

Oskar Brattström - Nigerian butterflies

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Version 1.2

# WHITES and SULPHURS (Family Pieridae)



Savannah Dotted Border  
(*Mylothris aburi*)

# WHITES and SULPHURS (Family Pieridae)

The Whites and Sulphurs are a family of medium-sized butterflies with mainly white, yellow and orange ground colour on their wings with darker, often black, additional markings. Many species are widespread and found in most parts of sub-Saharan Africa, but some genera like *Mylothris*, have numerous local endemics. Many Pieridae are intra-African migrants, following the annual rain cycle. In West Africa, that generally means they are found further south during the dry season, and then move back north during the wet season. This guide contains a selection of mostly common or easily identifiable species, while complex genera are only partially covered.



# ACKNOWLEDGEMENTS

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# PHOTOGRAPHERS

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# **WHITES and SULPHURS**

## **(Family Pieridae)**

### **INCLUDED GENERA**

**(CLICKABLE LINKS)**

*Pseudopontia*

*Afrodryas*

*Catopsilia*

*Colotis*

*Terias*

*Teracolus*

*Pinacopteryx*

*Belenois*

*Nepheronia*

*Dixeia*

*Eronia*

*Appias*

*Leptosia*

*Mylothris*



**WHITES & SULPHURS (PIERIDAE)*****Pseudopontia paradoxa* (Felder & Felder, 1869)  
Ghost**

The **Ghost** (*Pseudopontia paradoxa*) is an astonishing sight to see, and one of the weirdest little butterflies one can find in Nigeria. The wings are rounded and almost translucent without any dark markings. The eyes are a bright shiny green, adding a bit of colour to this pale butterfly. It is found inside wet rainforest areas, often in shaded parts of the forest flying low over the undergrowth. The flight is slow, weak, and almost bouncing. They are strongly attracted to certain flowers, but otherwise not often seen nectaring. The species has a patchy distribution and is quite uncommon, but always a delight to see with its slow almost hypnotic flight.

PETER BYGATE



## WHITES &amp; SULPHURS (PIERIDAE)

*Catopsilia florella* (Fabricius, 1775)  
African Emigrant

The **African Emigrant** (*Catopsilia florella*) is a common West African species, and can be found in almost any habitat except intact rainforest. It is quite easy to identify from a distance, and the sexes can usually be told apart as the male is often much paler than the yellow female, but in the dry season females are also quite pale. The species is highly migratory and its behaviour has many similarities to those of intra-African migratory birds, as their movements are coordinated with the rains. However, its migration is less precise than for most birds, so in most places it can still be found all year round, although it tends to be more common in the transition periods between wet and dry seasons. The flight is fast, quite high above ground, but both sexes frequently visit flowers where they will often stay still long enough to enable a closer look.

PHIL WHITE



THOMAS DESLOGES

Dry season form females can be as pale as the males, but can usually be told apart by the better developed spots at the end of the hindwing cell (red arrows). The male also has a brush of pale yellow hairs on the hindwing costa (blue arrow), but this can usually not be seen in the field.



## WHITES & SULPHURS (PIERIDAE)

### Genus *Terias* – Grass Yellows



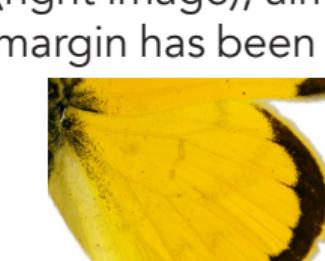
Six species of *Terias* (previously *Eurema*) are found in Nigeria, all quite small butterflies that can usually be separated by a combination of their wing shape and patterns. In general, females are paler than males, and often with broader dark markings. However, all species are quite variable and also have seasonal morphs. The wet season morphs have more dark dorsal markings, while dry season morphs have more ventral patterning. Males of the three species [\*T. hecate\*](#), [\*floricola\*](#) and [\*senegalensis\*](#) all have a dark androconial patch along a basal vein on the ventral forewing (see image to the right).

To identify any *Terias* to species level you begin by studying the shape of the black forewing patch (scroll down for a detailed identification guide).



**Scroll down for identification guide!**

1. Start by looking at the black margin on the dorsal forewing. In [\*T. hapale\*](#) (left image) the black stops almost halfway towards the tornus. In the other species the black reaches further down (right image), go to Step 2.

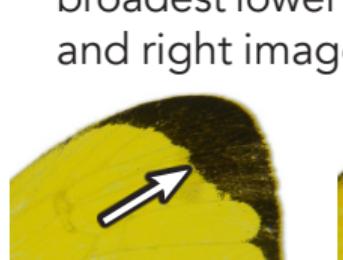


*T. hapale*



*T. floricola*

2. Look at inside of the black margin. If it is relatively even (left image) go to Step 3. If it instead has a 'tooth' (middle and right image), go to Step 4.



*T. brigitta*

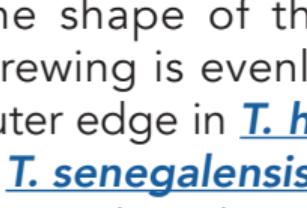


*T. hecate*

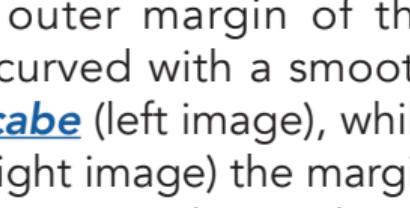


*T. floricola*

3. The shape of the hindwing outer margin is evenly rounded in [\*T. brigitta\*](#) (left image), but more sharply angled in [\*T. desjardinsii\*](#) (right image), almost like a part of the wing margin has been cut off.

