF23	SF24	SF25	SF26	SF27
Anisynta cynone cynone	Mottled Grass Skipper	*	*	*	*	*		*	*			*			*													
Antipodia atralba	Diamond Sedge Skipper															*				*							*	
Hesperilla chrysotricha cyclospila	Golden-haired Sedge-skipper																											*
Hesperilla donnysa	Variable Sedge-skipper				*											*			*									
Hesperilla flavescens	Yellowish Sedge-skipper	*																										
Hesperilla idothea clara	Flame Sedge-skipper																		*									
Hesperilla trimaculata trimaculata	Four-spot Sedge-skipper																		*									
Ocybadistes walkeri hypochlora	Southern Grass-dart	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Taractrocera papyria papyria	White-banded Grass-dart	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Delias aganippe	Wood White				*									*	*	*			*	*		*	*	*	*	*	*	*
Pieris rapae rapae +	Cabbage White	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

BUTTERFLY	COMMON NAME	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	SF19	SF20	SF21	SF22	SF23	SF24	SF25	SF26	SF27
Geitoneura acantha	Ringed Xenica																		*									
Geitoneura klugii	Common Xenica				*	*						*			*	*			*	*								*
Heteronympha merope merope	Common Brown											*		*	*	*	*		*	*			*		*	*	*	*
Junonia villida calybe	Meadow Argus	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Vanessa kershawi	Australian Painted Lady	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Vanessa itea	Australian Admiral	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Danaus petilia	Lesser Wanderer	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Danaus plexippus plexippus	Monarch	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lucia limbaria	Chequered Copper					*										*											*	
Ogyris amaryllis meridionalis	Amaryllis Azure				*											*				*								
Ogyris olane	Olane Azure																			*				*				*
Ogyris genoveva	Genoveva Azure																											*
Jalmenus icilius	Icilius Hairstreak																							*	*			
Candalides heathi heathi	Rayed Blue																								*			
Erina acasta	Blotched Dusky-blue																		*						*			
Erina hyacinthina simplex	Western Dusky-blue																		*									
Lampides boeticus	Long-tailed Pea-blue	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nacaduba biocellata biocellata	Two-spotted Line-blue	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

BUTTERFLY	COMMON NAME	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	SF19	SF20	SF21	SF22	SF23	SF24	SF25	SF26	SF27
Neolucia agricola agricola	Fringed Heath-blue														*	*				*								
Theclinesthes albocinctus	Bitter-bush Blue				*											*				*				*	*			
Theclinesthes miskini miskini	Wattle Blue	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Theclinesthes serpentatus serpentatus	Salt-bush Blue	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zizina otis labradus	Common Grass-blue	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

+ Introduced species

Appendix 2. *Priority sites and proposed restoration activities - species conservation and restoration.*

Common species = species distributions present in all cells and may be observed periodically, refer to Appendix 1.

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF1	Hindmarsh Island, Murray Mouth Lookout Reserve (Sugars beach)	*Anisynta cynone cynone* & common species	Poor condition sand dune system	Enhance with additional *Poa poiformis var. poiformis* plantings for *Anisynta cynone cynone*	Medium	NPWSSA, Council
SF1	Hindmarsh Island, Monument Road marshland	*Anisynta cynone cynone* & common species	Good system	None	Low	Council

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF1	Hindmarsh Island, Mundoo Channel & Boggy Creek	*Anisynta cynone cynone* & common species	Good partial sedge-land swamp system	Undertake additional *Gahnia filum* plantings to enhance habitat for *Hesperilla flavescens*	High	Private
SF2	Sir Richard Peninsula	*Anisynta cynone cynone* & common species	Poor condition, heavy invasion of exotic weed species in areas	Undertake weed management and enhance habitat for *Anisynta cynone cynone*	Medium	SA Water
SF3	Goolwa foreshore	*Anisynta cynone cynone* & common species	Variable dune system	Weed control	Low	Council, Coastal Community groups
SF4	Tokuremoar Reserve	*Anisynta cynone cynone* & common species.	Variable condition. Suitable habitat for *Anisynta cynone cynone*. Habitat improvements for *Hesperilla flavescens* undertaken. Site provides opportunity for planting *Adriana quadripartita.*	Continue planting *Gahnia filum* to enhance habitat for the introduction of *Hesperilla flavescens.* Weed management in *G. filum* plantings. *A. quadripartita* plantings for *Theclinesthes albocinctus.*	High	NPWS, Coastal community groups, Council

