

APPENDIX II

Conservation status evaluation for taxa with small geographic range sizes

Conservation evaluation is based on IUCN Red List categories and criteria, particularly criterion B: geographic range size according to extent of occurrence (EOO) or area of occupancy (AOO), number of locations and evidence of decline due to threatening processes. Justifications and actions needed are listed for threatened (Vulnerable: VU), Near Threatened (NT) and Data Deficient (DD) taxa. Symbol (†) denotes taxa endemic to the study region and therefore the status evaluation is global; for non-endemic taxa, the assessment is at the regional level and applies to the relevant population(s) within the study region.

Taxon	Geographic range (sq km)	Distribution parameter (and method)	No. of locations	Cons. status	Justification	Actions needed
† <i>Ogyris iphis doddi</i>	c. 1,400	AOO (spatial buffering)	2	VU	Criterion B2ab(ii)(iii)	Clarify distribution and habitat, and population structure within critical habitat.
† <i>Euploea alcatheae enastri</i>	9,103	EOO (minimum convex polygon)	11	NT	Criterion A3c: projected population decline over 10 years based on decline of habitat quality through inappropriate fire regime and disturbance by feral animals.	Monitor extent and/or quality of critical habitat and butterfly occupancy, and manage threats from fire and feral animals.
† <i>Hypochrysops apelles</i> ssp. 'Top End'	4,325	EOO (minimum convex polygon)	3	NT	Criterion D2: projected loss of locations through decline of habitat from coastal development.	Clarify distribution and monitor butterfly occupancy of critical habitat.
† <i>Idalima</i> sp. 'Arnhem Land'	c. 1,400	AOO (spatial buffering)	2	NT	Criteria A3c, D2: projected loss of locations and/or population decline over 10 years based on decline of larval food plant through inappropriate fire regime.	Monitor abundance of moth and food plant and occupancy of critical habitat.

Taxon	Geographic range (sq km)	Distribution parameter (and method)	No. of locations	Cons. status	Justification	Actions needed
† <i>Hecatesia</i> sp. 'Arnhem Land'	c. 1,400	AOO (spatial buffering)	2	NT	Criteria A3c, D2: projected loss of locations and/or population decline over 10 years based on decline of larval food plant through inappropriate fire regime.	Monitor abundance of moth and food plant and occupancy of critical habitat.
† <i>Nesolycaena caesia</i>	27,900	EOO (minimum convex polygon)	5	DD	Uncertain threats: possible decline of larval food plant and/or butterfly through inappropriate fire regime.	Monitor abundance of butterfly and food plant and occupancy of critical habitat in relation to fire regimes.
† <i>Hesperilla crypsigramma</i> ssp. 'Top End'	20,981	EOO (minimum convex polygon)	9	DD	Uncertain threats: possible decline of larval food plant and/or butterfly through inappropriate fire regime.	Monitor abundance of butterfly and food plant and occupancy of critical habitat in relation to fire regimes.
<i>Ogyris barnardi barnardi</i>	9,095	EOO (minimum convex polygon)	6	DD	Uncertain threats: possible decline of habitat through poor land management.	Monitor extent and/or quality of critical habitat and butterfly occupancy, and identify key threatening processes.
<i>Petrelaea tombugensis</i>	c. 1,400	AOO (spatial buffering)	2	DD	Few records and uncertain distribution; deficient ecological information.	Clarify extent of distribution and determine larval food plant.
<i>Synemon</i> sp. 'Kimberley'	c. 1,400	AOO (spatial buffering)	2	DD	Few records and uncertain distribution; deficient ecological information.	Clarify extent of distribution, determine critical habitat and larval food plant.
<i>Mimeusemia econia</i>	c. 1,400	AOO (spatial buffering)	2	DD	Few records and uncertain distribution; deficient ecological information.	Clarify extent of distribution, determine critical habitat and larval food plant.
<i>Agarista agricola agricola</i>	c. 1,400	AOO (spatial buffering)	2	DD	Few records and uncertain population status and/or distribution; uncertain threats.	Clarify extent of distribution and identify key threatening processes.
<i>Badamia exclamationis</i>	c. 700	AOO (spatial buffering)	1	DD	Deficient ecological information and uncertain threats.	Clarify extent of breeding distribution, determine critical habitat and identify key threatening processes.
† <i>Suniana lascivia lasus</i>	c. 700	AOO (spatial buffering)	1	DD	Few records and uncertain population status and/or distribution; insufficient ecological information; uncertain threats.	Clarify extent of distribution, determine critical habitat and identify key threatening processes.
<i>Acrodipsas myrmecophila</i>	c. 700	AOO (spatial buffering)	1	DD	Few records and uncertain population status and/or distribution.	Clarify extent of distribution.

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† <i>Acrodipsas decima</i>	c. 700	AOO (spatial buffering)	1	DD	Few records and uncertain population status and/or distribution; insufficient ecological information.	Clarify extent of distribution and determine critical habitat.
<i>Bindahara phocides</i>	c. 700	AOO (spatial buffering)	1	DD	Uncertain population status and/or distribution; insufficient ecological information.	Determine whether population is established and clarify distribution and larval food plant.
<i>Theclinesthes albocinctus</i>	c. 700	AOO (spatial buffering)	1	DD	Uncertain threats.	Clarify extent of distribution and identify key threatening processes.
† <i>Pollanisus</i> sp. 7	c. 700	AOO (spatial buffering)	1	DD	Old record and uncertain population status and/or distribution; deficient ecological information.	Determine whether population is established and clarify distribution and larval food plant.
<i>Euchromia creusa</i>	c. 700	AOO (spatial buffering)	1	DD	Few records and uncertain distribution; deficient ecological information.	Clarify extent of distribution and determine larval food plant.
<i>Mimeusemia centralis</i>	< 700	AOO (spatial buffering)	1	DD	Few records and uncertain distribution; deficient ecological information.	Clarify extent of distribution and determine critical habitat and larval food plant.
† <i>Candalides geminus gagadju</i>	39,942	EOO (Arnhem Land Plateau)	7	LC		
† <i>Borbo impar lavinia</i>	35,356	EOO (modified α -hull)	20	LC		
† <i>Pseudosesia oberthuri</i>	29,990	EOO (modified α -hull)	6	LC		
† <i>Hasora hurama territorialis</i>	28,050	EOO (modified α -hull)	7	LC		
† <i>Nacaduba kurava felsina</i>	25,246	EOO (minimum convex polygon)	10	LC		
<i>Jalmenus icilius</i>	22,528	EOO (minimum convex polygon)	3	LC		
<i>Appias albina albina</i>	22,372	EOO (modified α -hull)	6	LC		
<i>Yoma sabina</i>	14,900	EOO (modified α -hull)	13	LC		
† <i>Agarista agricola biformis</i>	8,860	EOO (minimum convex polygon)	6	LC		

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† <i>Leptosia nina</i> ssp. 'Kimberley'	5,925	EOO (modified α -hull)	9	LC		
† <i>Taractrocera ilia</i>	3,582	EOO (minimum convex polygon)	5	LC		
† <i>Protographium leosthenes geimbia</i>	1,697	EOO (minimum convex polygon)	4	LC		
† <i>Radinocera</i> sp. 'Sandstone'	c. 1,400	AOO (spatial buffering)	2	LC		

This text is taken from *Atlas of Butterflies and Diurnal Moths in the Monsoon Tropics of Northern Australia*, by M.F. Braby, D.C. Franklin, D.E. Bisa, M.R. Williams, A.A.E. Williams, C.L. Bishop and R.A.M. Coppen, published 2018 by ANU Press, The Australian National University, Canberra, Australia.