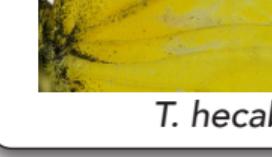


*T. brigitta*



*T. desjardinsii*

4. Check where the black inner forewing margin is broadest. In [\*T. floricola\*](#) it is broadest in space 5 (left image). However, if it is at its broadest lower down, close to vein 4 (middle and right image), go to Step 5.



*T. floricola*



*T. hecate*



*T. senegalensis*

5. The shape of the outer margin of the forewing is evenly curved with a smooth outer edge in [\*T. hecate\*](#) (left image), while in [\*T. senegalensis\*](#) (right image) the margin is straighter, but the outer edge is clearly scalloped (has a jagged outline).



*T. hecate*



*T. senegalensis*

## WHITES &amp; SULPHURS (PIERIDAE)

*Terias brigitta brigitta* (Stoll, 1780)  
Small Grass Yellow

BART WURSTEN

This is usually the smallest of the **Grass Yellows**. The male has an orange tone to the yellow, whilst the female can be slightly green. The dorsal surface of the female often has a sprinkle of black scales. The forewings of both sexes are narrow compared to other *Terias* species.

*Terias desjardinsii regularis* Butler, 1876  
Desjardin's Grass Yellow

The hindwings usually have a sharp angle along the outer edge and the colour is less orange than *T. brigitta*. The underside is similar to *T. brigitta*, often with long streaks formed from dark scales.



THOMAS DESLOGES (ALL MOUNTED SPECIMENS OF TERIAS)

## WHITES &amp; SULPHURS (PIERIDAE)

*Terias hecabe solifera* Butler, 1875  
Common Grass Yellow

The outer edge of the forewing is more rounded than in *T. senegalensis* and without clear scalloping. The hindwings also often have a darker margin, but this can vary.



♂



♀

*Terias senegalensis* Boisduval, 1836  
Forest Grass Yellow

This is normally the largest *Terias* species. The outer edge of the forewing is straight compared to *T. hecabe*, and it is also noticeably scalloped (jagged outline). As the name implies, this species is generally more linked to forests.



♂



♀

## WHITES &amp; SULPHURS (PIERIDAE)

*Terias floricola leonis* Butler, 1886  
Malagasy Grass Yellow

Like *T. senegalensis*, this species is more linked to forest than savannah. Despite the difference in the black patterning on the forewing, it is deceptively similar to *T. hecate*.

*Terias hapale* Mabille, 1882  
Marsh Grass Yellow

This is the rarest of the Nigerian *Terias* species and is generally linked to marshy areas. The black forewing markings are less developed than in the other species and the yellow colour is usually paler. It also has a larger spot in the ventral forewing cell.

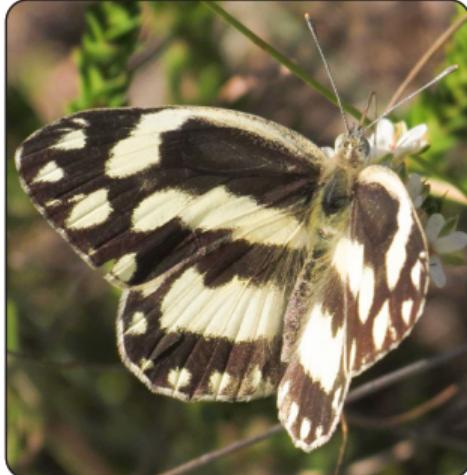


## WHITES & SULPHURS (PIERIDAE)

### *Pinacopteryx eriphia tritogenia* (Klug, 1829) Zebra White

The **Zebra White** (*Pinacopteryx eriphia*) is a species of the dry Northern savannah regions, and rarely found further south than about 11° N. It has been found a few times in Amurum Forest Reserve outside Jos which is potentially the most southern location with frequent sightings in Nigeria. On rare occasions it can reach far south, and have been recorded in Ibadan (Jon Baker) and Cross River (Oskar Brattström). The sexes look similar, but there is a high degree of seasonal difference with the dry season morph having less distinct markings, especially on the ventral side, acting as a highly effective camouflage. The pattern on the dorsal side is unique, and makes it an easy species to identify in the field.

BRIAN DU PREEZ



MALCOLMDEE (INATURALIST.ORG USERNAME)



PETER ERB



## WHITES &amp; SULPHURS (PIERIDAE)

*Nepheronia argia argia* (Fabricius, 1775)  
Large Vagrant

This large forest species can be quite common and often reaches further into savannah habitats along rivers. Male has dark apical markings on both sides of the forewing. The female is highly variable and can be either white or yellow, but always has broad dark ventral markings on both wings. She can be similar to the [Vine-leaf Vagrant \(Eronia cleodora\)](#), while the male can be mistaken for the smaller [Blue Vagrant \(N. thalassina\)](#).