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF4	Old Goolwa Golf Course & Heritage Areas	*Hesperilla donyssa donyssa, Anisynta cynone cynone, Theclinesthes albocinctus* & common species.	Varied habitat, fair condition with invasive weed species. Important vegetation community for species of conservation significance	Monitor existing species populations. Remove invasive weed species where possible.	High	Private,
SF5	Middleton & Dunes: Surfers to Goolwa	*Lucia limbaria* & common species	Fair condition	None	Low	Council, Coastal Community groups
SF6	Middleton & Dunes: Surfers to Goolwa	Common species	Fair condition	None	Low	Council, Coastal Community groups
SF7	Port Elliot	*Anisynta cynone cynone* & common species	Fair condition	Ensure coastal grasses persist	Low	Council, Coastal Community groups
SF8	Port Elliot	*Anisynta cynone cynone* & common species	Fair condition	Ensure coastal grasses persist	Low	Council, Coastal Community groups
SF9	Port Elliot	Common species	Poor condition	None	Low	Council, Coastal Community groups
SF10	Hindmarsh River Mouth, Coastal reserve	Common species	Good quality coastal system	None	Low	Council, Coastal Community groups

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF10	Port Elliot, Watsons Gap swamp	Common species	High quality *Gahnia filum* stands, however tussocks require rejuvenation for suitability of use by *Hesperilla flavescens*	Restoration of habitat for the introduction of *Hesperilla flavescens*	High	Private and Council
SF11	Victor Harbor, lower reaches of the Hindmarsh River	Common species	Good quality riparian system	None	Low	
SF12	Victor Harbor, Inman River floodplain	Common species	Good quality habitat	None	Low	
SF13	Newland Head CP cliffs to Kings Head and the Bluff	Not examined in 2007 report	Unknown	Propose survey	High	
SF14	Newland Head CP cliffs to Kings Head and the Bluff	Not examined in 2007 report	Unknown	Propose survey	High	
SF15	Newland Head CP	*Antipodia atralba, Hesperilla donyssa donyssa, Lucia limbaria, Theclinesthes albocinctus* & common species	Habitat condition is variable in areas.	Monitor existing species populations.	Medium	NPWS, Coastal Community groups
SF16	Not examined in 2007 report	Not examined in 2007 report	Unknown	Propose survey	High	
SF17	Not examined in 2007 report	Not examined in 2007 report	Unknown	Propose survey	High	

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF18	Deep Creek National Park	*Hesperilla donyssa, H. idothea clara, H. chrysotricha cyclospila, H. trimaculata trimaculata* & common species	Good habitat. Ecological reduction burns must consider species of conservation significance.	Exclude burns from population sites until such time as previously burned areas regrow to species required habitat.	High	NPWS, Coastal Community groups
SF19	Cape Jervis, Lands End, Fishery Beach	*Antipodia atralba, Ogyris amaryllis meridionalis, O. olane, Theclinesthes albocinctus* & common species	Variable habitat with exotic weed species	Weed management Monitor species populations	High	Council, Coast Protection Board, Coastal Community groups
SF20	Not examined in 2007 report	Not examined in 2007 report	Unknown	Propose survey	High	
SF21	Rapid Bay cliffs	Common species	Poor condition	None	Low	Private
SF21	Rapid Bay, Yattogolinga River	Common species	Poor condition	Restore riparian corridor, include plantings of *Gahnia trifida* for *Hesperilla chrysotricha cyclospila*	Medium	Private
SF22	Second Valley, sea cliffs	Common species	Poor condition	None	Low	Private

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF22	Wirrina Cove Resort & Anacotilla River	Common species	Poor condition, exotic weed species	Restore riparian corridor, include plantings of *Gahnia trifida* for *Hesperilla chrysotricha cyclospila*	Medium	Private and Council
SF22	Second Valley, Parananacooka River	Common species	Poor condition	Restore riparian corridor, include plantings of *Gahnia trifida* for *Hesperilla chrysotricha cyclospila*	Medium	Private and Council
SF23	Normanville Dunes south	*Jalmenus icilius, Theclinesthes albocinctus* & common species	Medium quality	Undertake additional *Adriana quadripartita* plantings in suitable soils to enhance habitat for *Theclinesthes albocinctus*	High	Council
SF23	Yankalilla, Little Gorge	Common species	Poor quality	None	Low	Private

