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THE CONSERVATION ASSESSMENTS

This section contains the 165 conservation assessments and Red Listings (all global) of the taxa assessed during the Southern African Lepidoptera Conservation Assessment (SALCA) project, ordered alphabetically by family and then by genus, species and subspecies. Details of the methods used can be found in the main article, with each assessment set out as follows:

- Taxon scientific name followed by the describer of the taxon and the date.
- English and Afrikaans common names.
- Name of the assessor/ taxon author.
- Red Listing with relevant categories and criteria, as per the IUCN Red Listing protocol (IUCN, 2017).
- For those Least Concern taxa which are rare, their rarity category is also given.
- Also indicated are those taxa endemic to the South Africa.
- Taxon images are arranged with males above and females below (upper side and underside). Specimen label data and photo credits are tabulated on pages 155–160.
- Seasonality table: This table shows the months of occurrence of the taxon, starting August and ending July. Each month is divided into quarters. Quarters for which there are Accepted records are highlighted in grey.
- Distribution map: The map's extent is for South Africa. Data points are displayed for Accepted and Locally Extinct records. The following key is used for each data point:

Red List category	Symbol
EX (also if a taxon is locally extinct)	
CR–PE	
CR	
EN	
VU	
NT	
DD	
LC (rare categories)	
LC	

- Type locality: As originally stated by the describer.
- Taxonomy: Highlighting any relevant taxonomic issues.
- Distribution: A description of the taxon's distribution.
- Habitat: A description of the taxon's habitat.
- Vegetation types: The vegetation types where the taxon is found, based on the 2018 vegetation map (SANBI, 2018), for records flagged as both Accepted and Locally Extinct. For those sites where the taxon is locally extinct, the vegetation types are given in parentheses.
- Assessment rationale: The assessment rationale provides information which justifies the Red Listing and related categories and criteria.
- Change in status from the Southern African Butterfly Conservation Assessment (SABCA): For those taxa where the Red Listing changed from the previous SABCA assessment of 2012 (Mecenero *et al.*, 2013), an evaluation is given of whether or not the change in status is genuine or non-genuine.
- Threats: A description of any threats relevant to the taxon.
- Conservation measures and research required: Any conservation measures or research required are mentioned here, where relevant.
- Relevant literature: Taxon-specific references published since SABCA are listed in this field, where applicable. The key references listed below were perused for all assessments.
- An example of citing a specific conservation assessment:

  "Woodhall, S.E. 2020. *Abantis bicolor*. pp. 34–35 *In:* Mecenero *et al.* 2020. Outcomes of the Southern African Lepidoptera Conservation Assessment (SALCA). *Metamorphosis* **31(4)**: 1–160".
- Abbreviations:

AOO:	Area of occupancy
CR:	Critically Endangered
CR–PE:	Critically Endangered – Possibly Extinct
DD:	Data Deficient
EN:	Endangered
EOO:	Extent of occurrence
EX:	Extinct
LC:	Least Concern
NT:	Near Threatened
VU:	Vulnerable

RELEVANT LITERATURE

The relevant literature listed below applies to all the conservation assessments. Literature applying only to specific taxa is given after each conservation assessment.

HENNING, G.A., TERBLANCHE, R.F. & BALL, J.B. (eds) 2009. South African Red Data Book: butterflies. SANBI Biodiversity Series Pretoria, South African National Biodiversity Institute. 13: 1–158.

IUCN. 2017. *Guidelines for Using the IUCN Red List Categories and Criteria.* Version 13. Prepared by the Standards and Petitions Subcommittee. Download from: http://www.iucnredlist.org/documents/RedListGuidelines.pdf

MECENERO, S., BALL, J.B., EDGE, D.A., HAMER, M.L., HENNING, G.A., KRÜGER, M., PRINGLE, E.L., TERBLANCHE, R.F. & WILLIAMS, M.C. 2013. *Conservation Assessment of Butterflies of South Africa, Lesotho and Swaziland: Red List and Atlas.* Saftronics (Pty) Ltd., Johannesburg & Animal Demography Unit, Cape Town.

PRINGLE, E.L., HENNING, G.A. & BALL, J.B. (eds) 1994. Pennington's Butterflies of southern Africa. 2nd Edition. Cape Town, Struik-Winchester. 1–800, 210 pls.

SANBI. 2018 *Beta Vegetation Map of South Africa, Lesotho and Swaziland (Shapefile) [vector geospatial dataset] 2018.* https://bgis.sanbi.org/SpatialDataset/Detail/669 (Accessed on 28 June 2020).

WILLIAMS, M.C. 2019. *Afrotropical Butterflies Encyclopaedia.* http://www.metamorphosis.org.za/?p=articles&s=atb

WOODHALL, S.E. 2020. Field guide to butterflies of South Africa (2nd Edn). Penguin Books South Africa.

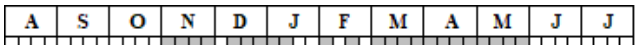
FAMILY: HESPERIIDAE

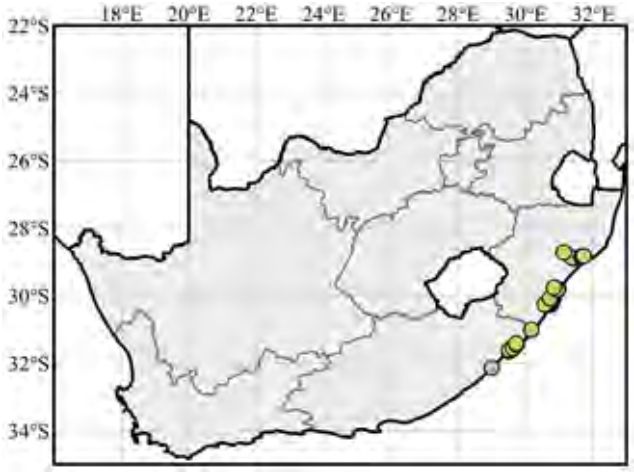
Genus *Abantis* Hopffer, 1855.

Abantis bicolor (Trimen, 1864)
Bicoloured Paradise Skipper; Wegkruip Dartelaartjie

Steve E. Woodhall

NT B1ab(iii)
Endemic





Type locality: Bashee River, Kaffraria.

Taxonomy: There are no notable issues. *Abantis bicolor* is a distinctive species that cannot easily be mistaken for other members of its genus. All subpopulations show some variation in the extent of the black upper side markings, and this variation appears to be consistent across subpopulations. Flight range is based on behaviour on sites where males are found on hilltops and females lower down on flowers; typically these sites are of the order of 1 000 m apart.

Distribution: Endemic to the Eastern Cape and KwaZulu-Natal provinces in South Africa, in the coastal and coastal hinterland regions from Nqileni in the south to Nkandla in the north. Historically it occurred further south near East London.

Habitat: Males are usually found on hill tops near or in moist scarp forests, or forest/grassland mosaics, in the coastal hinterland and hillsides. Both sexes may be found on flowers, or perching on prominent shrubs and trees, close to forest edges.

Vegetation types: CB3 KwaZulu-Natal Coastal Belt Grassland, CB4 Pondoland-Ugu Sandstone Coastal Sourveld, CB5 Transkei Coastal Belt, CB6 KwaZulu-Natal Coastal Belt Thornveld, FOz5 Scarp Forest, FOz7 Northern Coastal Forest, Gs20 Moist Coast Hinterland Grassland, SVs5 KwaZulu-Natal Sandstone Sourveld, (CB3 KwaZulu-Natal Coastal Belt Grassland).

Assessment rationale: This is an uncommon, habitat-restricted endemic species, known from seven subpopulations in central to southern coastal KwaZulu-Natal province, and the adjoining north-eastern section of the Eastern Cape province, in South Africa (EOO 16 447 km^2). EOO has declined since the previous assessment (EOO 18743 km^2) and historically (EOO 29 000 km^2). The butterfly is present in well-protected nature reserves such as Nkandla and Ongoye Forests, Krantzkloof Nature Reserve near Durban, and Umtamvuna Nature Reserve near Port Edward. However, known sites within these are far apart. Over the entire range, the population is mostly not severely fragmented because most of the AOO is within fairly homogeneous forested areas (with the possible exception of the Westville and Illovo sites). Outside the nature reserves the taxon's forest habitat is under threat from agriculture and informal human settlements. At least one protected area (Vernon Crookes Nature Reserve) has been subject to a successful land claim and hence faces the same threats. One location, at Palmiet Nature Reserve in Westville, Durban, has produced no sightings of the butterfly in the past 18 years and the site where the sightings were made has been concreted over. The location at Illovo (Mpongolwana) is inside an area already threatened by informal agriculture and settlement, and overgrazing. Some of the sites in its known AOO are under severe threat and its AOO is expected to decline in future. There are 15 locations. The colonies around Port St Johns form six separate locations, three of which are under threat (alien plant invasion – two locations, and urbanisation – one location). All these colonies may come under threat from development due to the planned N2 road extension and the urbanisation that is likely to accompany this. This would have the effect of reducing the number of locations to 10. Therefore, a continued decline in the area of suitable habitat is expected. EOO is under 20 000 km^2 which puts it inside the Vulnerable threshold but the number of locations is just over 10, just outside the Vulnerable threshold. The taxon thus qualifies globally under the IUCN criteria as Near Threatened under criterion B.

Change in status from SABCA: The EOO has declined since the previous assessment from 18 743 km^2 to 16 447 km^2, due to its apparent disappearance from its southern locations (East London area) and increasing threats across its range, but due to the number of locations being 15 this is still within the Near Threatened (B1) threshold. There were significant threats during the previous assessment that were not considered, and this taxon should have been assessed as Near Threatened then too. The Red List criteria were therefore wrongly applied previously. The status change from Least Concern to Near Threatened is therefore a non-genuine change.

Threats: Subpopulations occurring outside of protected

areas are threatened from habitat destruction by agriculture and housing, in the form of informal settlements. The sites at Vernon Crookes Nature Reserve may come under threat from both of these, due to a recent successful land claim. Invasive alien plants also pose a threat to the early stages of the taxon in the Port St Johns area, in forests where its host plant probably grows, and alien plants are poorly controlled. Although the host plant is not known, such invaders can form dense stands that shade out and displace indigenous vegetation. The subpopulations in the south, along the Eastern Cape province coast, may face future threats from development pressures as a result of a planned highway (N2) linking Durban and East London.

Conservation measures and research required: The known subpopulations outside current protected areas need protection from human encroachment and alien plant invasion. Monitoring of all subpopulations is required to establish overall population, distribution and trends. Research required into its life history and ecology/habitat requirements.

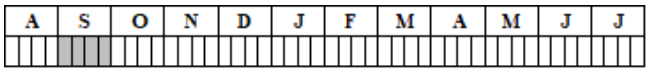
Genus *Kedestes* Watson, 1893.

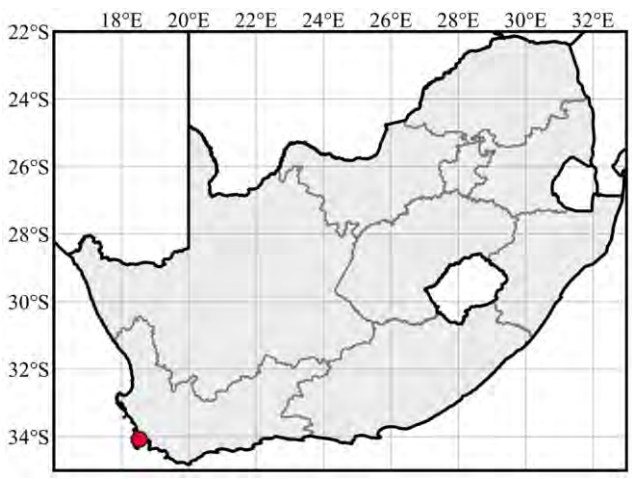
Kedestes barberae bunta Evans, 1956

Cape Freckled Ranger; Kaapse Vlakte Gevlekte Wagtertjie

Andrew S. Morton

CR B1ab(iii); C2a(i)
Endemic





Type locality: Nr. Steenberg Railway Station, Cape prov.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, from a small area of the Cape Flats in and around Strandfontein.

Habitat: Stands of *Imperata cylindrica* growing in damp seeps between dunes, predominantly in Cape Flats Dune Strandveld. The sandy soil where the butterfly is found is mainly alkaline and calcareous.

Vegetation types: FS6 Cape Flats Dune Strandveld.

Assessment rationale: A very range restricted endemic taxon from the Western Cape, South Africa (EOO 1 km^2). There are two locations. Housing and development on the Cape Flats has destroyed most suitable habitat for this taxon and it has been reduced to one last population. The drought is also impacting the host plant. Despite efforts to protect the last remaining site, less than 25 adults were recorded during the last flight period in 2016. It therefore qualifies as Critically Endangered under criteria B and C.

Change in status from SABCA: The status has not changed from the previous assessment.

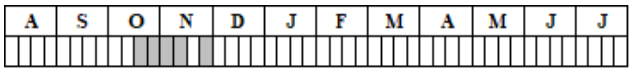
Threats: Heavier vehicular traffic on the Strandfontein road, which bisects the main colony, has increased the incidence of specimens being hit and killed by vehicles and the amount of air-borne toxins and pollutants from exhaust fumes being released into the habitat. It has also increased the risk of fire in the area caused by passing motorists disposing of smoldering cigarette ends. The recent drought in the Cape Town area has led to the seeps becoming drier. Alien vegetation, mainly wattles, has in the past increased the drying out of the seeps and raised the risk of fire frequency and intensity. The constant threat of a road-widening project at the Strandfontein localities looms. The new locality at Pelican Park suffers from some of the same threats, but this site is at least in a Nature Reserve and the threats can more easily be mitigated (see conservation measures).

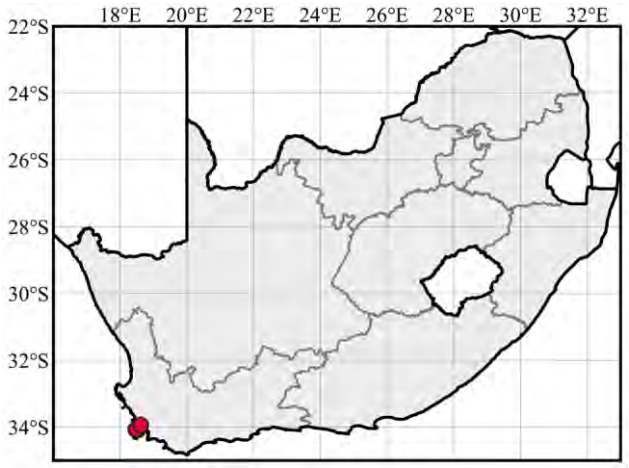
Conservation measures and research required: The Cape Town Metro has fenced the Strandfontein portion of the taxon's habitat, to prevent dumping, and has cleared the habitat of alien plants. A new locality for the butterfly was found in the Pelican Park section of the False Bay Nature Reserve. Ismat Adams' MSc research project, which gathered life-history and ecological data has been successfully completed. A *Kedestes* Conservation Committee has been set up including personnel from all stakeholders, including the Cape Town Metro, LSA, University of Cape Town and the Cape Town Environmental Education Trust (CTEET). CTEET have appointed a project manager, Louise Baldwin and the Committee has established a conservation strategy which includes habitat restoration at all occupied sites and a captive rearing programme which aims to increase the number of adults by preventing mortality in the wild.

Kedestes lenis lenis Riley, 1932
False Bay Unique Ranger; Valsbaai Unieke Wagtertjie

Andrew S. Morton

CR B1ab(i,ii,iii,iv,v)
Endemic





Type locality: Cape of Good Hope.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, from Strandfontein, Retreat and Bellville South on the Cape Flats.

Habitat: Damp areas in Fynbos where its host plant *Imperata cylindrica* grows.

Vegetation types: FFd5 Cape Flats Sand Fynbos, FS6 Cape Flats Dune Strandveld.