STEVE WOODHALL



REGINE HAKENBECK



PETER BYGATE



ROGÉRIO FERREIRA (BOTH IMAGES BELOW)



## WHITES &amp; SULPHURS (PIERIDAE)

***Nepheronia thalassina thalassina* (Boisduval, 1836)  
Blue Vagrant**

This common forest species is slightly smaller than the [Large Vagrant \(\*Nepheronia argis\*\)](#) and is also quite ecologically tolerant, enabling it to push far into degraded habitats and dry forests. The male has a strong light-blue shine on the dorsal wing surface, and both sexes also lack the strong black markings on the ventral side found in the [Large Vagrant \(\*Nepheronia argis\*\)](#). The ground colour of the wings of the female is highly variable with mixed amounts of white, yellow, and orange.

PETER R STEWARD



PETER BYGATE



FREDERIK LECK FISCHER



I.C. RIDDELL



## WHITES &amp; SULPHURS (PIERIDAE)

*Nepheronia pharis pharis* (Boisduval, 1836)  
Round-winged Vagrant

This common forest species is smaller than the other *Nepheronia* species. The ventral hindwing has a distinctive streak in both sexes, with further dark markings in the female. The dorsal markings are similar in both sexes. Due to its rounded wings it can be mistaken for one of the [Leptosia](#) species, but these are all smaller. While both the [\*\*Large Vagrant\*\* \(\*Nepheronia argia\*\)](#) and the [\*\*Blue Vagrant\*\* \(\*Nepheronia thalassina\*\)](#) can be seen flying around high vegetation and tree canopies, the **Round-winged Vagrant** always stays closer to the undergrowth.

CHARLEY HESSE

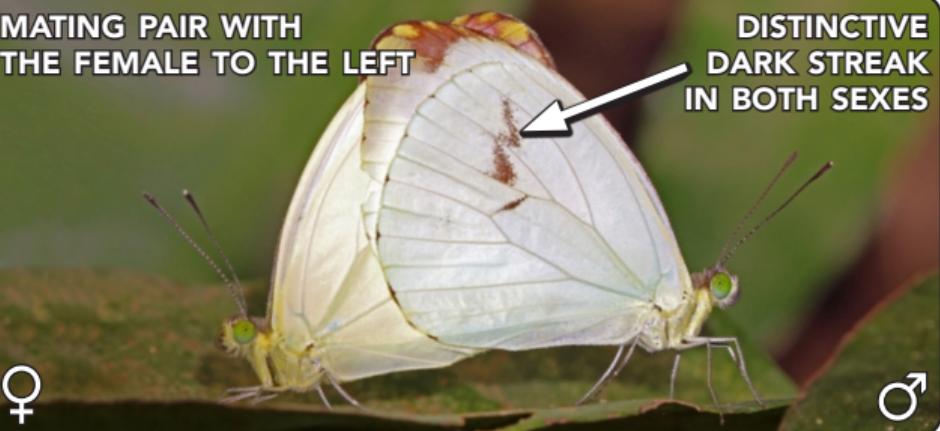
PETER BYGATE



CHARLES J SHARP

MATING PAIR WITH THE FEMALE TO THE LEFT

DISTINCTIVE DARK STREAK IN BOTH SEXES



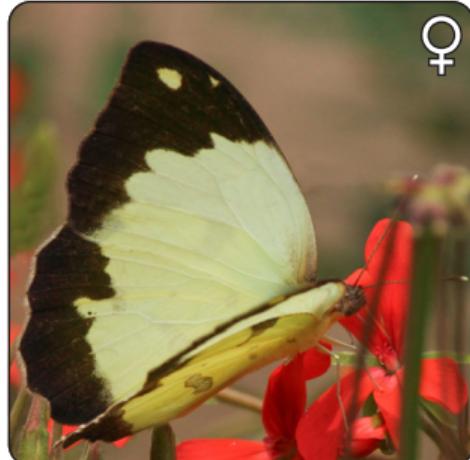
## WHITES &amp; SULPHURS (PIERIDAE)

*Eronia cleodora cleodora* Hübner, 1823  
Vine-leaf Vagrant

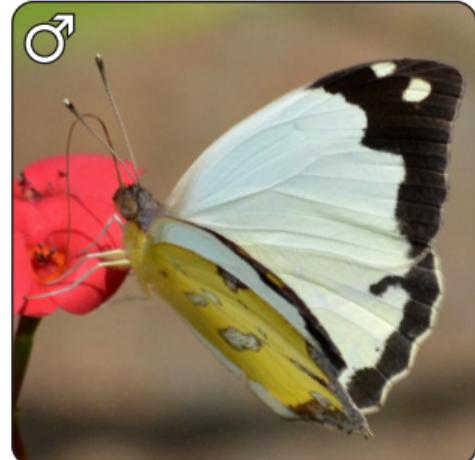
The Vine-leaf Vagrant is easy to recognise in the field, with its broad, dark wing margins and yellow ventral hindwings with a distinct camouflage pattern. In West Africa, it is only found in the northern parts of Nigeria in dry savannah woodlands. The sexes are similar, but the female tends to have a cream coloured tint to the white compared to the male, although white females can also be found. It can only be confused with the [Large Vagrant \(Neponerionia argia\)](#).



ROBERT TAYLOR



RANDY FLOYD



## WHITES &amp; SULPHURS (PIERIDAE)

*Afrodryas leda* (Boisduval, 1847)  
Autumn Leaf Vagrant

In West Africa, the strikingly coloured **Autumn Leaf Vagrant** (*Afrodryas leda*) is only found in north-eastern Nigeria, reaching as far south as the Jos Plateau. It looks similar to some of the *Colotis* species, but unlike these it is rarely found in fully open habitats, instead preferring riverine vegetation and Sudan Savannah thickets. It is a fast flier that rarely settles for long. Both sexes have a similar pattern, but the apical orange patch on the dorsal forewing that is always present in the male can sometimes be missing in the female.