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF23	Yankalilla River (lower fraction only within CAP boundary)	*Ogyris olane* & common species	Poor quality	Restore wetland & riparian areas, include plantings of *Gahnia trifida and G. filum* for *Hesperilla chrysotricha cyclospila*	Medium	Private and Council
SF23	Lady Bay Sea Cliffs	Common species	Poor quality	None	Low	Private
SF23	Lady Bay	*Theclinesthes albocinctus* & common species	Poor quality	Manage *Adriana quadripartita* stands through either additional plantings or rejuvenation of existing stands to ensure *Theclinesthes albocinctus* long-term survival	High	Private
SF24	Normanville Dunes north	*Jalmenus icilius, Theclinesthes albocinct*us & common species	Medium quality	Undertake additional *Adriana quadripartita* plantings in suitable soils to enhance habitat for *Theclinesthes albocinctus*	High	Council

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF24	Yankalilla, Bungala River & Hay Flat Road Creek	Common species	Highly degraded with exotic weed species in areas	Weed management Restore riparian corridor, include plantings of *Gahnia trifida* for *Hesperilla chrysotricha cyclospila*	High	Council
SF25	Carrickalinga Beach	Common species	Poor quality	None	Low	Council
SF26	Carrickalinga North, Whitelaw Road	*Antipodia atralba* & common species	Poor quality habitat for *Antipodia atralba.* Heavy grazing and weedy grass ingrowth of *G. lanigera.*	Restore the quality of *G. lanigera* via ecological burns and eradicate post weedy grass regrowth.	High	Private
SF26	Carrickalinga North Canyon	*Antipodia atralba* & common species	Poor quality habitat for *Antipodia atralba.* Heavy grazing and weedy grass ingrowth of *G. lanigera.*	Restore the quality of *G. lanigera* via ecological burns and eradicate post weedy grass regrowth.	High	Private

Cell	Location	Species Present	Habitat condition	Proposed management action	Priority of action	Key Players
SF26	Myponga Beach South	*Antipodia atralba* & common species	Good habitat for *Antipodia atralba* with stands of *Gahnia lanigera.*	Continue with current management practices.	Medium	Private
SF27	Sellicks Cliffs Coastal Reserve	Common species	Poor quality	None	Low	Private and Council
SF27	Myponga River Gorge and Estuary	*Hesperilla chrysotricha cyclospila, Ogyris amaryllis meridionalis, O. olane, O. genoveva.*	Important habitat for *H. chrysotricha cyclospila* with large stands of *Gahnia trifida* in central to upper reaches of the Gorge. Variable habitat, good in areas, weed infested in upper reaches of the Gorge	Weed reduction in central and upper reaches of the Gorge	High	Land managers, SA Water

Appendix 3. *Focal species for the Southern Fleurieu Coastal Action Plan region.*

Photo: Matt Endacott

Antipodia atralba **(Diamond Sedge Skipper)**
Conservation status (Rare, locally vulnerable)

This butterfly is very localised and restricted to coastal heath areas where its larval food plant, *Gahnia lanigera,* (Desert or black grass saw-sedge) grows in large enough densities. Populations within and between sites fluctuate in densities in response to the availability of fresh *G. lanigera* leaf growth favoured by larvae. The butterfly is very responsive to post fire plant growth and often attains large population numbers following such events.

Antipodia atralba has a patchy distribution along the southern Fleurieu Peninsula and has been recorded from the following locations: Carrickalinga and Myponga South areas, Cape Jervis, Lands End and Newland Head CP. Regionally recorded at Cox's Scrub CP.

The following threatening processes are identified:
● *G. lanigera* tussocks becoming too old, weed infested and unfavourable for female butterflies to use.
● Continuous site disturbances and excessive grazing pressure by animals
● Low population numbers vulnerable to complete collapse with extreme fluctuations in environmental conditions
● Reduced genetic diversity in small populations.

Photo: Matt Endacott

***Theclinesthes albocinctus* (Bitter-bush Blue)**
Conservation status (Localised, locally vulnerable)

This butterfly is very localised and restricted to coastal areas where its larval food plant, *Adriana quadripartita,* (Coast Bitter-bush) grows in large enough densities. Populations within and between sites fluctuate in densities in response to the availability of fresh leaf growth and male flower spikes favoured by larvae.

Theclinesthes albocinctus has a patchy distribution along the southern Fleurieu Peninsula and has been recorded from the following locations: Normanville Dunes, Lady Bay, Cape Jervis, Lands End, Fishery Beach, Newland Head CP and Old Goolwa Golf Course & Heritage areas. Further inland from coastal cell boundaries the species is found on Hindmarsh Island.

The butterfly will naturally establish in Tokuremoar Reserve provided *A. quadripartita* planted.