Assessment rationale: This is a range restricted endemic taxon from the Western Cape province, South Africa (EOO 62 km^2). The majority of this taxon's former habitat has been lost to urban and agricultural development and the population is severely fragmented. There are four remaining locations. The subpopulation at Strandfontein is bisected by a major road and mortality rates from passing traffic are high. A portion of this habitat along Strandfontein road is likely to be lost to an imminent road widening. The damp seeps in which the host plant grows are drying out and the host plant is becoming combustible. Fortunately this taxon also occurs in two municipal reserves managed by the Cape Town Metro where it is well protected at Pelican Park and Rondevlei. The location at Steenberg railway station is likely to be no longer viable as consistent surveys over the last five years have resulted in no adults being recorded. There is a subpopulation at the Cape Flats Nature Reserve at the University of the Western Cape. The reserve management are aware of the butterfly and the reserve is well managed. Invasive alien plants are causing ongoing habitat degradation at all known subpopulations. The taxon therefore qualifies globally under the IUCN criteria as Critically Endangered under criterion B.

Change in status from SABCA: The nature and intensity of the threats to its already severely fragmented population have increased since the previous assessment. A portion of this habitat along Strandfontein road is due to be lost to an imminent road widening. Drought is causing the damp seeps in which its food plant grows to dry out and the food plant is becoming combustible. The subpopulation at Steenberg Railway station has been lost. Invasive alien plants are causing ongoing habitat degradation. The status change from Endangered to Critically Endangered is therefore genuine.

Threats: Development across the Cape Flats has destroyed a large portion of suitable habitat. Development includes housing, farming and a large sewage works at Strandfontein. The last remaining suitable habitat is severely fragmented. Some of this habitat is degraded by alien vegetation which dries out the seeps in which the host plant grows. The threat and intensity of fires is enhanced by the flammable alien wattles. The largest subpopulation is bisected by a major road with ever increasing traffic (causing pollution and fire risk) and an imminent threat of road widening. The converse is true for the subpopulation in Bellville. Fires are far too infrequent and planned burns impossible due to the proximity to the airport where visual clarity is of utmost importance to air traffic.

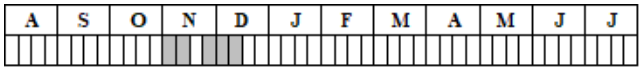
Conservation measures and research required: The Cape Town Metro has fenced the Strandfontein portion of the taxon's habitat, to prevent dumping, and has cleared the habitat of alien plants. Ismat Adams' MSc research project, which gathered life-history and ecological data has been successfully completed. A *Kedestes* Conservation Committee has been set up including personnel from all stakeholders, including the Cape Town Metro, LSA, University of Cape Town and the Cape Town Environmental Education Trust (CTEET). CTEET have appointed a project manager, Louise Baldwin and the Committee has established a conservation strategy which includes habitat restoration at all occupied sites and a captive rearing programme which aims to increase the number of adults by preventing larval mortality in the wild.

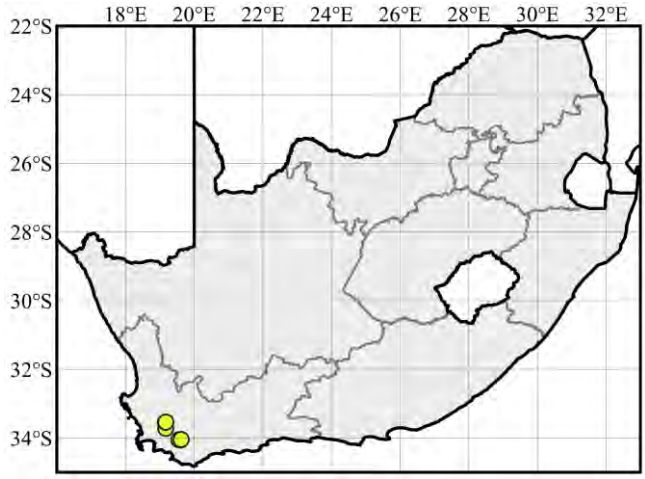
Kedestes niveostriga schloszi Pringle, 1997
Greyton Dark Ranger; Greyton Donker Wagtertjie

Andrew S. Morton

VU B1ab(iii)
Endemic

Type locality: Greyton.





Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, previously only known from the foot of the Riversonderend Mountains, near Greyton, but two other subpopulations, at Bain's Kloof and in Du Toit's Kloof, were discovered by the taxon author in 2015 and 2016, respectively.

Habitat: Damp riverbed environs in fynbos where its host plant *Pennisetum macrourum* grows.

Vegetation types: FFa2 Breede Alluvium Fynbos, FFg2 Boland Granite Fynbos, FFh7 Greyton Shale Fynbos, FFs10 Hawequas Sandstone Fynbos, FRs12 Central Ruens Shale Renosterveld.

Assessment rationale: An endemic taxon from the Western Cape province, South Africa (EOO 578 km^2). There are six locations. This taxon was previously only known from riverine environs around Greyton, which are being degraded and lost as the town of Greyton expands. Several surveys of Greyton over the last five years have resulted in only one individual adult seen in 2015. However, in 2015 the author found the taxon at another locality, 100 km from Greyton, in a nature reserve in Bain's Kloof. This subpopulation is healthy and in a well-protected area. In 2016 the taxon was found at a third locality, in Du Toit's Kloof, which also falls within a nature reserve. However, only one specimen was seen and further searches along the Molenaars River in Du Toit's Kloof are required to determine the size of this subpopulation. All known locations are experiencing ongoing decline in habitat quality as a result of invasion by alien plants. The taxon thus qualifies globally under the IUCN criteria as Vulnerable under criterion B.

Change in status from SABCA: Since the previous assessment the author of the current assessment has done much field work in order to establish the true status of this taxon. The localities around the type locality are degraded and only one specimen has been seen in the last four years. However, healthy populations have been found in Bain's Kloof 100 km away (Morton, 2016) and a single specimen was taken at Du Toit's Kloof since the previous assessment. The EOO has now increased to 578 km^2 and there are six locations. These localities would have existed during the previous assessment. Despite the discovery of new localities the taxon is still under threat as it is experiencing ongoing decline in habitat quality as a result of invasion by alien plants. The status change from Endangered to Vulnerable is therefore non-genuine.

Threats: The habitat around Greyton has been significantly degraded by human interference (residential encroachment, grazing, etc.). These factors appear to account for the disappearance of the taxon from some of its former localities around Greyton. Two newly discovered subpopulations occur in nature reserves but are still threatened by encroachment of alien vegetation.

Conservation measures and research required: Further field surveys are required to establish the range and relative abundance of this taxon (surveys in the last two years have resulted in the discovery of two subpopulations). These two subpopulations are within nature reserves, one private (Bastiaan's Kloof in Bain's Kloof) and the other (Du Toit's Kloof) under the control of CapeNature. Continued alien vegetation control is required at both sites. Research is needed into the life history and ecology and the population needs to be monitored at all sites.

Relevant literature:

Morton, A.S. 2016. Discovery of a new locality for the endangered skipper butterfly *Kedestes niveostriga schloszi* Pringle & Schlosz, 1997. *Metamorphosis* **27**: 15–16

Kedestes sarahae Henning & Henning, 1998

Cedarberg Ranger; Sederberg Wagtertjie

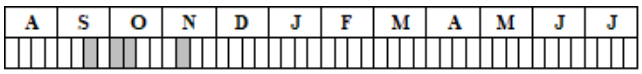
Jeremy C.H. Dobson & Chris M. Dobson

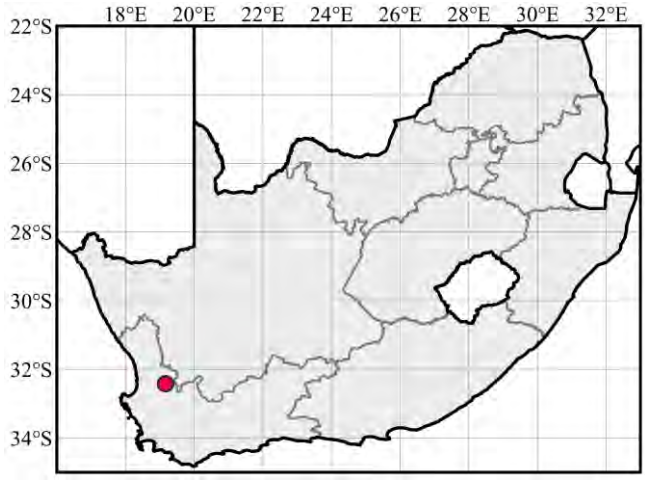
CR B1ab(iii,v)+2ab(iii,v)
Endemic

Type locality: Cederberg, 920 m, Western Cape province.

Taxonomy: Morphologically, *Kedestes sarahae* is similar to *Kedestes barberae*. The subspecies *K. barberae bonsa* displays features transitional between *K. b. barbarae* and *K. sarahae*, and the latter may thus represent another subspecies of *K. barberae.* It is recommended that DNA comparisons are undertaken to help resolve the relationship between these taxa.

Distribution: Endemic to the Western Cape province in





South Africa, known only from the type locality in the Cederberg mountains, south-east of Clanwilliam.

Habitat: This species has only been recorded from the banks of a small stream in the Cederberg mountains. It appears to be associated with patches of *Merxmuellera* grass, in montane fynbos at an altitude of about 920 m.

Vegetation types: FFs4 Cederberg Sandstone Fynbos.

Assessment rationale: A range-restricted endemic species known only from one locality in the Cedarberg in the Western Cape province, South Africa (EOO 8 km^2, AOO 8 km^2). There has been a drastic reduction in the number of adults recorded over the last few seasons, and there was a fire that burnt the habitat in December 2016. While the fire occurred outside of the butterfly's flight period, it is believed that early stages (larvae and/or pupae) may have been killed. No empirical data are available, but the number of adult butterflies observed in the 2016 season before the fire (J. Dobson, pers. obs.; H. Selb and A. Morton, pers. comm.) appeared to represent an order of magnitude reduction from the 2012 season (H. Selb, pers. comm.). The taxon thus qualifies globally under the IUCN criteria as Critically Endangered under criterion B.

Change in status from SABCA: The 2012 assessment was based on the assumption that this species would be located within other areas nearby given the extensive and pristine nature of the site. However, extensive searches recently, within apparently suitable habitat nearby, have failed to locate any more butterflies, and thus the assumption has since been proven to be incorrect. It is a very localised species, having an AOO < 1 km^2 and one location. During the previous assessment there were no obvious threats. However, the numbers of adults seems to have crashed in recent years, with approximately 10 specimens observed in 2016 (J. Dobson, pers. obs.). The drought is believed to be responsible for the recent decline, culminating in a fire that swept through the locality in December 2016. While this fire was outside the adult butterfly's flight period, it is believed that early stages of the butterfly may have been destroyed. The previous assessment should have considered fire as a future potential threat and this species should consequently have been listed as Vulnerable D2. The reduction in population size since the 2012 assessment and the current threats of fire and drought, make it Critically Endangered now, and thus the change in status from the previous assessment, which should have been Vulnerable, is genuine.

Threats: Although this species occurs in a remote area of the Cederberg, it appears to be dependent on patches of *Merxmuellera* grass, confined to the banks of a small stream. It is uncertain what the effect of the recent drought will have on this vegetation. In addition, the entire locality was burnt during a fire in September 2017, during the butterfly's flight period. The consequences of this event will only become apparent during the course of the coming season.

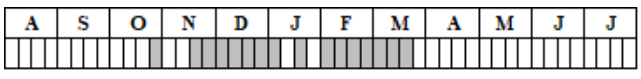
Conservation measures and research required: The population needs to be monitored at all sites during the September/October flight period, to establish the full extent of its range and relative abundance. Research is needed into the life history and ecology, and future conservation efforts will be informed by this research.

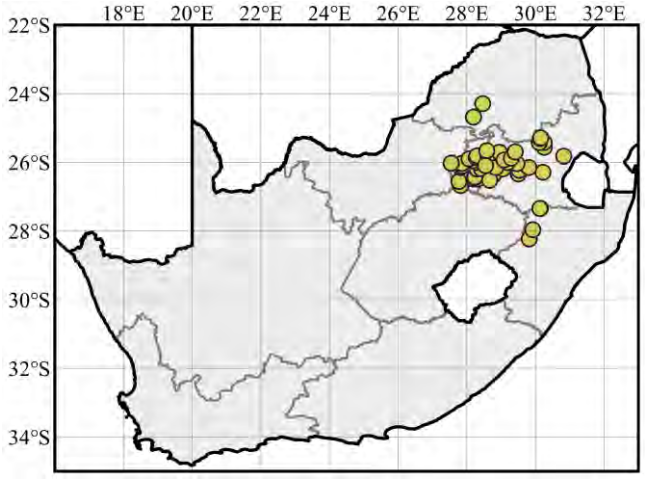
Genus *Metisella* Hemming, 1934.

Metisella meninx (Trimen, 1873)
Marsh Sylph; Moeras Walsertjie

Graham A. Henning

NT C2a(i)
Endemic





Type locality: Potchefstroom, Transvaal Republic.

Taxonomy: A research paper distinguishing two subspecies from the nominate subspecies is being prepared for publication. One of these putative subspecies comprises the population in Angola.

Distribution: Endemic to the Gauteng, KwaZulu-Natal, Limpopo and Mpumalanga provinces in South Africa, from Magaliesberg in the west to Barberton in the east, and Ladysmith in the south to Vaalwater in the north. Also as a newly differentiated subspecies in Angola.

Habitat: Marshes and stream banks in wetlands in open grassland, at altitudes of 1 400 to 1 700 m; the marshes are often in headwaters of streams.

Vegetation types: Gh15 Carletonville Dolomite Grassland, Gm10 Egoli Granite Grassland, Gm11 Rand Highveld Grassland, Gm12 Eastern Highveld Grassland, Gm14 Wakkerstroom Montane Grassland, Gm17 Barberton Montane Grassland, Gm30 Steenkampsberg Montane Grassland, Gm8 Soweto Highveld Grassland, Gm9 Tsakane Clay Grassland, Gs4 Northern KwaZulu-Natal Moist Grassland, SVcb10 Gauteng Shale Mountain Bushveld, SVcb11 Andesite Mountain Bushveld, SVcb13 Loskop Mountain Bushveld, SVcb17 Waterberg Mountain Bushveld, SVcb6 Marikana Thornveld, SVcb9 Gold Reef Mountain Bushveld.

Assessment rationale: A wide-ranging endemic taxon from the northern and eastern regions of South Africa (EOO 80 348 km^2). Found in very small areas where its host plant can be found in wetlands. There are already dozens of localities where this taxon was previously found which have been destroyed by development. Every year more localities are modified and the butterflies occurring at these sites are extirpated. The taxon is a habitat specialist, being completely dependent on its host plant in riverine or wetland habitats. There are less than 12 000 mature individuals in the entire population, with no more than 250 individuals per subpopulation. The taxon thus qualifies globally under the IUCN criteria as Near Threatened under criterion C.

Change in status from SABCA: This species is found widely but in very small areas in pristine wetland habitats where its host plant, Rice Grass (*Leersia hexandra*), can be found. There are already dozens of localities where this taxon has previously been found but which have been destroyed by development. Since the previous assessment, every year more localities are modified and the butterflies occurring at these sites are extirpated. The taxon is a habitat specialist being completely dependent on its host plant and pristine habitat for survival. Currently there are estimated to be less than 12 000 mature individuals in the entire population, with no more than 250 individuals per subpopulation. The change in status from Least Concern to Near Threatened is therefore genuine.

Threats: Urban encroachment, agriculture and acid mine-drainage are current or potential threats. Natural phenomena such as storms and flooding have been recorded as decimating entire colonies overnight (G.A. Henning, pers. obs.). Wetlands, the preferred habitat of this taxon, are being drained and modified throughout the distribution of the taxon.

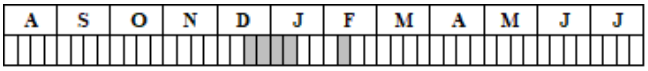
Conservation measures and research required: Ongoing monitoring of this taxon should be undertaken, although it is not threatened at present. Research into its taxonomy is ongoing, and needs to include its life history and ecology/habitat requirements.