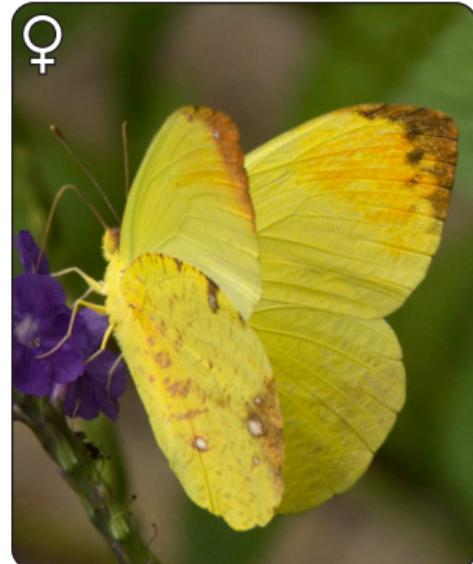
ROBERT TAYLOR



BART WURSTEN



BART WURSTEN



## WHITES &amp; SULPHURS (PIERIDAE)

Genus *Colotis* – Orange Tips

The **Orange Tips** (*Colotis*) is a highly variable genus, and they are sometimes not easy to identify to species level. Many species show large seasonal differences, with dry season morphs generally having more dark markings, especially in the females. Most of the species are migratory, moving south in the dry season, so the species present in any given location varies throughout the year.

*Colotis vesta amelia* (Lucas, 1852)  
Veined Golden Arab

The **Veined Golden Arab** (*Colotis vesta*) is a highly variable species, and the sexes can sometimes be very hard to tell apart.

The ventral surface is better camouflaged in the dry season form. Like most *Colotis*, it is usually more numerous in the northern parts of Nigeria.

OSKAR BRATTSTRÖM

WET SEASON

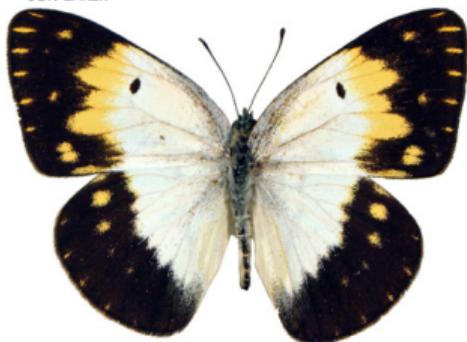


JUKKA JANTUNEN

DRY SEASON



JON BAKER



## WHITES & SULPHURS (PIERIDAE)

*Colotis amata amata* (Fabricius, 1775)  
**Small Salmon Arab**

*Colotis phisadia phisadia* (Godart, 1819)  
**Blue-spotted Arab**

These quite small species are linked to the Sahel region and can be found in the north-eastern parts of Nigeria. Both are fairly distinct and the sexes look similar, but females tend to be larger and have bigger spots. The two species can be separated by looking at the dark border on the dorsal hindwing. In the **Small Salmon Arab** (*C. amata*) this border has light spots, while it is solid in the **Blue-spotted Arab** (*C. phisadia*). The name of the latter relates to an Indian subspecies with more blue pattern elements.

UDAY AGASHE



UDAY AGASHE



Colotis amata

Yael Orgad



JOEY BOM



Colotis phisadia

## WHITES &amp; SULPHURS (PIERIDAE)

*Colotis chrysonome* (Klug, 1829)  
**Golden Arab**

*Colotis halimede halimede* (Klug, 1829)  
**Yellow Patch White**

These Sahel-linked species can be found in the north-eastern parts of Nigeria. They are distinct and easy to recognise, and the sexes are also different. The **Golden Arab** (*C. chrysonome*) has a golden-orange ground colour and the male has a blue-white patch at the forewing base that is missing in the female. The **Yellow Patch White** (*C. halimede*) is mainly white, but with an orange patch on the forewing. The female has a row of black forewing spots that is missing in the male.

PAMELA DONALDSON (BOTH IMAGES OF SPECIES)



SANDER1 (INATURALIST.ORG USERNAME)



Colotis chrysonome



Colotis halimede

## WHITES &amp; SULPHURS (PIERIDAE)

*Colotis celimene sudanicus* (Aurivillius, 1905)  
Magenta Tip

The male of this Sudan Savannah butterfly has a large and highly characteristic purple apical patch, bisected by black lines along the veins. The West African subspecies has a broad black border on the hindwing which is not visible in the ventral photos as they show the nominate subspecies from East Africa. The female lacks the purple patch, but is otherwise similar to the male. The female can be mistaken for the [Veined Golden Arab \(\*Colotis vesta\*\)](#), but the inner edge of the dark dorsal hindwing margin is not as straight in that species as it is in the **Magenta Tip** (*C. celimene*) female.