The following threatening processes are identified:
- *A. quadripartita* plants senescing and not naturally recruiting resulting in *T. albocinctus* population demise
- Vegetation crowding of *A. quadripartita*
- Lack of additional *A. quadripartita* plantings to support current populations
- Low population numbers vulnerable to complete collapse with extreme fluctuations in environmental conditions
- Reduced genetic diversity in small populations
- Roadside slashing of *A. quadripartita* (Hindmarsh Island)

Photo: Matt Endacott

Anisynta cynone cynone **(Mottled Grass Skipper)**
Conservation status (Rare, locally vulnerable)

This butterfly is very localised and restricted to coastal areas where its larval food plants, Poaceae (Grasses) both native and introduced are present.

A. cynone cynone has a patchy distribution occurring at; Hindmarsh Island, Sir Richard Peninsula, Goolwa foreshore, Surfers to Goolwa Dunes, Port Elliot, Victor Harbor including Granite Island and Newland Head CP.

The following threatening processes are identified:
- *Poaceae* displaced by invasive weed species
- Dune system disturbances by unauthorised use
- Coastal developments
- Reduced grass occurrences in sheltered coastal situations
- Low population numbers vulnerable to complete collapse with extreme fluctuations in environmental conditions
- Reduced genetic diversity in small populations

Photo: Matt Endacott

***Hesperilla flavescens* (Yellowish Sedge Skipper)**
Conservation status (Very localised, locally vulnerable)

This butterfly is very localised and restricted to coastal wetland areas where its larval food plant, *Gahnia filum,* (Chaffy Saw-sedge) grows in large enough densities. Populations are restricted to sites with the availability of fresh *G. filum* leaf growth favoured by larvae. The butterfly is very responsive to post fire and slashing plant growth attaining large population numbers following such events.

Hesperilla flavescens has a patchy distribution along the southern half of coastal South Australia and currently is not found present in southern Fleurieu coastal cells. The species occurs on Hindmarsh Island in one small site along Captains Sturt Parade. Historically the butterfly's distribution included Goolwa and Sir Richard Peninsula.

Continuous effort to increase suitable habitat with plantings of *G. filum* in coastal areas will increase habitat suitability for local introductions.

The following threatening processes are identified:
- *G. filum* tussocks becoming too old and unfavourable for use by butterflies
- Vegetation crowding of *G. filum* stands
- Low population numbers vulnerable to complete collapse with extreme fluctuations in environmental conditions
- Unauthorised habitat alterations and destruction
- Coastal developments

Photo: Matt Endacott

***Lucia limbaria* (Chequered Copper)**
Conservation status (Rare)

This butterfly is very localised, rarely observed and present in coastal areas where its larval food plant, *Oxalis perennans* (Native Sorrel) is found present. Populations fluctuate in densities in response to the availability of fresh *O. perennans* leaf growth favoured by larvae. The butterfly also uses *Oxalis corniculata ssp. corniculata* (Yellow Wood-sorrel) an introduced weed species commonly found in suburban gardens. The species has a symbiotic relationship with *Iridomyrmex rufoniger* ants.

Lucia limbaria distribution along the southern Fleurieu Peninsula is known from three sites, Carrickalinga North, Waitpinga Creek and Middleton areas, both in sub coastal sites.

The butterfly is likely to be more common than currently observed.

The following threatening processes are identified:
- *Oxalis perennans* mistakenly identified as exotic weed species and removed
- Reduction of suitable sites for *O. perennans* to sustain populations
- Coastal developments

Photo: Matt Endacott

***Hesperilla chrysotricha cyclospila* (Golden-haired Sedge Skipper)**
Conservation status (Rare, very localised, locally vulnerable)

This butterfly is very localised and restricted to areas where its larval food plant, *Gahnia trifida* (Cutting Grass) grows in large enough densities. The butterfly requires open wetland and creek line systems with the larval hosts growing in unobstructed sunny situations.

Hesperilla chrysotricha cyclospila has a patchy distribution in the greater Fleurieu Peninsula being recorded from only one coastal site; Myponga Gorge. The butterfly is also recorded from inland locations at Deep Creek (private property) and Stipiturus CP. Historically the species had broader distributions within the Fleurieu Peninsula. The butterfly populations are healthiest in areas where *G. trifida* plants exhibit fresh leaf growth.

The following threatening processes are identified:
- *G. trifida* tussocks becoming too old and unfavourable for use by butterflies
- Vegetation crowding of *G. trifida* stands
- Inappropriate fire management
- Unauthorised habitat alterations and destruction
- Coastal developments
- Inappropriate grazing management on private properties