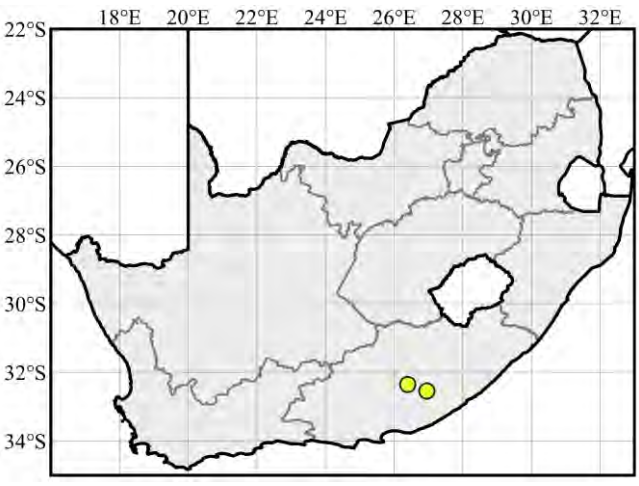
Metisella syrinx (Trimen, 1868)

Bamboo Sylph; Bamboes Walsertjie

Jeremy C.H. Dobson & Chris M. Dobson

VU D2
Endemic





Type locality: On the summit of Gaika's Kop, the highest point of the Amatola Mountains, being about 6,800 feet above sea-level.

Taxonomy: There are no notable issues.

Distribution: An endemic to the Eastern Cape province in South Africa, from Gaika's Kop near Hogsback and near Bedford.

Habitat: Rocky areas, often near the summit of mountains, in montane grassland. Very closely associated with the larval host plant, Mountain Bamboo (*Bergbambos tessellata*). For reasons not yet understood, this species is not found in habitats to the north of its known range, where conditions appear to be suitable. These include parts of the Royal Natal National Park and Giants Castle (northern Drakensberg) and mountains above Harrismith and Fouriesburg in the Free State.

Vegetation types: Gd2 Amathole Mistbelt Grassland.

Assessment rationale: This is a highly restricted endemic species from the Eastern Cape province, South Africa (EOO 18 km^2, AOO 8 km^2). It has two locations that are not under significant threat at present. It is a very localised butterfly, entirely dependent on a single host-plant, *B. tessellata*, which tends to occur near the tops of mountains. The plant itself is not red-listed, however the butterfly only occurs within a relatively small portion of the plant's regional distribution (the extreme southern extent). Fires, climate change and exploitation are considered to pose plausible future threats to the plant and, consequently, to the butterfly. It therefore qualifies as Vulnerable under criterion D.

Change in status from SABCA: This species has always been considered a relatively rare habitat specialist. For the 2012 assessment it was considered to occupy a large area from Bedford in the southwest to Drakensberg Gardens in the northeast, with an EOO of about 20 000 km^2. For the current assessment, which was based on verified data, there are only two accepted locality-records, Gaika's Kop and Bedford, and this would have also been valid for the previous assessment. There has been no change in threats since the previous assessment. Thus, previously it should have been assessed as Vulnerable, and thus the change in status from Least Concern to Vulnerable is non-genuine.

Threats: There do not appear to be any significant threats at present. Potential future threats include the vulnerability of the larval host plant, *B. tessellata*, to fire and to possible exploitation. As this plant is generally found near the tops of mountains, it may be vulnerable to climate change.

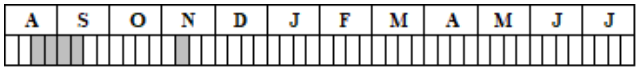
Conservation measures and research required: There do not appear to be significant threats at present. The species is entirely dependent on a single, relatively uncommon host plant *B. tessellata*. Excessive or unseasonal fires, commercial exploitation of the host plant, or the potential effects of climate change pose future threats.

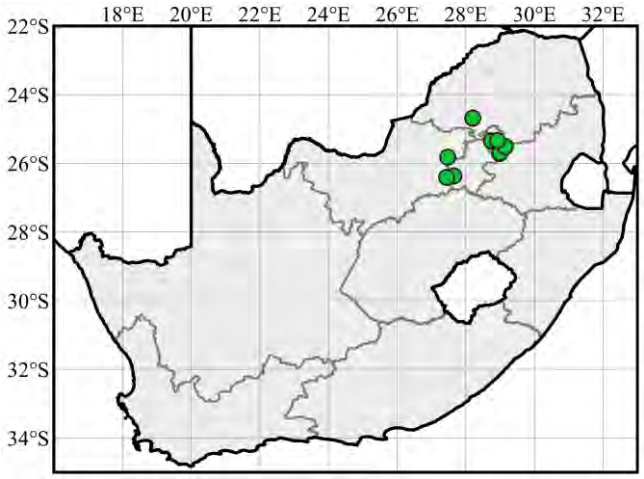
Genus *Platylesches* Holland, 1896.

Platylesches dolomitica Henning & Henning, 1997
Spring Hopper; Lente Springertjie

Jeremy C.H. Dobson & Chris M. Dobson

LC
Endemic





Type locality: South Africa: 30km south-east of Steelpoort, Lydenburg District, Mpumalanga, 8.ix.1995, A. Mayer.

Taxonomy: There are no notable issues.

Distribution: Endemic to Gauteng, Mpumalanga, North West and Limpopo provinces in South Africa, from Carltonville in the south-west to Lydenburg in the north-east.

Habitat: Found on relatively flat, sandy to rocky slopes where *Parinari capensis* occurs. The locations are typically north-facing, between an altitude of 1 300 m and 1 800 m. This species does not occur on hilltops and appears to avoid steep slopes.

Vegetation types: SVcb10 Gauteng Shale Mountain Bushveld, SVcb12 Central Sandy Bushveld, SVcb13 Loskop Mountain Bushveld, SVcb17 Waterberg Mountain Bushveld, SVcb9 Gold Reef Mountain Bushveld.

Assessment rationale: This is a relatively widespread endemic species in South Africa (EOO 16 406 km^2). It appears to be fairly resistant to overgrazing and drought. It closely resembles a very common species, *Platylesches ayresii*, which is almost always present at the same sites. As a result, it has historically been overlooked. More and more localities are being discovered in recent years and its extent

of occurrence has increased significantly. The taxon thus qualifies globally under the IUCN criteria as Least Concern.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: The taxon is widespread and its larval host plant, *P. capensis*, is relatively resistant to drought, fire and overgrazing. There do not appear to be any significant threats at present.

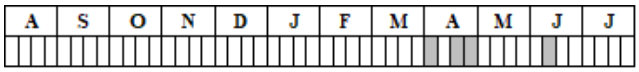
Conservation measures and research required: Ongoing surveys should be undertaken to discover new localities for this taxon. More research is required to assess its life history, ecology, population numbers and distribution.

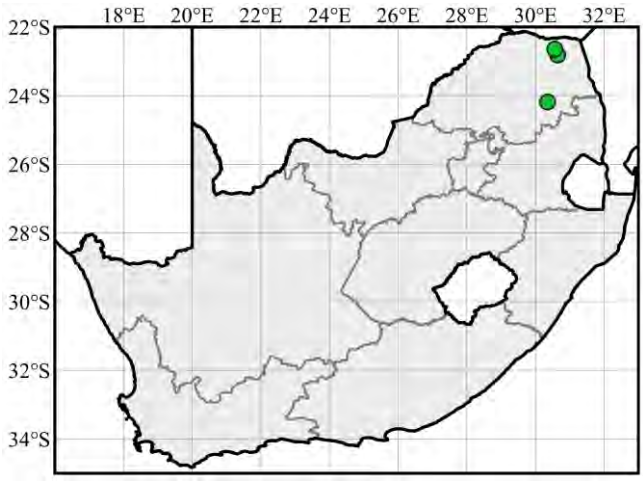
Genus *Teniorhinus* Holland, 1892

Teniorhinus harona (Westwood, 1881)
Orange Small Fox; Pylkop Oranjetjie

André J. Coetzer

LC





Type locality: Near the Victoria Falls.

Taxonomy: There are no notable issues.

Distribution: This taxon has been recorded from the Limpopo province in South Africa, but is more widely distributed further north in Africa, at least as far as Angola and Tanzania.

Habitat: This species is associated with *Brachystegia* woodland further north in Africa. In South Africa it has been recorded from mixed bushveld vegetation types. No *Brachystegia* species have been recorded in Mphaphuli Cycad Reserve or in Lekgalameetse Nature Reserve.

Vegetation types: FOz4 Northern Mistbelt Forest, SVcb21 Soutpansberg Mountain Bushveld, SVl1 Makuleke Sandy Bushveld.

Assessment rationale: This species was recorded for the first time in South Africa in 2015, and its conservation status has not been assessed before. It is widespread in southern Africa (EOO >200 000 km^2). The taxon thus qualifies globally under the IUCN criteria as Least Concern.

Change in status from SABCA: Not previously assessed.

Threats: There is a fair amount of wood-harvesting taking place in the areas surrounding Gundani and the Mphaphuli Cycad Reserve, but Mphaphuli is protected as a reserve and Gundani is considered a sacred forest, so wood-harvesting should not pose a threat to the two locations in these areas. Further north in Africa *Brachystegia* woodland is heavily affected by charcoal production, but it is a widely distributed vegetation type and the survival of the butterfly species is not under threat.

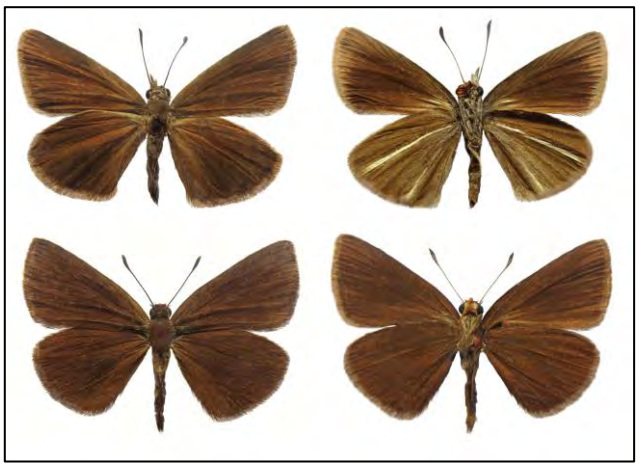
Conservation measures and research required: No conservation measures are required since it occurs in the Mphapuli Cycad Reserve (Coetzer, 2014). Research is needed to establish if it also occurs in the Gundani forest, which is c. 20 km away and contains *Brachystegia* woodland.

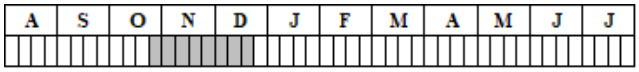
Genus *Tsitana* Hemming, 1934.

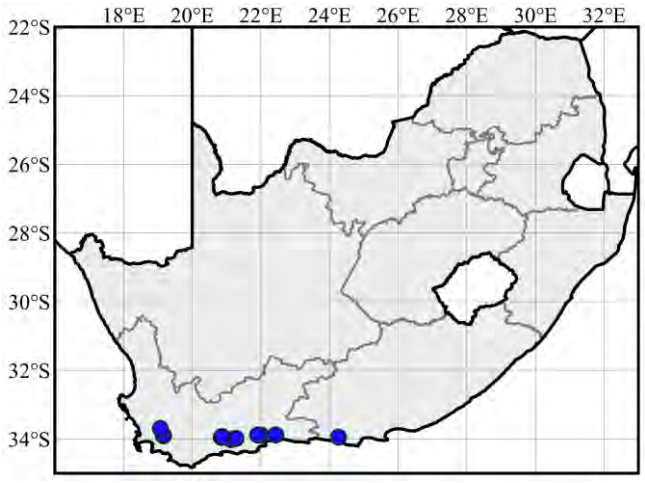
Tsitana dicksoni Evans, 1937
Hawequas Sylph; Ligte Walsertjie

Jeremy C.H. Dobson & Chris M. Dobson

LC
Rare – Low Density
Endemic







Type locality: Franschhoek Mts. (north of top of pass), Cape province.

Taxonomy: The relationship between *Tsitana dicksoni* and other members of the *Tsitana* genus should be researched.

Distribution: Endemic to the Western Cape and Eastern Cape provinces in South Africa, inland mountain areas from Franschhoek Pass in the west to Kareedouw in the east.

Habitat: Hillsides and mountains. Grassy spots in montane fynbos vegetation.

Vegetation types: FFg2 Boland Granite Fynbos, FFs10 Hawequas Sandstone Fynbos, FFs16 South Langeberg Sandstone Fynbos, FFs18 North Outeniqua Sandstone Fynbos, FFs19 South Outeniqua Sandstone Fynbos, FFs20 Tsitsikamma Sandstone Fynbos.

Assessment rationale: This is an endemic taxon from the Western Cape and Eastern Cape provinces, South Africa (EOO 7 283 km^2). Although it occurs on three different mountain ranges, it is rarely seen due to its low density. The taxon thus qualifies globally under the IUCN criteria as Least Concern and is nationally classified as Rare (Low Density).

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: Although a rare, low density species, *T. dicksoni* can be found in suitable habitat throughout its range and is not threatened.

Conservation measures and research required: No conservation actions are recommended other than monitoring of the subpopulations to establish its range and population size. Research is required into the taxonomy of the genus, as well as the life history and ecology of *T. dicksoni*.

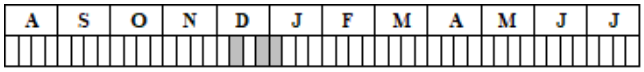
FAMILY: LYCAENIDAE

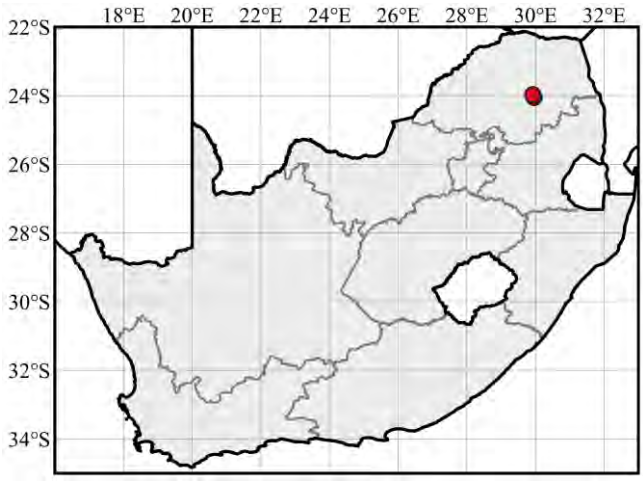
Genus *Alaena* De Boisduval, 1847.

Alaena margaritacea Eltringham, 1929
Wolkberg Zulu; Wolkberg Zoeloe

André J. Coetzer

CR B1ab(iii)+2ab(iii)
Endemic





Type locality: Haenertzburg.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Limpopo province in South Africa, restricted to two subpopulations in the Wolkberg mountain range.

Habitat: Steep rocky slopes of Woodbush Granite Grassland associated with lichen-covered rocks. There seems to be a connection between a *Xerophyta* species (Velloziaceae) growing in the area and the butterfly species. *Xerophyta* is not listed as a key species for either of the vegetation types, but it is present at both the known localities, and absent from most of the pristine grasslands where the butterfly is also absent.

Vegetation types: Gm25 Woodbush Granite Grassland, Gm26 Wolkberg Dolomite Grassland.