JON BAKER



RGUINNESS (INATURALIST.ORG USERNAME)



MARTIN GRIMM



SIMON TONGE



## WHITES & SULPHURS (PIERIDAE)

### *Colotis protomedia* (Klug, 1829) Yellow Splendour

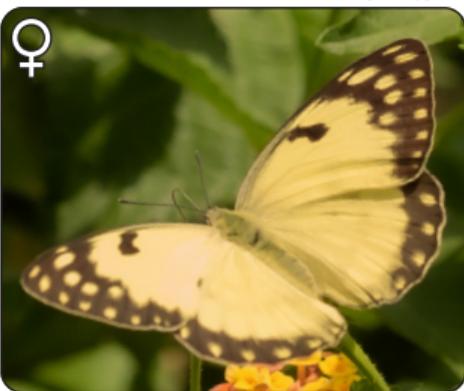
The **Yellow Splendour** (*Colotis protomedia*) is a Sudan Savannah butterfly that in West Africa is limited to north-eastern Nigeria. It is quite large and has a highly distinct pattern. The sexes can be told apart by the blackened veins on the dorsal forewing that is only present in the male. The yellow colouration is very bright and so distinct that it is usually possible to tell it apart from similar sized yellow species such as the [African Emigrant](#) (*Catopsilia florella*) even when it is flying.



♂



♂



PAMELA DONALDSON



PAMELA DONALDSON

YALE PEABODY MUSEUM OF NATURAL HISTORY

## WHITES & SULPHURS (PIERIDAE)

### *Colotis ione* (Godart, 1819) Purple Tip

The **Purple Tip** (*Colotis ione*) is a large *Colotis* species. The male is highly distinct with the strong purple coloration of the apical patch. In the wet season, the veins are often darkened (upper left image), while the dry season form is paler (lower left image). The female can look similar to a giant **Scarlet Tip** (*Colotis danae*), but lacks the well-developed row of spots on the ventral hindwing found in that species. Instead there is an almost straight band that can be strongly marked in the wet season. The species is found in Sudan Savannah habitats across most of West Africa, but it is usually scarce and localized.

RGUINNESS ((NATURALIST.ORG USERNAME))



STEVE WOODHALL



JUKKA JANTAUNEN



STEVE WOODHALL



**WHITES & SULPHURS (PIERIDAE)*****Colotis elgonensis glauningi* (Schultze, 1909)  
Mountain Crimson Tip**

This species is unusual among *Colotis* by being strictly submontane. Several subspecies have been described, each of them limited to isolated mountain ranges across Africa. The subspecies ***glauningi*** is the only one found in West Africa, and is restricted to the Obudu and Mambilla Plateaux, flying at the edge of submontane forests. The sexes are similar, but the male has better developed red spots at the forewing tips. They look similar to the [\*\*Purple Tip \(\*Colotis ione\*\)\*\*](#), but as the latter is a Sudan Savannah species the ranges do not overlap. Pictures below show the nominate subspecies (*elgonensis*) from Kenya.



**WHITES & SULPHURS (PIERIDAE)*****Colotis danae eupompe* (Klug, 1829)**  
**Scarlet Tip**

Just as the name suggests, the **Scarlet Tip** (*Colotis danae*) has a strong scarlet colouration of the wing tips, especially in the male. Most similar species found in West Africa have some degree of yellow tones to any red colouration in this patch. In the female, the scarlet colouration is sometimes missing. Both sexes tend to have some degree of grey scaling (sometimes almost black) at the base of each wing on the dorsal side. This helps in identifying females when the scarlet is missing. The ventral surface is similar in both sexes.

BERNARD DUPONT



K.M. HANEESH



MICOLTANZANIA (INATURALIST.ORG USERNAME)



GLORYSUMMAY (INATURALIST.ORG USERNAME)



## WHITES &amp; SULPHURS (PIERIDAE)

*Colotis evarne* (Klug, 1829)  
Sulphur Orange Tip

Normally this species is found in Sudan Savannah habitats, but at times strong Harmattan winds can bring large numbers further south. The male has a light orange forewing patch that lacks a black border on the inside. Normally the wing ground colour is light yellow, but sometimes the yellow is reduced to a small area close to the orange patch (top left image). This yellow colouration separates it from the similar [Desert Orange Tip \(\*Colotis liagore\*\)](#). The female has more black markings, and sometimes the orange colour is more or less missing in the apical patch area.

PAMELA DONALDSON



OSOANDINO (INATURALIST.ORG USERNAME)



ATTILA STEINER



TILUCHI (INATURALIST.ORG USERNAME)



## WHITES &amp; SULPHURS (PIERIDAE)

***Colotis liagore* (Klug, 1829)  
Desert Orange Tip**

This small species is usually limited to the Sahel region, but can sometimes venture further south. The light orange patch in the male lacks a black inside border and the light black marking can sometimes be completely missing. It can be confused with the similar [\*\*Sulphur Orange Tip\*\*](#) ([\*\*\*Colotis evarne\*\*\*](#)), but the ground colour in that species usually has a yellow tone, sometimes limited to the area just inside the orange patch. The male has a small orange streak on the ventral hindwing costa that appears to be missing in the [\*\*Sulphur Orange Tip\*\*](#) ([\*\*\*C. evarne\*\*\*](#)). The female is quite variable with more dark markings, but can be told apart from similar species by the distinctive dusting of grey scales in the dorsal forewing cell.

LESLIE FLINT



ATEAH ALFAKIH



JAN FISCHER RASMUSSEN



## WHITES &amp; SULPHURS (PIERIDAE)

*Colotis antevippe antevippe* (Boisduval, 1836)  
Large Orange Tip

The male apical patch is a strong orange-red, sometimes bordered by black on the inside, making it somewhat similar to the [Round-winged Orange Tip \(\*Colotis euippe\*\)](#). However, the latter species always has a broader black margin around the whole apical patch. In the wet season the ventral surface often has strong black scaling along all the veins in both sexes, while the dry season form is less marked (lower images). The female always has a black bar inside the paler orange patch at the forewing tip. Small specimens of both sexes can be mistaken for the [Tiny Orange Tip \(\*Colotis evagore\*\)](#).

CHARLES J SHARP



YVONNE DE JONG



PHIL WHITE



MLOLUMSMA (NATURALIST.ORG USERNAME)



CHARLES J SHARP



DRY SEASON

WET SEASON

## WHITES &amp; SULPHURS (PIERIDAE)

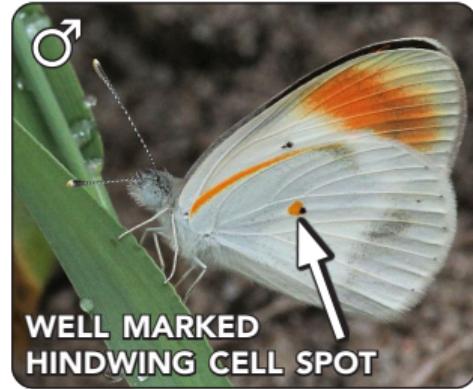
*Colotis evagore antigone* (Cramer, 1776)  
Tiny Orange Tip

This is a variable species, and apart from its small size, it is not always possible to tell apart from other small *Colotis* species. The amount of black markings varies in both sexes, and light male specimens look similar to the [Desert Orange Tip](#) (*C. liagore*), but this species always lacks a clear spot at the end of the ventral hindwing cell. The female has more black markings than the male, and can be told apart from dark male specimens as the female usually has more dark scaling around the orange apical patch, sometimes covering it completely (lower right). The females also almost always have a dark spot in the dorsal forewing cell.

CHARLES J SHARP



WYNAND UYS



WYNAND UYS



MARKUS GMEINER



## WHITES &amp; SULPHURS (PIERIDAE)

*Colotis daira stygia* (Felder & Felder, 1865)  
Black-marked Orange Tip

The male of this small species normally has a much broader dark hindwing margin than in similar species. The orange apical patch is evenly rounded and is usually, but not always, bordered with black on the inside. In the similar [Tiny Orange Tip \(\*Colotis evagore\*\)](#), the inside edge of the patch is straighter. The female is similar to the male, but the orange of the forewing tip patch is often fully covered by dark scales. There is never a spot in the dorsal forewing cell. The species has a patchy distribution across Sudan Savannah and northern Guinea Savannah habitats, but it can sometimes be quite common locally.

SIMON TONGE



LRUSSOUTK (INATURALIST.ORG USERNAME)



LRUSSOUTK (INATURALIST.ORG USERNAME)

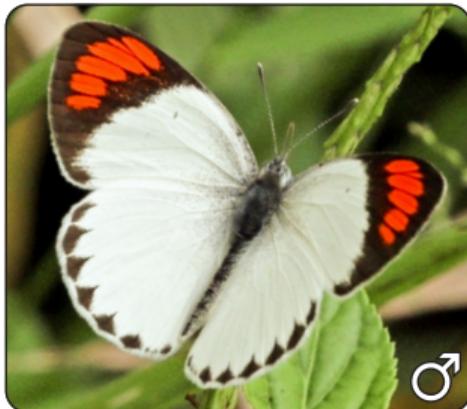


## WHITES &amp; SULPHURS (PIERIDAE)

*Colotis euipe euipe* (Linnaeus, 1758)  
Round-winged Orange Tip

This species has a more rounded forewing than other **Orange Tips**. The male apical patch is always bordered by a broad black margin on all sides. The female is usually the darkest *Colotis* species, and the orange patch can sometimes be completely covered by black scales. Both sexes lack a strongly developed orange streak on the ventral hindwing costa found in many similar species. The **Round-winged Orange Tip** (*Colotis euipe*) is probably the most ecologically tolerant of all the Nigerian *Colotis* species and can be found far to the south.

CHARLES J SHARP



RAINER WENDT

**NO STRONG ORANGE COSTAL STREAK**



PAVEL VOJTEK



PETER BYGATE

♀



## WHITES &amp; SULPHURS (PIERIDAE)

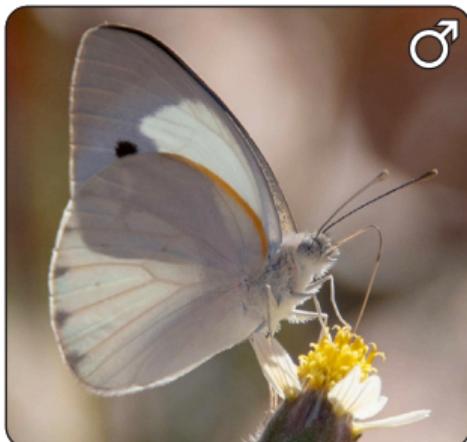
*Teracolus eris eris* (Klug, 1829)  
Banded Gold Tip

This species used to be placed in the genus *Colotis*, but genetic data recently showed that it belongs to the genus *Teracolus*. It is found widely across drier parts of Africa, including northern West Africa. The male is highly distinct with strong black markings on the forewings and golden spots on the tips. The hindwing costa is also broadly black, setting it apart from most similar species. The female is similar but with smaller black markings, especially on the hindwings, and most of the lighter spots are generally white instead of gold. The ventral side is lighter in both of the sexes, but females tend to be darker than males.