Assessment rationale: This is a highly range-restricted endemic from Limpopo province in South Africa (EOO 8 km^2, AOO 8 km^2). There are two locations. When the Red List status of this species was previously assessed there was only one locality known for the species, the second only having been discovered in 2013. Unfortunately, both locations fall outside officially protected areas, and are threatened by plantations and other factors associated with commercial operations (change or reduction in fire frequency, invasive species and decreased soil moisture content). In addition, the quality of the habitat is deteriorating and the two localities are severely fragmented, with little or no corridor for gene flow. The previous 2012 assessment inferred a decline in the number of mature individuals. It was based on observations from the 1980s where hundreds of specimens were seen in a day, compared to the 10 to 30 specimens that are typically seen in a day during recent surveys. However, without detailed quantitative analyses this criterion cannot be used as it may well be a sampling artifact, where surveys are affected by season, weather and sampling effort. Due to the small AOO and EOO, the severely fragmented small subpopulations, and the decline in the quality of the habitat, the status remains Critically Endangered, qualifying under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: The type locality is surrounded by plantations, which prevent the dispersal of specimens, and therefore gene flow, between the subpopulations. Plantations are also known to affect the soil water content and may have a negative impact on the remaining grassland. Due to the risk of damage to the plantations, the fire regime for both locations is no longer natural.

Conservation measures and research required: A buffer zone from the exotic plantation trees and a fire management plan is needed to protect the type locality. Research is needed into the population size, variability and area of occupancy at both known sites.

Relevant literature:
Coetzer, A.J. (2015). Life history and conservation status of *Alaena margaritacea* Eltringham, 1929 (Lepidoptera: Lycaenidae: Poritiinae) Metamorphosis **26**: 32–37.

Genus *Aloeides* Hübner, 1819.

Aloeides barbarae Henning & Henning, 1994
Barberton Russet; Klein Bruin Kopervlerkie

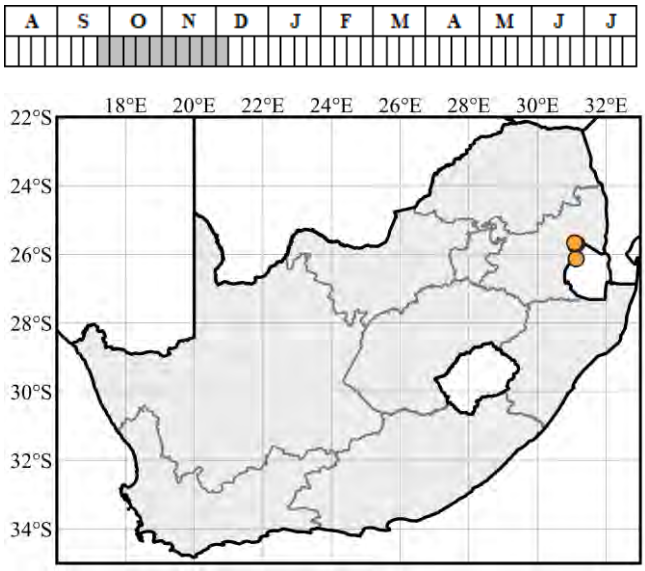
Graham A. Henning

EN B1ab(iii)+2ab(iii)
Endemic

Type locality: Barberton, Transvaal, 3 Dec. 1989, N.K. Owen-Johnston.

Taxonomy: The specimens from Swaziland are in the USA and were studied from photographs supplied. The author is satisfied that they represent this species.

Distribution: Found in Mpumalanga province in South



Africa, on the hills between the Sheba and Fairview mines near Barberton, to Malolotja National Park in Swaziland.

Habitat: Rocky ridges in sub-montane grassland.

Vegetation types: Gm16 KaNgwane Montane Grassland, Gm17 Barberton Montane Grassland, SVl12 Kaalrug Mountain Bushveld, SVl3 Granite Lowveld.

Assessment rationale: A range-restricted species from Mpumalanga province in South Africa and also from Swaziland (EOO 168 km^2, AOO 32 km^2). There are three locations. The habitat is declining in the Mountainlands Nature Reserve due to invasive plants. The taxon thus qualifies globally under the IUCN criteria as Endangered under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

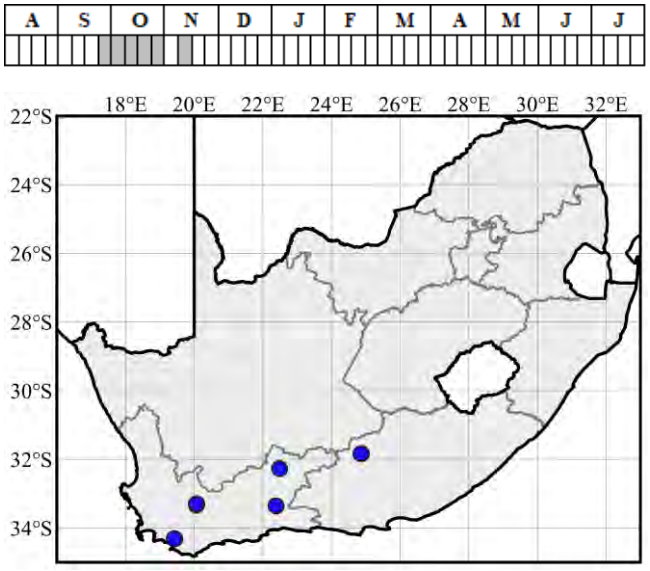
Threats: The prospect of mining in the Barberton area and the presence of plantations of alien Eucalyptus trees in the vicinity of one of the subpopulations are threats to the continued existence of the butterfly in the area. Fire near or during the flight period is a serious threat to all subpopulations. Grazing and other disturbances is causing ongoing decline to habitat quality. The subpopulation in the Mountainlands Nature Reserve is under threat from habitat modification owing to the effects of grazing by animals not formerly there, road works and trampling by visitors to the reserve. Mining is a potential threat in the reserve.

Conservation measures and research required: A management plan is needed, which limits disturbances (such as fires or grazing) and deterioration of the habitat at all the known sites. Research is needed into the life history and ecology/habitat needs, which includes monitoring of both the habitat and the population.

Aloeides caledoni Tite & Dickson, 1973
Caledon Russet; Caledon Kopervlerkie

Ernest L. Pringle

LC
Rare – Low Density
Endemic



Type locality: Cape province: Shaw's Mountain, south of Caledon.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Eastern Cape and Western Cape provinces in South Africa, from Caledon in the west to Nieu-Bethesda in the east.

Habitat: Rocky summits and slopes of mountains.

Vegetation types: FFq3 Matjiesfontein Quartzite Fynbos, FFs12 Overberg Sandstone Fynbos, FFs23 North Swartberg Sandstone Fynbos, FRs6 Matjiesfontein Shale Renosterveld, Gh1 Karoo Escarpment Grassland.

Assessment rationale: An endemic species from the Eastern Cape and Western Cape provinces of South Africa (EOO 38 972 km^2). There are six widely separated subpopulations, none of which are threatened. It is clear that the short flight-period and the localised nature of its colonies have resulted in this taxon being overlooked in its area of distribution. The taxon's wide distribution indicates that there will, in due course, be many other colonies found. The taxon thus qualifies globally under the IUCN criteria as Least Concern and is nationally classified as Rare (Low Density).

Change in status from SABCA: The status has not changed from the previous assessment.

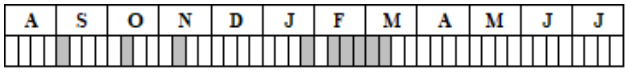
Threats: No threats identified. Known colonies are in arid, remote mountainous areas.

Conservation measures and research required: No conservation actions recommended. Research is needed into the taxonomy of the widely scattered populations, life history, ecology, population size, distribution and trends.

Aloeides carolynnae aurata Pringle, 1994
De Hoop Dark Russet; De Hoop Kopervlerkie

Ernest L. Pringle

NT D2
Endemic



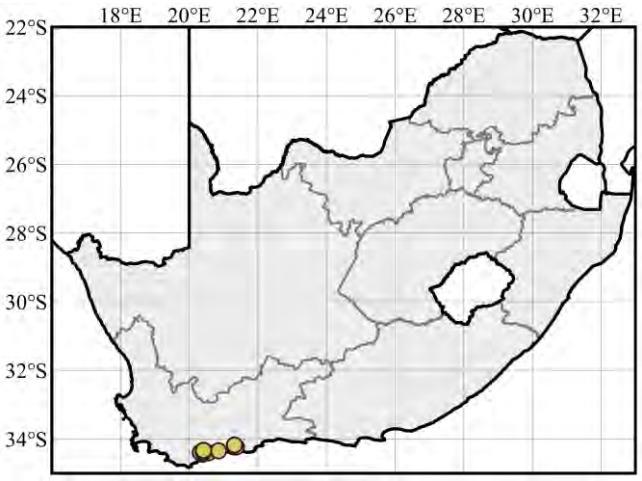
Type locality: Witsand, Western Cape province.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, from the De Hoop Nature Reserve near Bredasdorp in the west to the Riversdale district in the east.

Habitat: Flat, sandy terrain in subcoastal fynbos.

Vegetation types: FFd9 Albertinia Sand Fynbos, FFl2 De Hoop Limestone Fynbos, FFl3 Canca Limestone Fynbos,



FRs13 Eastern Ruens Shale Renosterveld.

Assessment rationale: An endemic taxon from the Western Cape province in South Africa (EOO 900 km^2, AOO 36 km^2). There are six known locations. Although some of these are from within the De Hoop Nature Reserve, and are therefore not threatened, subpopulations occurring outside the reserve are threatened by agricultural developments, alien vegetation, poor fire management and coastal housing development. The taxon thus qualifies globally under the IUCN criteria as Near Threatened under criterion D.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: There are no immediate threats as the majority of this taxon's records are from within the De Hoop Nature Reserve. For populations outside the reserve, agricultural development, new roads or housing could severely impact on the habitats. Fire frequency and grazing also have to be monitored. A number of properties near some of the localities may become available for sale and the associated development has to be monitored. The ecosystem status of the habitat, from a vegetation perspective, is Vulnerable. Invasive alien vegetation remains a future potential threat.

Conservation measures and research required: Research is needed to monitor the population size at the known sites and to locate additional subpopulations; and to establish the life history and ecology including any ant symbionts. When this information is to hand management plans are required for the known the sites, which could include a fire regime to be implemented.

Aloeides carolynnae carolynnae Dickson, 1983
Slanghoek Dark Russet; Voetheuwel Kopervlerkie

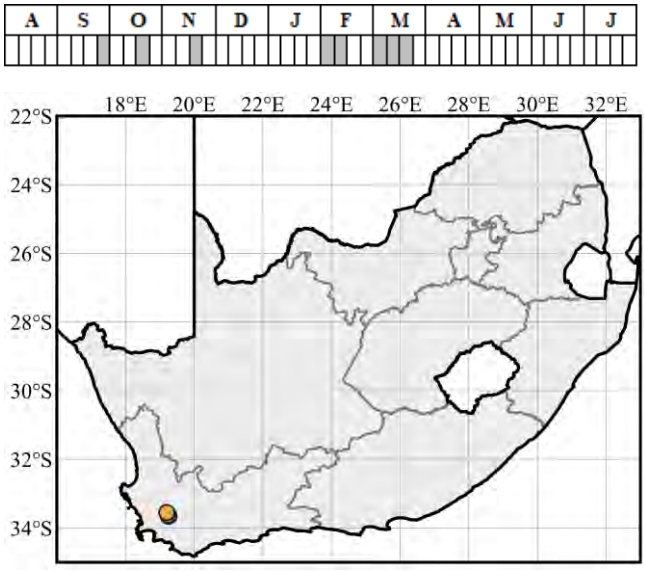
Fanie Rautenbach

EN B1ab(i,iii,iv,v)
Endemic

Type locality: South Western Cape province: near Goudini.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, from the Slanghoekberge near Goudini in the west and the south-western side of the Badsberg north-west of Rawsonville in the east. Not seen at some of its former



localities on the Slanghoekberge for 20 years.

Habitat: Montane fynbos on the south-western side of the Badsberg, on the lower slopes, at elevations between 300 m and 600 m.

Vegetation types: FFa2 Breede Alluvium Fynbos, FFh4 Breede Shale Fynbos, FFs10 Hawequas Sandstone Fynbos.

Assessment rationale: This is a range-restricted endemic taxon from the Western Cape province, South Africa (EOO 20 km^2). There are two locations. There is ongoing decline in the EOO, AOO, habitat quality, number of subpopulations and mature individuals due to severe infestations of invasive plant species and too frequent fires. The taxon has also lost significant habitat to viticulture over the past 15 years. The taxon thus qualifies globally under the IUCN criteria as Endangered under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

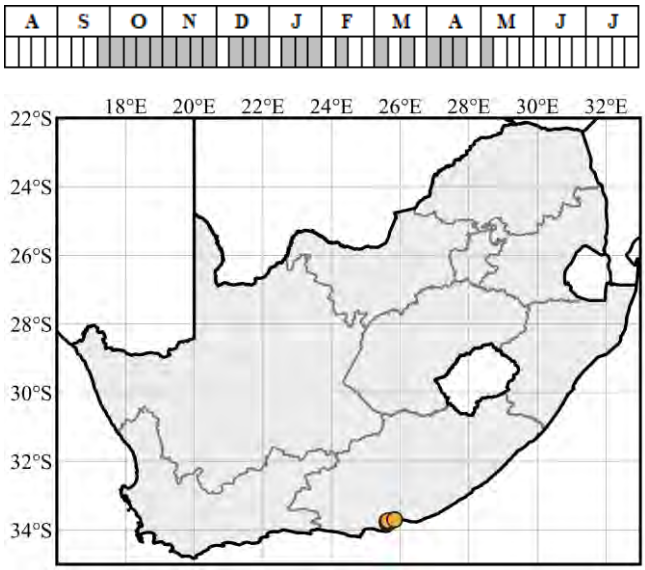
Threats: Expanding viticulture destroyed the bulk of the subpopulation/habitat at the type locality. Invasive alien vegetation, mainly *Hakea sericea*, but to a lesser extent a *Pinus* species, has affected the rest of the habitat at the type locality. Further habitat destruction by viticulture could be an added threat, as well as too frequent fires. The ecosystem status of the habitat, from a vegetation perspective, is endangered.

Conservation measures and research required: A management plan for this taxon, which includes an integrated approach to the control of *H. sericea* using mechanical and biological control, is required. There should be no further upslope extension of vineyards into the only known remaining habitat. Research is needed to monitor the population size at the known sites and to locate additional subpopulations; and to establish the life history and ecology including any ant symbionts.

Aloeides clarki Tite & Dickson, 1968
Coega Russet; Coega Kopervlerkie

Ernest L. Pringle

EN B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
Endemic



Type locality: Cape province: Aloes-Coega Flats.

Taxonomy: Species group in need of taxonomic revision.

Distribution: Endemic to the Eastern Cape province of South Africa, from the Sundays River and Aloes-Coega area near Port Elizabeth.

Habitat: Dry, sandy and limestone ridges at an altitude of 30 m to 150 m.

Vegetation types: AT39 Grassridge Bontveld, AT51 Sundays Valley Thicket.

Assessment rationale: This is a range-restricted endemic species from the Port Elizabeth area of the Eastern Cape province in South Africa (EOO 92 km^2, AOO 40 km^2). There are four locations. Industrial development has already destroyed a number of subpopulations in the Aloes-Coega flats area. Further development of the area and airborne pollution remain a concern. Informal settlements are a future threat. The taxon thus qualifies globally under the IUCN criteria as Endangered under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

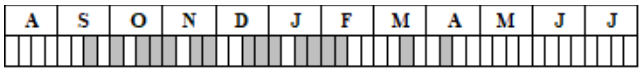
Threats: Industrial development has already destroyed a number of localities in the Aloes-Coega flats area. The Coega Industrial Development Zone (IDZ) will possibly have, among other industries, an aluminium smelter, a chlorine refinery and a precision strip mill. Only one subpopulation is within a reserve, created for the butterfly by the Coega IDZ. Further development and airborne pollution is causing ongoing loss and degradation of habitat. An informal settlement near Coega village has been disbanded and relocated. Informal settlements remain a future threat, such as the possible expansion of Motherwell township into the Coega area, which is of major concern. Other threats include alien vegetation.

Conservation measures and research required: A special reserve for the butterfly has been established at Coega at a location named Butterfly Valley. Research is needed into the taxonomy of the many similar populations over a wide area, life history, ecology, population size, distribution and trends.

Aloeides dentatis dentatis (Swierstra, 1909)
Roodepoort Toothed Russet; Roodepoort Kopervlerkie

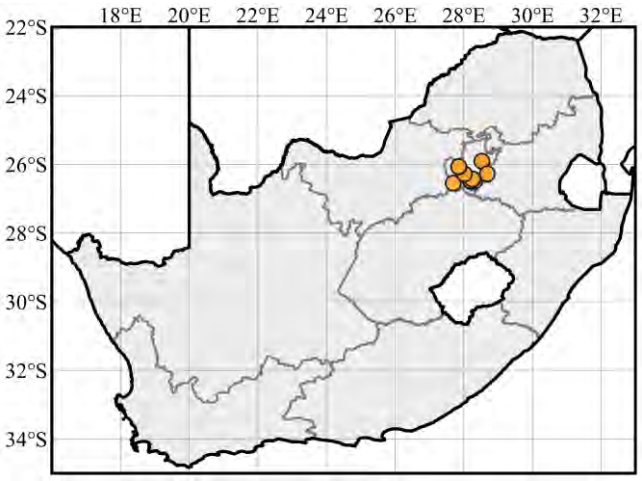
Graham A. Henning

EN B1ab(iii)+2ab(iii); C2a(i)
Endemic



Type locality: Waterfal Onder.

Taxonomy: *Aloeides dentatis* is a taxonomically difficult species that needs a great deal of research to determine the correct status of the various populations included. Some of the taxa in dispute have been treated as *A. d. maseruna*, but



they may have to be included in the nominate subspecies or recognised as a new subspecies or even a new species when adequate research has been conducted.

Distribution: Endemic to South Africa, along and adjacent to the Witwatersrand and Suikerbosrand mountain ranges near Heidelberg in Gauteng province and eastwards to around Delmas in Mpumalanga province.

Habitat: Fairly flat, rocky highveld grassland above 1 500 m, along or below ridges.

Vegetation types: Gm10 Egoli Granite Grassland, Gm11 Rand Highveld Grassland, Gm8 Soweto Highveld Grassland, Gm9 Tsakane Clay Grassland, SVcb11 Andesite Mountain Bushveld.

Assessment rationale: An endemic taxon found in the Gauteng and Mpumalanga provinces, South Africa (EOO 4 597 km^2, AOO 44 km^2). There are less than 1 500 individuals in the population with each of the six subpopulations having less than 250 individuals. There has been an intensification of threats due to continued urbanization. Inappropriate burning regimes and a decline in quality of habitat in and near residential areas has increased the threat. The population is severely fragmented. The taxon thus qualifies globally under the IUCN criteria as Endangered under criteria B and C.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: Despite the existence of subpopulations in three nature reserves, the threat of habitat modification due to environmental changes remains. Habitats have to be continually monitored with regard to an appropriate fire regime. Housing developments close to some of these habitats preclude natural burning systems. Two of the remaining subpopulations are close to Suikerbosrand Provincial Nature Reserve, where an inadequate fire regime poses the greatest current threat and urbanisation a potential future threat. The subpopulation near Delmas is threatened by agricultural development and habitat alteration.

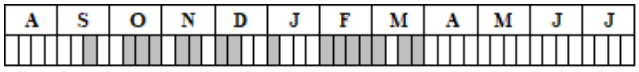
Conservation measures and research required: Subpopulations occur in three protected areas (including Ruimsig Nature Reserve, although it appears to now be extinct there), which are regularly monitored to determine population sizes and habitat quality. Connecting corridors to link subpopulations need to be investigated. Research is

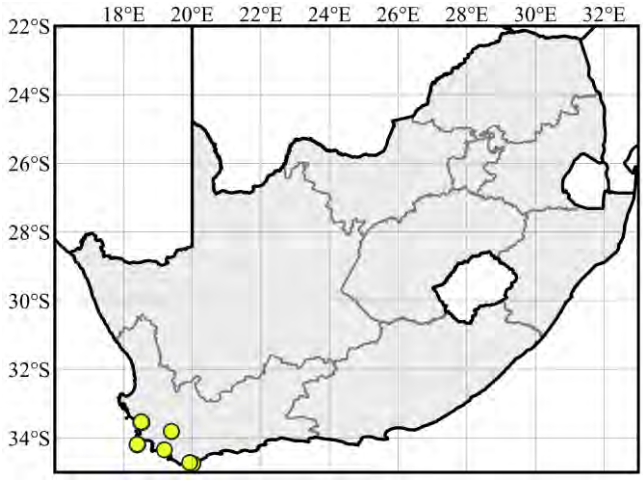
needed into the taxonomy of the *dentatis* species group, and their life histories and ecology.

Aloeides egerides (Riley, 1938)
Red Hill Russet; Red Hill Kopervlerkie

Harald E.T. Selb

VU B1ab(iii)
Endemic





Type locality: Redhills, Simonstown.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, from Red Hill in Simonstown on the Cape Peninsula in the west to the Quaggaskloof dam (Worcester) in the east, south to Struisbaai and Pella mission station near Mamre in the north, in small isolated subpopulations.

Habitat: Flat, sandy, open ground among low-growing fynbos, from just above sea level to about 300 m in altitude.

Vegetation types: FFd4 Atlantis Sand Fynbos, FFd8 Breede Sand Fynbos, FFf1 Elim Ferricrete Fynbos, FFl2 De Hoop Limestone Fynbos, FFs12 Overberg Sandstone Fynbos, FFs9 Peninsula Sandstone Fynbos.

Assessment rationale: This is an endemic species from the Western Cape province, South Africa (EOO 9 294 km^2). There are six locations. No adults have been seen at the type locality for many years, possibly due to habitat loss caused by too frequent fires during the flight period. Encroachment by alien vegetation is also resulting in ongoing degradation of habitat throughout its range. The taxon thus qualifies globally under the IUCN criteria as Vulnerable under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

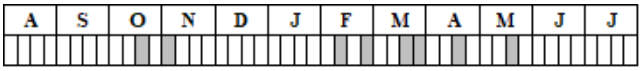
Threats: Habitat loss due to inappropriate fires, urban and informal housing developments, and invasive alien plants. Fire frequency and intensity is exacerbated by build-up of invasive alien vegetation.

Conservation measures and research required: Effective fire management and eradication of invasive plants is required at the main sites. More research is needed to establish whether additional subpopulations exist. At the type locality, reintroduction of the species is needed as it has not been observed there for many years, and the immediate area should be fenced. Research is needed to monitor the population size at the known sites and to locate additional subpopulations; and to establish the life history and ecology including any ant symbionts.

Aloeides lutescens Tite & Dickson, 1968
Worcester Russet; Worcester Kopervlerkie

Fanie Rautenbach

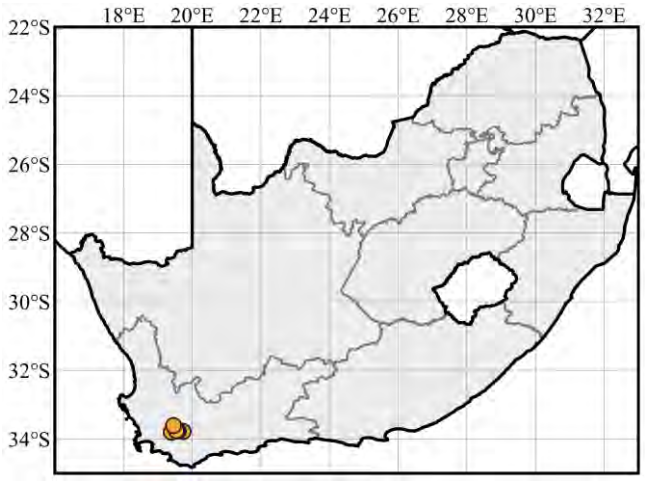
EN B1ab(i,ii,iii)+2ab(i,ii,iii)
Endemic



Type locality: Cape province: below De Wets Berg, Brand Vlei.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western Cape province in South Africa, in the Scherpenheuwel area and the eastern side of the Brandvlei Dam near Worcester in the west, as well as near Robertson in the east.



Habitat: Open karroid scrub vegetation, preferably open sandy areas at elevations of 200 m to 300 m.

Vegetation types: FFd8 Breede Sand Fynbos, FRa1 Breede Alluvium Renosterveld, FRs8 Breede Shale Renosterveld, SKv7 Robertson Karoo.

Assessment rationale: This is a range-restricted endemic species in the Western Cape province, South Africa (EOO 330 km^2, AOO 20 km^2). There are four locations. The threats (agriculture and invasive plants) have intensified and remain a threat to this taxon. There is a continuous decline of the EOO, AOO and habitat quality. The taxon thus qualifies globally under the IUCN criteria as Endangered under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: This taxon has lost extensive habitat in the past to crop cultivation and urban development in the Worcester district. Currently threatened by alien vegetation and agricultural activity. Habitat quality is experiencing ongoing decline due to invasion by alien plants. Habitat is also being lost due to expansion of crop cultivation within the range of the taxon. Future threats could emanate from recreation resorts along the river, and dam and housing developments, which will all pose a major threat to the habitat.

Conservation measures and research required: More research is needed to find additional subpopulations. Monitoring, management and protection of the habitats at the known sites is also required. Research is needed to monitor the population size at the known sites and to locate additional subpopulations; and to establish the life history and ecology including any ant symbionts.

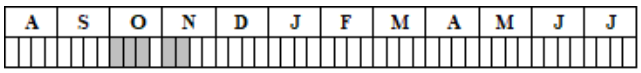
Aloeides monticola Pringle, 1994
Cedarberg Russet; Sederberg Kopervlerkie

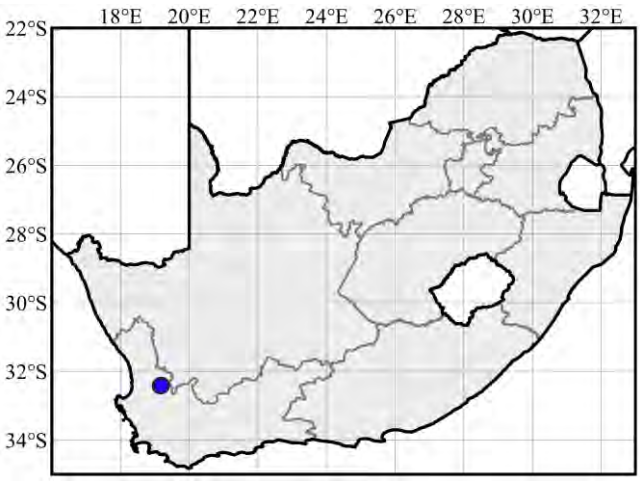
Ernest L. Pringle

LC
Rare – Restricted Range
Endemic

Type locality: Cedarberg.

Taxonomy: There are no notable issues.





Distribution: Endemic to the Western Cape province of South Africa, found at high altitude on the Cedarberg mountain range near Clanwilliam.

Habitat: Open, rocky ground on the higher slopes of the Cedarberg.

Vegetation types: FFb1 Northern Inland Shale Band Vegetation, FFs4 Cederberg Sandstone Fynbos.

Assessment rationale: This is a very restricted endemic species found at high altitude on the Cedarberg mountains of the Western Cape province, South Africa (EOO 1 km^2). This species has a limited flight period, and occurs in restricted areas in an inaccessible and largely unexplored habitat. It has also been described only recently. It seems certain that further field work will reveal other locations. There is, however, no discernable threat to its known localities, as the area in which it occurs is well conserved. The taxon thus qualifies globally under the IUCN criteria as Least Concern and is nationally classified as Rare (Restricted Range).

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: No visible threats.

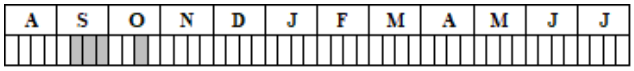
Conservation measures and research required: No conservation actions recommended. Research is required

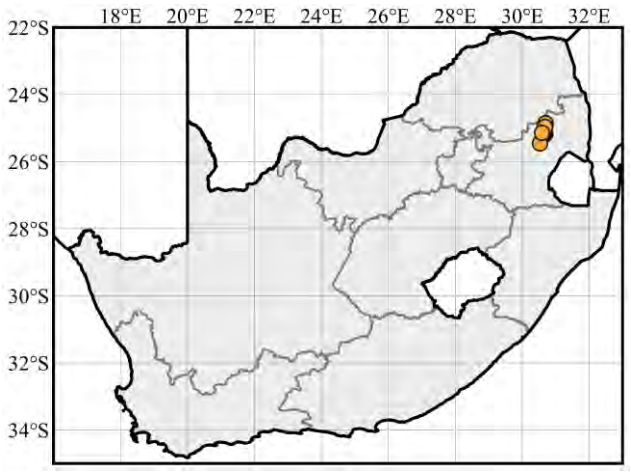
into the life history, ecology and ant symbionts; and the population size, distribution and trends need to be monitored.

Aloeides nubilus Henning & Henning, 1982
Cloud Russet; Wolk Kopervlerkie

Graham A. Henning

EN B1ab(iii,v)+2ab(iii,v); C2a(i)
Endemic





Type locality: Klipbankspruit, Sabie, Transvaal.

Taxonomy: Several specimens from Elandshoogte near Nelspruit have extended the range of the taxon southwards, but more material needs to be studied from this locality to confirm the identification.

Distribution: Endemic to Mpumalanga province in South Africa, known from four sites near Pilgrim's Rest, namely Morgenzon Forestry at the top of Robber's Pass, Trout Hideaway and Sterkspruit Nature Reserve as well as further south at Elandshoogte near Nelspruit.

Habitat: Ridges on mist-belt fire-climax grassland of the Mpumalanga Drakensberg at altitudes above 1 800 m. The habitats are subject to frost and snow. The colony at Robber's Pass is confined to a small area on a high ridge. The ridge has quartzitic elements and runs east-west, with a northern face.

Vegetation types: Gm30 Steenkampsberg Montane Grassland, Gm31 Long Tom Pass Montane Grassland, (FOz4 Northern Mistbelt Forest), (SVl9 Legogote Sour Bushveld).

Assessment rationale: A range-restricted endemic species from Mpumalanga province in South Africa (EOO 162 km^2, AOO 24 km^2). There are four locations. This taxon is found in four small subpopulations of less than 250 individuals in each, with less than 1 000 individuals in the population. The taxon is found at high elevations where forestry and habitat modification is a threat and there is habitat decline due to alien plant invasions and inappropriate fire management. The taxon thus qualifies globally under the IUCN criteria as Endangered under criteria B and C.

Change in status from SABCA: The status has not changed from the previous assessment.

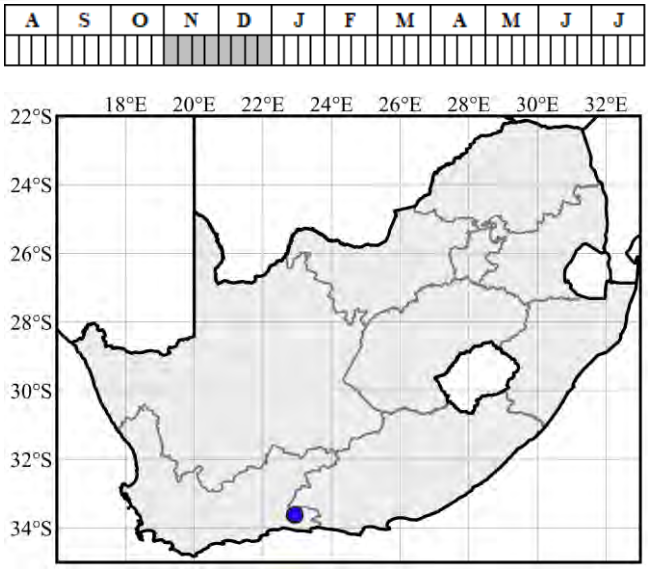
Threats: The colony at Robber's Pass, Morgenzon Forestry, is restricted to a ridge a few hundred metres long and is infested with black wattle (*Acacia mearnsii*). There is another colony on the top of the escarpment at Trout Hideaway, a few kilometres to the south, which is threatened by invasive plants - this subpopulation is unstable and has not been seen recently. The colony in Sterkspruit Nature Reserve was threatened by expansion of a pine plantation, but this plantation has since been felled. The colony at Klipbankspruit (the type locality) has been destroyed by forestry. A further colony to the south, Elandshoogte near Nelspruit, has been located, but more research is necessary at this locality.