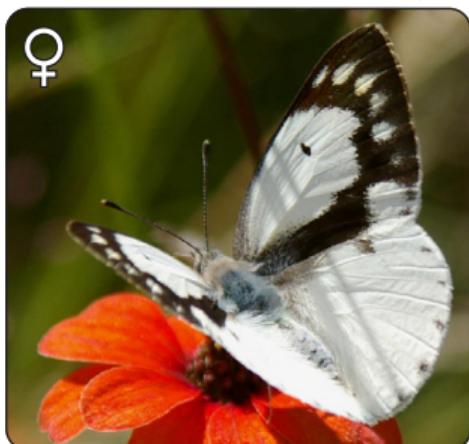
STEVE WOODHALL



JONI OVERBOSCH



ELAINE BESTER



## WHITES & SULPHURS (PIERIDAE)

### Genus *Belenois* – Caper Whites

The **Caper Whites** (*Belenois*) can be a tricky genus to learn to identify to species level as they are so highly variable. Many species have remarkably different subspecies found across Africa, so relying on images from areas outside West Africa can lead to wrong determinations of Nigerian material. All species are medium-sized butterflies and the males are generally white, with contrasting black markings, but two species are yellow. The females are remarkably variable, and individuals of the same species vary in the wing ground colour from white to orange and yellow. The amount of black markings is also much more variable than in the males. Many species are migratory, and males can sometimes be found mud-puddling in large groups (see photo below). This guide shows a few common species, but also some rarer characteristic ones. For detailed identifications, reference literature will need to be consulted.

OTOMOPS (INATURALIST.ORG USERNAME)



## WHITES & SULPHURS (PIERIDAE)

### *Belenois aurota* (Fabricius, 1793) Caper White

The ventral surface of this common species has a characteristic net-pattern with all the veins darkened. In West Africa it can only be confused with the [Large Caper White \(\*Belenois zochalia\*\)](#).

There is a bar-shaped mark in the forewing cell. The female is darker than the male, but otherwise similar. It is a Sudan Savannah species, but with strong migratory tendencies meaning that the whole population gradually begins to move south during the dry season.

During rare extreme migration events, many millions of **Caper Whites** (*Belenois aurota*) can form remarkable large clouds of butterflies, all flying in the same general direction.

IAN LAWSON



IAN LAWSON



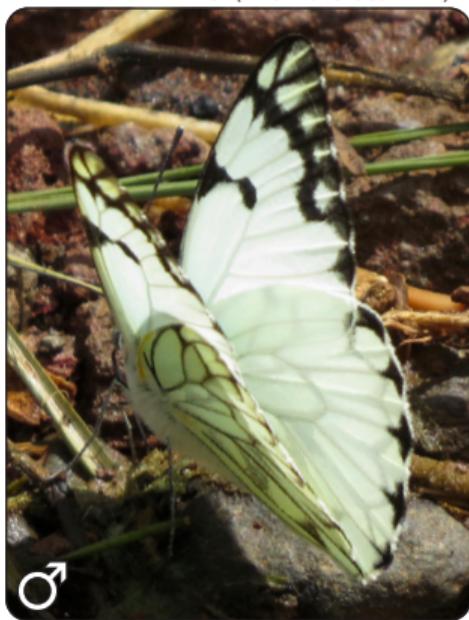
TONY REBELO



## WHITES &amp; SULPHURS (PIERIDAE)

*Belenois zochalia connexiva* (Joycey & Talbot, 1927)  
Large Caper White

In West Africa, this species is only found on the Obudu and Mambilla Plateaux. The ventral surface is similar to the [Caper White \(\*Belenois auota\*\)](#), but they can be separated by the two small additional dark streaks in the hindwing cell not found in the latter. The female hindwing is usually yellow on the dorsal side. The male dorsal surface looks similar to many other *Belenois* species. However, this is a submontane species normally found flying at the edge of forests, rarely straying below altitudes of at least 1300 metres.



## WHITES & SULPHURS (PIERIDAE)

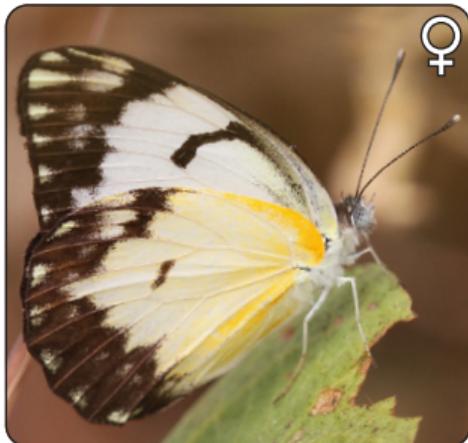
### *Belenois gidica gidica* (Godart, 1819) Pointed Caper White

This species can be told apart from the similar [African Caper White \(\*Belenois creona\*\)](#) and the [Caper White \(\*Belenois aurota\*\)](#) by its slightly larger size and the more pointed forewing shape in both sexes. It is usually found in slightly drier habitats all the way up to the Sahel region, but will overlap with other *Belenois* species. The female is darker than the male, but is otherwise similar. The species does not tend to migrate far and will not be found in the south, even during the peak of the dry season.

RAINER WENDT



IAN LAWSON



IAN LAWSON



**WHITES & SULPHURS (PIERIDAE)*****Belenois creona creona* (Cramer, 1776)  
African Caper White**

This is another common species, and with similar migratory tendencies to the [Caper White \(\*Belenois aurota\*\)](#). The ventral surface lacks the net-pattern of the former species, and the black markings at the wing edges are better developed. The female is quite variable and much darker than the male. Both sexes have a small black spot in the forewing cell, instead of the larger bar-like dark marking found in the similar [Caper White \(\*B. aurota\*\)](#).