Conservation measures and research required: Population size and habitat quality should be monitored regularly. There should be no further habitat encroachment by either plantation forestry or infestation of alien trees, and the latter should be removed. Research is required into the life history, ecology and ant symbionts; and the population size, distribution and trends need to be monitored.

Aloeides pallida jonathani Pringle, 1987
Kammanassie Giant Russet; Kammanassie Bleekkopervlerkie

David A. Edge

LC
Rare – Restricted Range
Endemic



Type locality: Kammanassie Mountains.

Taxonomy: No issues with the taxonomy.

Distribution: Endemic to the Western Cape province in South Africa, only recorded from the southern side of the Kammanassie mountain range near Uniondale.

Habitat: Montane fynbos, on relatively flat ground.

Vegetation types: FFb3 Central Inland Shale Band Vegetation, FFs25 North Kammanassie Sandstone Fynbos, FFs26 South Kammanassie Sandstone Fynbos.

Assessment rationale: A highly restricted taxon endemic to the Western Cape province, South Africa (EOO 4 km^2). The taxon occurs in a protected area and there are no current threats. It qualifies globally under the IUCN criteria as Least Concern and is nationally classified as Rare (Restricted Range).

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: No threats are known.

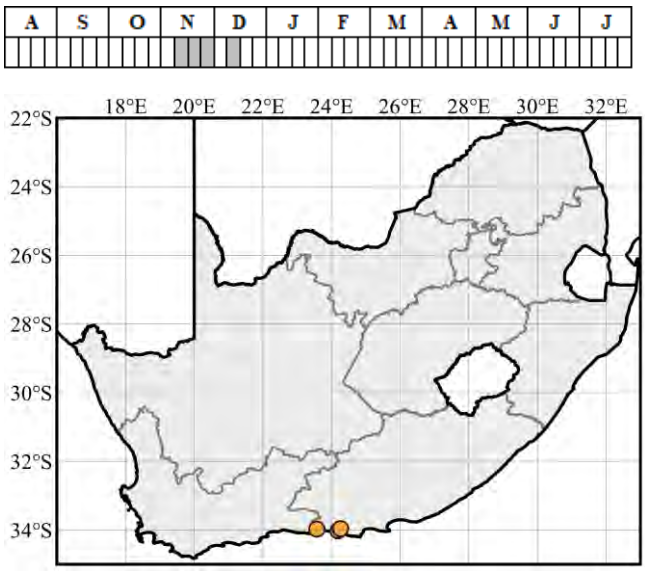
Conservation measures and research required: No conservation actions recommended. Research is required into taxonomy, life history, ecology and ant symbionts; and the population size, distribution and trends need to be monitored.

Aloeides pallida juno Pringle, 1994

Tsitsikamma Giant Russet; Tsitsikamma Bleekkopervlerkie

David A. Edge

EN B1ab(i,ii,iii)+2ab(i,ii,iii)
Endemic



Type locality: Karreedouw.

Taxonomy: There are no notable issues.

Distribution: Endemic to the Western and Eastern Cape provinces in South Africa, from Nature's Valley near Plettenberg Bay in the west to Kareedouw and Witelsbos in the east.

Habitat: Relatively open patches of ground in tall fynbos on subcoastal mountains.

Vegetation types: FFh9 Garden Route Shale Fynbos, FFs20 Tsitsikamma Sandstone Fynbos, FOz1 Southern Afrotemperate Forest.

Assessment rationale: This is a restricted range endemic taxon found in the Western and Eastern Cape provinces, South Africa (EOO 231 km^2, AOO 12 km^2). There are three locations and the population is severely fragmented (locations separated by 15–60 km, far more than the average dispersal range of the taxon). The quality and extent of the habitat has declined, and may decline further if action is not taken. The taxon thus qualifies globally under the IUCN criteria as Endangered under criterion B.

Change in status from SABCA: The Nature's Valley subpopulation has either declined significantly or may be extinct. Habitat degradation at the other two localities (Kareedouw and Witelsbos), since the previous assessment, has reduced the AOO and the size of these subpopulations. Additional recent threats at Kareedouw are illegal dumping of rubble and encroachment of alien trees. At Witelsbos the habitat is becoming overgrown by indigenous and alien trees because the forestry company is not maintaining the roads and keeping them open. The information on population size and changes in the threats have been obtained from several visits to all the known sites. There has been a significant reduction in its overall population since the previous

assessment and thus the change in status from Least Concern to Endangered is genuine.

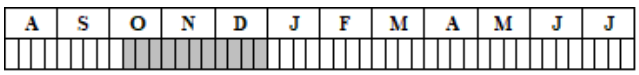
Threats: At Nature's Valley, where the taxon has not been recorded for over 20 years, the habitat has been degraded by bush encroachment and growth of fynbos shrubs as a result of suppression of natural fires, leading to loss of the more open sunny places where the taxon's host ant is present. A similar situation exists at Witelsbos and the Kareedouw Pass, where growth of alien trees near the habitat is an emerging threat. The latter locality has also been degraded by dumping of garbage and solid waste at the top of the pass.

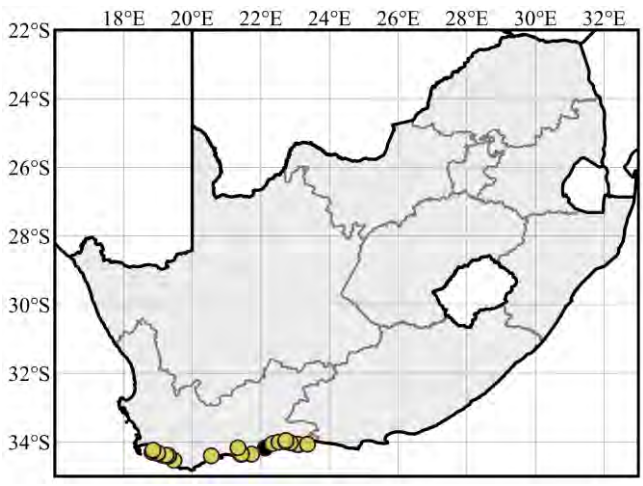
Conservation measures and research required: Letters should be written to the three separate authorities managing the locations of this butterfly (CapeNature, Kareedouw Municipality and Cape Pine Forestry Company) to make them aware of the threats to its survival. Research is required into taxonomy, life history, ecology and ant symbionts; and the population size, distribution and trends need to be monitored.

Aloeides pallida littoralis Tite & Dickson, 1968
Knysna Giant Russet; Knysna Bleekkopervlerkie

David A. Edge

NT B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv)
Endemic





Type locality: Cape province: Knysna.

Taxonomy: The subpopulations currently included in this taxon have a range from Kogelberg in the west to Plettenberg Bay in the east and exhibit a high degree of heterogeneity. A phylogeographic study of this species group may reveal the existence of several additional taxa, some of which may also be threatened status.

Distribution: Endemic to the Western Cape province in South Africa, south coastal region from Somerset West in the west to Plettenberg Bay in the east.

Habitat: Found on relatively flat terrain close to the coast.

Vegetation types: AT36 Goukamma Dune Thicket, AT40 Hartenbos Dune Thicket, FFd10 Knysna Sand Fynbos, FFd6 Hangklip Sand Fynbos, FFd9 Albertinia Sand Fynbos, FFf1 Elim Ferricrete Fynbos, FFg5 Garden Route Granite Fynbos, FFh5 Cape Winelands Shale Fynbos, FFh9 Garden Route Shale Fynbos, FFl1 Agulhas Limestone Fynbos, FFs11 Kogelberg Sandstone Fynbos, FFs12 Overberg Sandstone Fynbos, FFs19 South Outeniqua Sandstone Fynbos, FS9 Groot Brak Dune Strandveld, (AT40 Hartenbos Dune Thicket), (FFg5 Garden Route Granite Fynbos).

Assessment rationale: This is an endemic taxon to the Western Cape province, South Africa (EOO 12 232 km^2, AOO 112 km^2). There are 13 locations, with several subpopulations having become extinct in recent years, and others are threatened and declining as a result of habitat loss to agricultural crop cultivation and coastal development, as well as habitat degradation from suppression of fires and invasion by alien plants. Notwithstanding the uncertainty surrounding the taxonomic status of many subpopulations of this taxon, it currently qualifies as Near Threatened under criterion B.

Change in status from SABCA: Whilst the previous assessment was Data Deficient because of taxonomic uncertainties, better information has been gathered on most of the known subpopulations for a proper assessment. Although declines have been observed over recent years, it has not been enough for there to be a change in threat category and previously it would have qualified for the Near Threatened category, thus the change in status is non-genuine

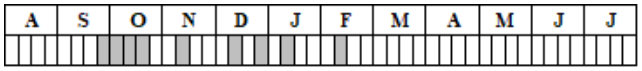
Threats: Property development is an ongoing threat in the southern Cape coastal zone. Intensification and extension of agricultural activities is also a threat in some areas. Suppression of natural fires closer to urban areas also leads to habitat degradation, as does growth of alien vegetation. Many of the known subpopulations are threatened from one or more of these causes.

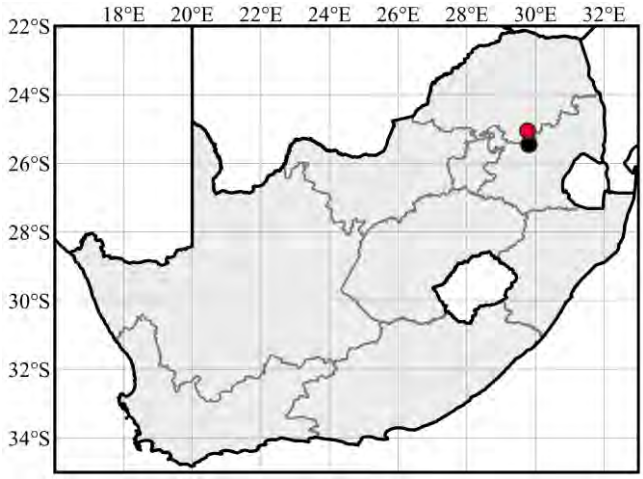
Conservation measures and research required: A detailed taxonomic study of this taxon is being conducted. Pending the results of this investigation, all known distinctive subpopulations need to be conserved. Research is required into taxonomy, life history, ecology and ant symbionts; and the population size, distribution and trends need to be monitored.

Aloeides rossouwi Henning & Henning, 1982
Stoffberg Russet; Stoffberg Kopervlerkie

Graham A. Henning

CR B1ab(iii,v)+2ab(iii,v); C2a(ii)
Endemic





Type locality: Stoffberg, Transvaal.

Taxonomy: There are no notable issues.

Distribution: Endemic to Mpumalanga province and Limpopo province in South Africa, formerly found on the top of a pass to the south-west of Stoffberg, now only found on the mountain above Dindela.

Habitat: High-altitude grassland, in gullies with sandy patches; location in a very limited geological area, which is the Rashoop Granophyre suite.

Vegetation types: Gm11 Rand Highveld Grassland, (Gm11 Rand Highveld Grassland).

Assessment rationale: A range-restricted endemic species in the Mpumalanga and Limpopo provinces, South Africa (EOO 8 km^2, AOO 8 km^2). There is one location. The subpopulation at the type locality is no longer extant due to the destruction of its habitat by invasion of alien vegetation and lack of burning. Only one colony, at Dindela in Sekhukhuneland, is known, which appears to move regularly indicating that it may be unstable. Declines have been recorded for extent of occurrence, area of occupancy, area, quality of habitat, number of locations and subpopulations, and number of mature individuals, This is based on half the known localities being destroyed and habitat threat to the only known subpopulation. The taxon thus qualifies globally under the IUCN criteria as Critically Endangered under criteria B and C.

Change in status from SABCA: The 2012 assessment applied the Red Listing incorrectly when determining the number of locations. There was and still is only one known location, whereas for the previous assessment two locations were incorrectly given. The threats are the same and thus the change in status from Endangered to Critically Endangered is non-genuine.

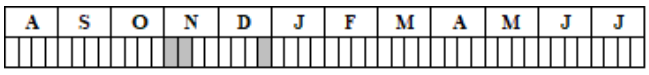
Threats: The habitat at the type locality in the area south-west of Stoffberg has already become overgrown by invasive alien plants and secondary succession, largely owing to a lack of burning, and is uninhabitable for the butterfly taxon. The only known remaining locality at Dindela is on tribal land where burning, grazing and habitat modification is causing ongoing decline in habitat quality.

Conservation measures and research required: A management plan should be developed that includes regular monitoring of population levels and habitat quality, the removal of alien invasive trees and the implementation of appropriate fire and grazing regimes.

Aloeides stevensoni Tite & Dickson, 1973
Wolkberg Russet; Wolkberg Kopervlerkie

Graham A. Henning

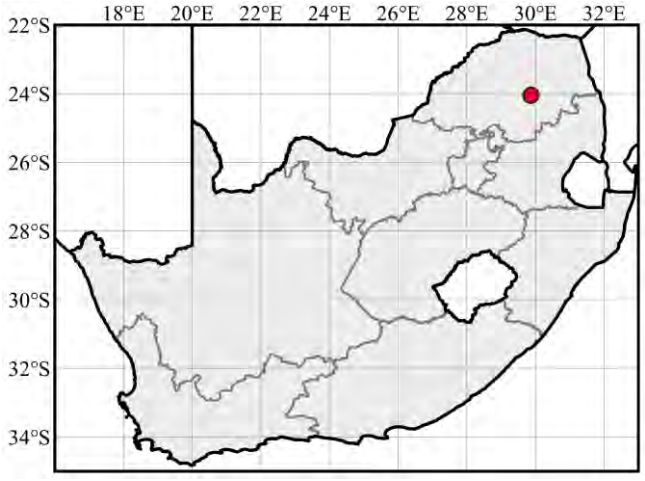
CR B1ab(iii,v)+2ab(iii,v)
Endemic



Type locality: Rhodesia: Rusape. [False locality]

Taxonomy: There are no notable issues.

Distribution: Endemic to Limpopo province in South Africa, on the Wolkberg near Serala.



Habitat: South-facing, high-altitude grassy slopes of the Wolkberg in Woodbush Granite Grassland, which is critically endangered.

Vegetation types: Gm23 Northern Escarpment Quartzite Sourveld, Gm26 Wolkberg Dolomite Grassland.

Assessment rationale: A range-restricted endemic species found in Limpopo province in South Africa (EOO 4 km^2, AOO 4 km^2). Historically recorded from two subpopulations, one of the two was exterminated by agricultural development early in this century. At the extant location no specimens have been seen since 2015, and the site has been affected by drought and inappropriate fire regimes. The taxon thus qualifies globally under the IUCN criteria as Critically Endangered under criterion B.

Change in status from SABCA: Since the previous assessment the number of locations has reduced from two to one. One of the locations has been exterminated by agricultural development. At the extant location no specimens have been seen since 2015, and the site has been affected by drought and inappropriate fire regimes. The location however is very inaccessible so it is likely that the taxon will be found again when conditions improve. The change in status from Endangered to Critically Endangered is therefore genuine.

Threats: Future agricultural activity or afforestation could destroy the only known locality. The habitat needs a fire regime appropriate for the life history of the taxon and its associated ant species. The subpopulation at the previously recorded locality near Haenertsburg is no longer extant as its habitat has been modified by agricultural development.

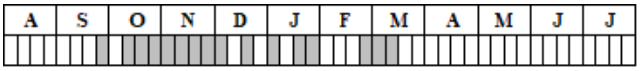
Conservation measures and research required: A management plan should be developed which considers the habitat requirements of this taxon, including appropriate fire and grazing regimes. Research is needed into the life history and ecology, with monitoring of the population size, area of occupancy and trends.

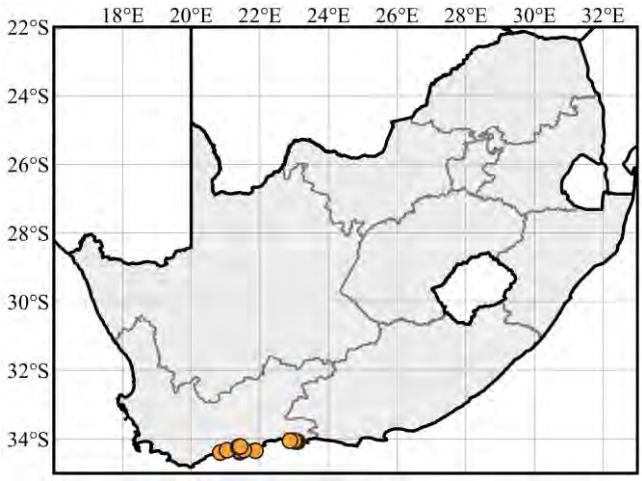
Aloeides thyra orientis Pringle, 1994

Brenton Red Russet; Brenton Rooi Kopervlerkie

David A. Edge

EN B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv)
Endemic





Type locality: Knysna.

Taxonomy: There remains some doubt as to whether the subpopulations at Knysna (Brenton) and the (Stilbaai – Witsand) subpopulations represent the same taxon, because of the disjunct nature of their distribution. DNA samples have been submitted for analysis.

Distribution: Endemic to the southern coastal regions of the Western Cape province in South Africa, from Witsand to Gouritsmond in the west, to the Brenton Peninsula near Knysna in the east.

Habitat: Coastal fynbos on flat sandy ground (either naturally occurring or from anthropogenic disturbances such as footpaths or unsurfaced track) between 40 m to 240 m above sea level.

Vegetation types: AT36 Goukamma Dune Thicket, AT40 Hartenbos Dune Thicket, FFd10 Knysna Sand Fynbos, FFl3 Canca Limestone Fynbos, FFs19 South Outeniqua Sandstone Fynbos, FS8 Blombos Strandveld.

Assessment rationale: A restricted range taxon endemic to the Western Cape province in South Africa (EOO 2 646 km^2), AOO 72 km^2). There are six known locations, including four for which taxonomic uncertainty exists (i.e. Gouritsmond, two near Still Bay and Witsand). There is severe fragmentation of the distribution of this taxon, with

only the two Knysna locations being reasonably close (6 km apart), but still beyond the average dispersal range of this taxon of c. 2 km. The other locations are separated by gaps of between 25 and 120 km. There is a continuing decline in the EOO, AOO, area, extent and quality of the habitat, and of the number of subpopulations. This situation is illustrated by looking at the Brenton Peninsula location, where a formerly widespread and large single subpopulation has become fragmented through the building of roads, houses and infrastructure, as well as agricultural activities and the spread of alien vegetation, into five smaller subpopulations between which almost no demographic or genetic interchange now takes place. It therefore qualifies as Endangered under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: All the subpopulations are threatened to a greater or lesser extent by alien vegetation. For example, on the Brenton Peninsula three subpopulations have been lost in the last 15 years. Property development in these coastal habitats is an ever present threat and has already caused the loss of several subpopulations in the Knysna and Stilbaai areas. The reduction in frequency of fires near human habitation is also believed to have a detrimental effect on this species by leading to shading out of the habitat. The build-up in fuel-load can also lead to very severe fires, which have the potential to wipe out subpopulations, although these seem to have survived the 2017 Knysna fire.

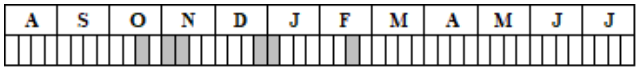
Conservation measures and research required: Eradication of alien plants on the Brenton Peninsula, and restoration of natural fire regimes. Methods need to be devised to maintain the habitats at the current localities in suitable condition for the host plant and host ants. Research is needed into the life history, including the host plant and ant associations, and the taxonomic status of the Stilbaai population. The role of fire in the ecosystems where the butterfly occurs needs to be established.

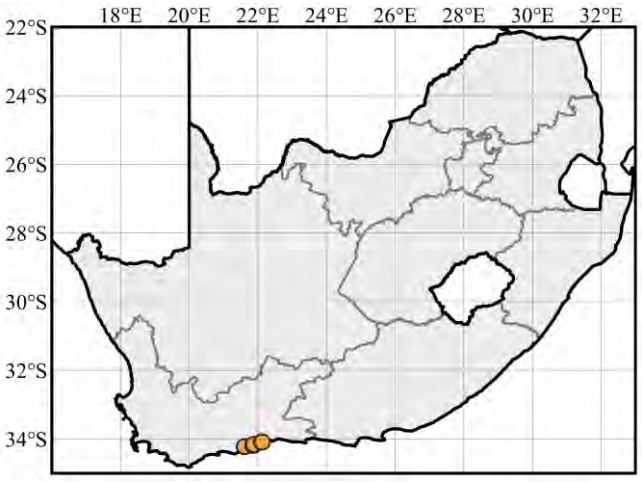
Aloeides trimeni southeyae Tite & Dickson, 1973

Mossel Bay Brown Russet; Mosselbaai Bruin Kopervlerkie

David A. Edge

EN B1ab(ii,iii)+2ab(ii,iii)
Endemic





Type locality: Cape province: nr Mossel Bay.

Taxonomy: There are no notable issues.

Distribution: Endemic to the southern coastal region in the Western Cape province in South Africa, between Albertinia in the west and Hartenbos in the east, south and north of the N2 highway.

Habitat: Gentle north-facing slopes, sparsely covered by low shrubs with bare ground in between. Low intensity grazing improves the habitat.

Vegetation types: FFs15 North Langeberg Sandstone Fynbos, FRs14 Mossel Bay Shale Renosterveld.

Assessment rationale: A taxon with a restricted range endemic to the southern coastal region in the Western Cape province, South Africa, with an EOO of 85 km^2 and AOO of 24 km^2. There are three widely separated locations, which are severely fragmented and between 17–30 km apart, far greater than the average dispersal distance of the taxon of 1–2 km. The landscape between these locations is transformed by agricultural, industrial or urban developments. The subpopulations are either very small or declining in AOO and numbers of individuals, and the quality of the habitat is declining due to overgrazing by livestock, suppression of fires, and invasion by alien plants (see Threats section). It therefore qualifies as Endangered under criterion B.

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: Most of the subpopulations are threatened by human-related activities, including grazing by domestic livestock, suppression of natural fires, and encroachment of alien plants.

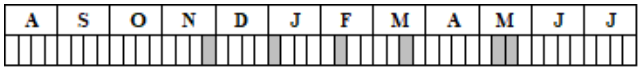
Conservation measures and research required: An autecological study of this taxon is needed, to determine its life history and whether there is an associated host plant and ant. This should be followed by the development and implementation of an environmental plan, which would include protection of the habitat needed by the taxon as well as ongoing monitoring of the populations. The Hartenbosheuwels locality is owned by the Afrikaanse Taal en Kultuurvereniging (ATKV) and investigations are ongoing to make it into a nature reserve.

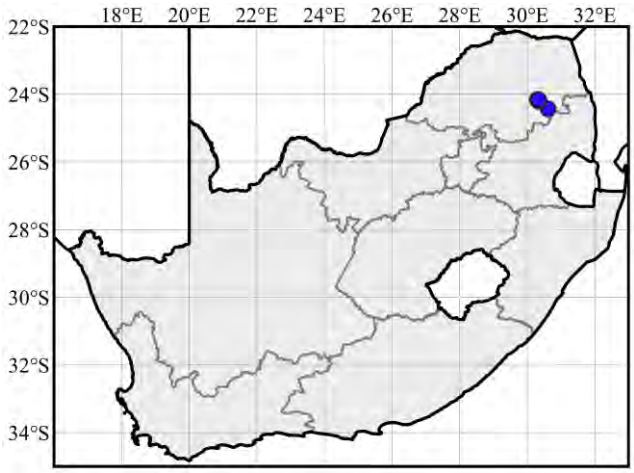
Genus *Anthene* Doubleday, 1847.

Anthene crawshayi juanitae Henning & Henning, 1993
Nyasaland Ciliate Blue; Feniks Kortstertjie

Mark C. Williams

LC
Rare – Restricted Range
Endemic





Type locality: Manoutsa Park, below Strydom Tunnel, N.E. Transvaal, em. 25.xi.1990 (ex pupa), R.F. Terblanche.

Taxonomy: The nominate subspecies, *Anthene crawshayi crawshayi*, occurs throughout tropical Africa and enters the subregion of southern Africa in the extreme north of Zimbabwe more than 1 000 km distant from Manoutsa Park where *A. c. juanitae* occurs.

Distribution: Endemic to Limpopo province in South Africa, from the riverine valley below the escarpment north of the Abel Erasmus Pass to Lekgalameetse Nature Reserve near Ofcolaco.

Habitat: Riverine woodland in mesic savanna.

Vegetation types: SVl3 Granite Lowveld, SVl8 Tzaneen Sour Bushveld.

Assessment rationale: This is a range-restricted endemic taxon from Limpopo province in South Africa (EOO 72 km^2). There are currently no known threats. The known larval host plant, *Senegalia polyacantha*, is abundant in a corridor from Abel Erasmus Pass in the south to the north-eastern parts of Limpopo province. Adults of the taxon, like the adults of many species of *Anthene*, are hard to find in the field. It is highly likely that more intensive field work will result in the discovery of further subpopulations in South Africa. The taxon thus qualifies globally under the IUCN criteria as Least Concern and is nationally classified as Rare (Restricted Range).

Change in status from SABCA: When this taxon was assessed Critically Endangered in 2012 the assessment was based on the information that it was known from a single location (the type locality) and that the habitat was undergoing degradation. Furthermore the taxon was known from only six captured individuals and adults had not been seen for nearly two decades following its discovery. Since this first assessment the taxon has been re-discovered at the type locality by A. Gardiner. A second locality in the Lekgalameetse Nature Reserve, was found by M. Williams. Following this the larval host plant at Lekgalameetse was determined to be *Acacia polyacantha* by A. Coetzer. This tree is common in Tzaneen Sour Bushveld (SVl 8). This vegetation type is fairly extensive in the north-east parts of Limpopo province and is very likely to contain more subpopulations of the taxon. This likelihood is grounded in the observation that the taxon was only recently (2012) found at Lekgalameetse despite the area being well surveyed by lepidopterists since the 1930s. There are also no significant threats, and this should have applied for the first assessment too. The status change from Critically Endangered to Least Concern is therefore a non-genuine change.

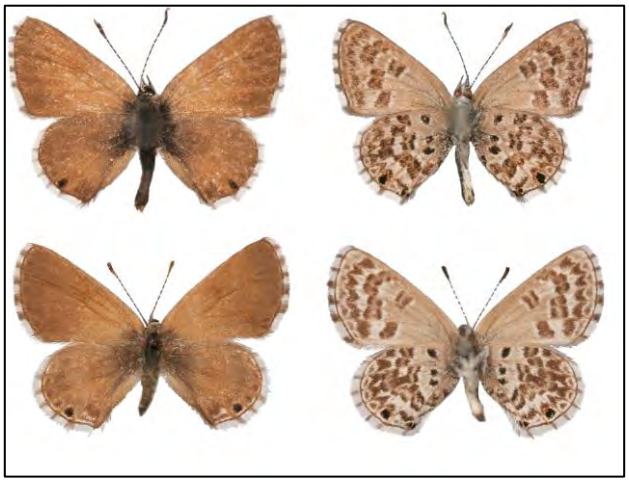
Threats: There are no current threats.

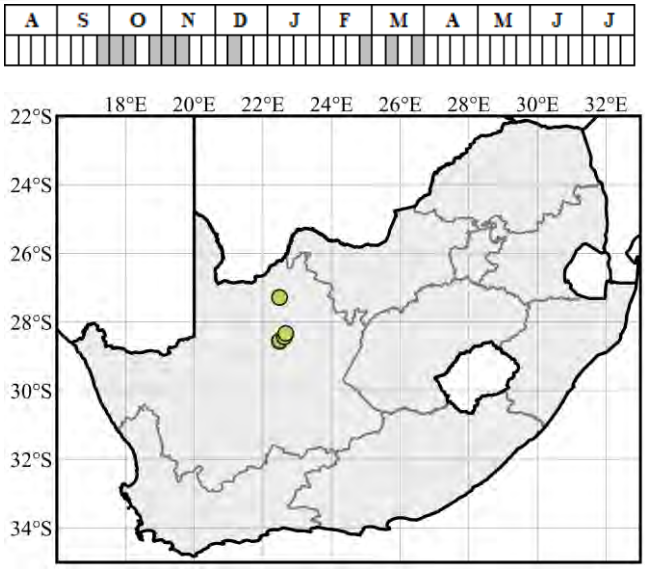
Conservation measures and research required: No conservation measures are currently needed. The taxonomy of the *crawshayi* species group needs investigation.

Anthene lindae Henning & Henning, 1994
Witsand Ciliate Blue; Kalahari Kortstertjie

Harald E.T. Selb

NT D2





Type locality: Witsand, northwestern Cape, 27 Oct. 1990, J.E. Terblanche.

Taxonomy: There are no notable issues.

Distribution: Occurs in the Northern Cape province in South Africa, from Witsand Nature Reserve to the western base of the Langberg, near Postmasburg, and north to as far as the south-eastern parts of the Tswalu Game Reserve along the Korannaberg east of Hotazel. There is a questionable record from northern Namibia from 2002 (Braine, 2002), but the specimen identification could not be confirmed due to missing genitalia. Recently, in 2019, a record was observed also from northern Namibia, but further work is needed to confirm that this represents a subpopulation rather than just a 'vagrant' individual, therefore this record was not considered for this assessment.

Habitat: Arid ecotone between Gordonia Plains Shrubland and Olifantshoek Plains Thornveld in the Eastern Kalahari Bushveld Bioregion of the Savanna Biome. Adults are found on sparsely scattered Camel Thorn, *Vachellia erioloba*, which is probably the larval host plant. These trees are large in the known habitat of the butterfly and generally occur on white Kalahari sand above subterranean aquifers.

Vegetation types: SVk13 Olifantshoek Plains Thornveld, SVk15 Koranna-Langeberg Mountain Bushveld.

Assessment rationale: This taxon occurs in the Northern Cape province, South Africa (EOO 1 330 km^2, AOO 20 km^2) (previously presumed endemic but recently observed in northern Namibia - this recent record was not considered for this assessment). It is known from four locations that are potentially threatened in the future by the combined impact of drought (associated with climate change), overgrazing and abstraction of underground water. The Kalahari region is one of the areas of South Africa that is experiencing the most significant changes in temperatures, a trend attributed to climate change. The taxon thus qualifies globally under the IUCN criteria as Near Threatened under criterion D.

Change in status from SABCA: Since the previous assessment, new information on its distribution has been gathered, increasing its EOO and AOO. Thus the change in status from Vulnerable to Near Threatened is non-genuine.

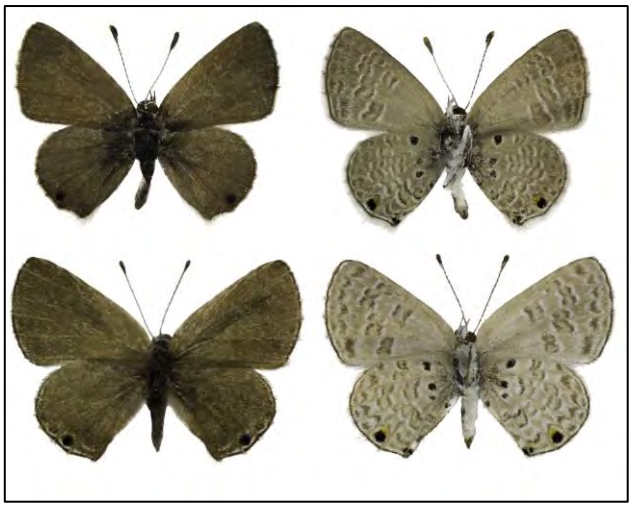
Threats: There are currently no significant threats to this taxon. However, the habitat occurs mainly above subterranean aquifers, and over-extraction of ground water, together with drought, overgrazing and climate change, could have serious consequences for the taxon. There are two subpopulations, both located in nature reserves, where the habitat is protected.

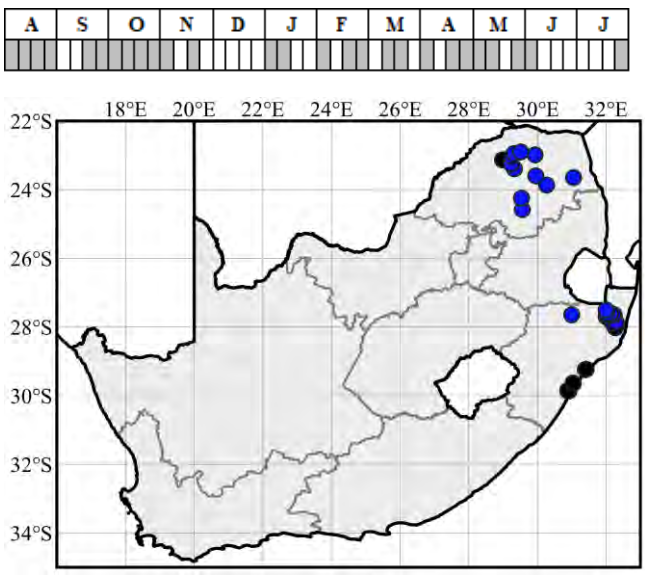
Conservation measures and research required: A subpopulation of the species is conserved in the Witsand Nature Reserve (WNR). Consideration should be given to incorporating the newly discovered subpopulation on the Langeberg into the WNR. Research is required into the life history, ecology/habitat needs, and the size of known subpopulations.

Anthene minima minima (Trimen, 1893)
Little Ciliate Blue; Dwerg Kortstertjie

Steve E. Woodhall

LC
Rare – Low Density





Type locality: Verulam; Malvern; Sinquasi River.

Taxonomy: There are no notable issues. The species was split by Collins (in Libert, 2010) into two subspecies. The nominate subspecies is found in the southern part of the

range (Zimbabwe, South Africa, Botswana and Swaziland), with *Anthene minima williamsi* Collins, 2010 being recorded from coastal Kenya.

Distribution: This widespread taxon is found in Limpopo province and KwaZulu-Natal province in South Africa, from Durban in the south and northwards into the north-eastern corner of the country. It is also found in Swaziland, Botswana and Zimbabwe.

Habitat: In South Africa the taxon appears to be restricted to *Vachellia* savanna, which would appear to be the case also in neighbouring countries.

Vegetation types: Gs6 KwaZulu-Natal Highland Thornveld, SVcb12 Central Sandy Bushveld, SVcb20 Makhado Sweet Bushveld, SVcb21 Soutpansberg Mountain Bushveld, SVcb25 Poung Dolomite Mountain Bushveld, SVl16 Southern Lebombo Bushveld, SVl20 Western Maputaland Clay Bushveld, SVl23 Zululand Lowveld, SVl3 Granite Lowveld, SVl8 Tzaneen Sour Bushveld, SVmp1 Musina Mopane Bushveld, SVmp5 Tsende Mopaneveld, (CB3 KwaZulu-Natal Coastal Belt Grassland), (SVcb18 Roodeberg Bushveld), (SVl23 Zululand Lowveld).

Assessment rationale: This widespread but low-density taxon is found in southern Africa (EOO 340 600 km^2). The EOO may be larger but there is much uncertainty because suitable habitat exists over large areas of southern Africa. Records outside South Africa are rare. The taxon is probably underreported due to its small size, dull colouration and tendency to keep close to its host plant. It may also be overlooked due to the usual presence of large numbers of other small lycaenids in its habitat, with which it is easily confused. It is, however, a rare taxon that is seldom encountered, so there is a chance that it genuinely has a low AOO. Although *Vachellia* trees are common across its range, colonies appear to be few and far between. Recent field work has shown this species to be probably absent from the type locality near Durban (and its vicinity). The taxon thus qualifies globally under the IUCN criteria as Least Concern and nationally is classified as Rare (Low Density).

Change in status from SABCA: The status has not changed from the previous assessment.

Threats: Widely distributed through sparsely populated areas. Although rare, it is not currently threatened. The subpopulation near Durban appears to have been destroyed by urban development.

Conservation measures and research required: No conservation actions recommended. Research is required into the life history, ecology/habitat needs, and the size of known subpopulations.

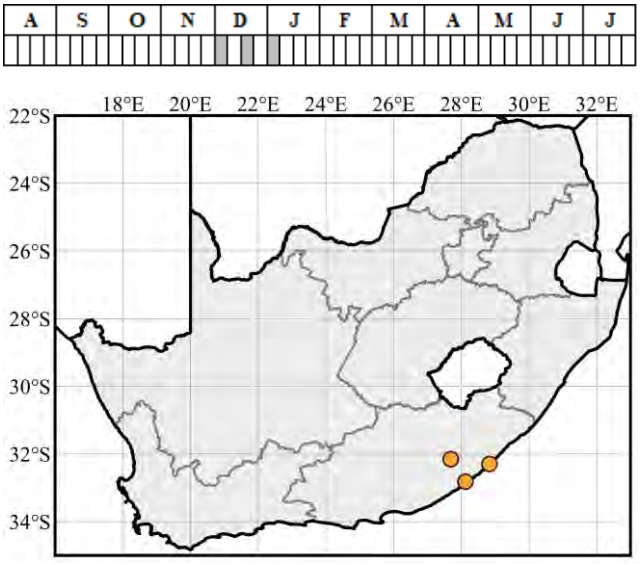
Genus *Aslauga* Kirby, 1890.

Aslauga australis Cottrell, 1981
Southern Purple; Suidelike Asvlerkie

Jeremy C.H. Dobson & Chris M. Dobson

EN B1ab(iii)+2ab(iii)
Endemic

Type locality: Cape province, Kowie River.



Taxonomy: There are no notable issues.

Distribution: Endemic to the Eastern Cape province in South Africa, from Cintsa East in the south, inland to Mbulu in the west and up the coast to Dwesa in the north.

Habitat: This taxon appears to occupy two habitat types: coastal bush adjacent to dune-forests and wooded areas within grassland. The life history of *Aslauga australis* is unrecorded and the reasons for its extremely patchy and localized distribution are currently unknown.

Vegetation types: FOz5 Scarp Forest, Gs10 Drakensberg Foothill Moist Grassland.

Assessment rationale: A range-restricted species endemic to the Eastern Cape province, South Africa (EOO 3 646 km^2, AOO 12 km^2). There are three locations (Cintsa East, Mbulu and Dwesa), two of which are experiencing a decline in both the extent and quality of habitat (Cintsa East and Mbulu). At Cintsa East this is a result of expanding residential development and associated infrastructure combined with invasion of alien plant species, such as *Lantana camara* and *Psidium guajava*. The Mbulu site is subjected to intense overgrazing (primarily by goats) and trees are being cut for firewood at an unsustainable level. The taxon thus qualifies globally under the IUCN criteria as Endangered under criterion B.

Change in status from SABCA: The previous assessment was based on unverified data. The 2018 assessment made use of verified data which resulted in a large reduction in the EOO. The EOO would have been the same during the previous assessment if the verified data had been used then too, thus the change in status from Near Threatened to Endangered is non-genuine.

Threats: The main threats to this species are related to habitat reduction and deterioration. Expanding residential development (coastal areas) and overgrazing/deforestation within the inland sites. The location at Cintsa East is increasingly being overgrown with alien vegetation, mainly *L. camara* and *P. guajava*.

Conservation measures and research required: No conservation measures currently in place and none of the listed actions are appropriate or are likely to receive official endorsement. Ongoing monitoring of this butterfly's three known subpopulations should be undertaken. In addition, searches should continue within the known extent of occurrence of this species in order to try and find more subpopulations. Research is also required into its life history and ecology.

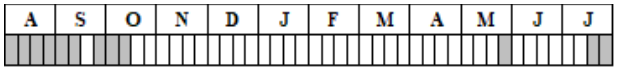
Genus *Capys* Hewitson, 1865.

Capys penningtoni Riley, 1932

iNkomasi Protea; Drakensberg Suikerbossie

Adrian J. Armstrong

CR C2a(i)
Endemic

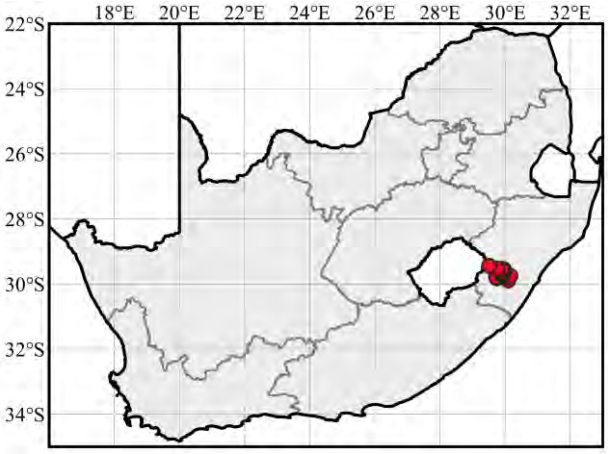


Type locality: Natal, Inhlozane.

Taxonomy: There are no notable issues.

Distribution: Endemic to KwaZulu-Natal province in South Africa, only occurring in part of the Midlands, from near Richmond in the south-east to Lotheni in the north-west.

Habitat: Montane Protea savanna within an approximate altitudinal range of 1 000 to 2 100 m.



Vegetation types: Gd4 Southern Drakensberg Highland Grassland, Gs10 Drakensberg Foothill Moist Grassland, Gs11 Southern KwaZulu-Natal Moist Grassland, Gs8 Mooi River Highland Grassland, Gs9 Midlands Mistbelt Grassland.

Assessment rationale: This endemic range-restricted species only occurs where its host plant, *Protea caffra*, grows in protea savanna in the midlands of the province of KwaZulu-Natal, South Africa, and it has an EOO of 1 562 km^2. Qualitative data suggest that *Capys penningtoni* is decreasing in abundance and is now rare at the sites where it still occurs. Local extinction is close to occurring at several sites where it formerly was relatively abundant, including at the type locality near Boston (last recorded there in 1983), Impendle Nature Reserve (not recorded there since 2012), Lundy's Hill area (one adult recorded in 2016, none in 2017), Nkawini Mountain (one adult recorded in 2016), Nhlozane mountain range (last recorded in 2014) and the Sevenfontein Prison Farm and adjacent area (one seen in 2016). The population size is inferred to be less than 250 mature individuals, with the inference of less than 50 mature individuals in the largest subpopulation. Sites known to have been occupied recently by the butterfly species are generally relatively far apart, apparently precluding movement of adults between many of them. The alien invasive Harlequin ladybird beetle that roams the habitat of *C. penningtoni*, including its oviposition sites, and that is known to feed on lepidopteran eggs, is probably the major threat to the survival of the butterfly species. The butterfly population is considered to have a single location with respect to this threat. Research on the magnitude of the impact that the ladybird beetle species is having on the butterfly population is required, as is the design of a trap that can remove substantial numbers of the beetle from the wild at the sites where the butterfly species still exists. The host plant, and therefore the butterfly, is threatened by the frequent burning of the protea savanna at quite a few of the sites where the butterfly species occurs, as well as by the intensity of the fires, fueled particularly by bracken and the invasive American bramble. These two plant species are becoming increasingly abundant in the habitat at certain sites, including under the canopies of the host plants, and the intense fires that result kill more of the hostplants than fires do in the grass sward of uninvaded habitat. The ladybird beetle and fires are probably acting synergistically to increase the pressure on the population of *C. penningtoni*. The species currently qualifies under the IUCN criteria as Critically Endangered under criterion C.

Change in status from SABCA: Previously assessed as Endangered, it seems that the conservation status for this species has indeed changed for the worse. During surveys initiated after the 2012 assessment, very few adults were seen overall. When no adults were seen, or only one, at known sites, even after repeat visits, the implication is that the species is in dire straits. Because surveys of host plants at six sites were quite intensive using three plots per site, and only two pupae were found at the one site and none at the other five sites where the species had been previously known to occur, and adults were also looked for, the population size is definitely very low. There has therefore been continuing decline in population size and number of mature adults. The effect of the ladybird beetle since the previous assessment is unknown, because population surveys only began after the previous assessment. All that is known is that by 2011 the beetle was well established in KwaZulu-Natal. This decrease in population size may be compounded by the drought. Despite population size not being known during the 2012 assessment, it does seem that the population is decreasing rapidly. The recent population surveys indicate that population size is indeed below 250 individuals, and the recent establishment of the ladybird beetle means that the number of locations has changed to one. Thus the change in status from Endangered to Critically Endangered is genuine.

Threats: The most severe imminent threat to the species arises from the alien invasive Harlequin ladybird beetle (*Harmonia axyridis*). This generalist feeder is abundant in the protea savanna habitat occupied by *C. penningtoni* during its egg-laying period and has been seen many times wandering over the protea flower buds on which the butterflies lay their eggs, exposed on the surface. Direct observation of the ladybird beetle feeding on these eggs has yet to be made, but it feeds on lepidopteran eggs elsewhere in the world (Koch *et al.*, 2003; Roy *et al.*, 2016). Whether the eggs of *C. penningtoni* have one or more adaptations that prevent the ladybird beetle species from eating them is unknown currently. The second major threat facing this species is the increased intensity and frequency of fires in the protea savannas it inhabits and the threat that these pose to its host plant, *P. caffra*. Intense fires kill *P. caffra* trees and bushes, reduce their regeneration and likely enhance the fire trap from which juvenile *P. caffra* plants must escape to establish themselves (Adie *et al.*, 2011; cf. Smith & Granger, 2016). Increased establishment of bracken (*Pteridium aquilinum*) and the alien invasive American bramble (*Rubus cuneifolius*) in protea savanna, especially under and around *P. caffra* trees and bushes, is the cause of the greater fire intensities (Adie *et al.*, 2011). Some protea savanna is burnt annually to prevent uncontrolled fires or to enhance the palatability of the grass sward to cattle of subsistence farmers, and this probably enhances the fire trap that retards or prevents regeneration and recruitment of *P. caffra*. Casual collection of flower heads of the host plant appears to occur occasionally at one location where the butterfly species is very rare, and this may affect recruitment of the host plant there. Harvesting of relatively high numbers of adults and pupae has occurred in the past (Swanepoel, 1953; Quickelberge, 2012). Afforestation has reduced the extent of potential habitat for the species in the past (Woodhall, 2013), and escape of timber trees from plantations into neighbouring protea savanna is occurring. One breeding area for the species is threatened by the potential rerouting of a road at a proposed dam site on the Mkhomazi River. The protea savanna inhabited by *C. penningtoni* is usually near the summits of mountains. Rainfall may not change significantly in the next decade in the extent of occurrence of the species (Kruger & Nxumalo, 2017), and its area of occupancy is expected to be resilient in terms of the climate being relatively stable and the habitat remaining relatively intact for the next few decades (Jewitt *et al.*, 2015a,b).

Conservation measures and research required: Protected areas where the butterfly occurs are subject to management plans, but intrusive fires can result from uncontrolled burning of neighbouring grassland. Effective traps to control the numbers of the alien invasive harlequin ladybird beetle are urgently required. *Protea caffra* and *P. simplex* host plant numbers need to be increased at its type locality and other sites such as Impendle Nature Reserve, prior to reintroduction. Some sites require formal protection to prevent the species becoming locally extinct. Other unprotected sites need management through alien plant control under or near the proteas; and fire protection including encouraging grazing to reduce the fuel load. Draft legislation with its regulations to protect *C. penningtoni* and its habitat needs to be implemented urgently by the provincial parliament. Owners and managers of land where the species occurs are being informed about how to manage the land, but this process needs to be formalized and expanded. Research into its life history and ecology, and monitoring of its various subpopulations is also needed.