OSKAR BRATTSTRÖM



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## WHITES &amp; SULPHURS (PIERIDAE)

*Belenois calypso calypso* (Drury, 1773)  
**Calypso Caper White**

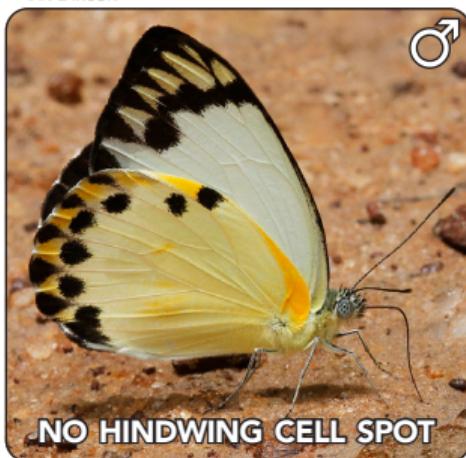
*Belenois theora theora* (Doubleday, 1846)  
**Forest Caper White**

Both of these species are linked to forests, but the **Forest Caper White** (*Belenois theora*) is generally found in to wetter forests, while the **Calypso Caper White** (*Belenois calypso*) is found in drier forests and dense Guinea Savannah. The two species look very similar and are often found together, but they can easily be told apart in the field by looking for one specific dark spot on the ventral hindwing, present only in the **Calypso Caper White** (*B. calypso*). As usual for *Belenois*, the females are variable in ground-colour and have broader dark markings.

DRAIN0 (INATURALIST.ORG USERNAME)

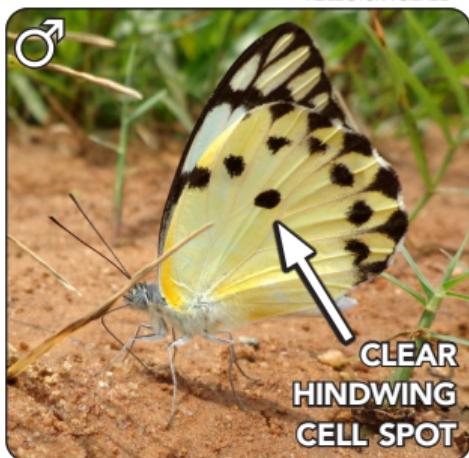


IAN LAWSON



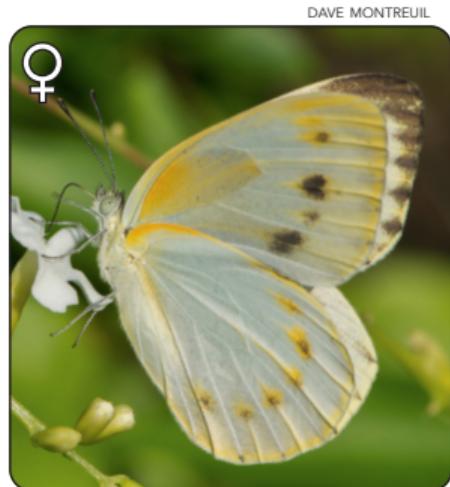
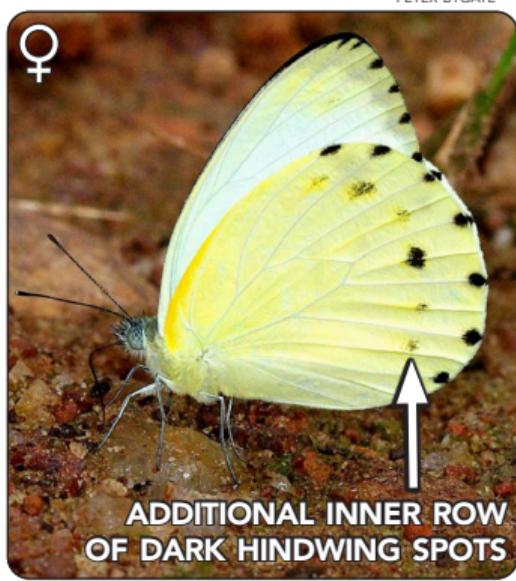
NO HINDWING CELL SPOT

ADEDOTUN AJIBADE

*Belenois theora**Belenois calypso*

**WHITES & SULPHURS (PIERIDAE)*****Dixeia orbona orbona* (Geyer, 1837)  
Creamy Small White**

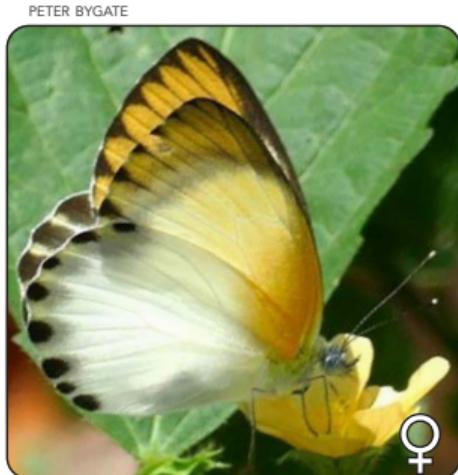
This is quite a small and somewhat variable species. The male dorsal pattern is usually pure black and white, while the ventral side typically has some degree of orange colouration close to the base of the wings. The female has a variable amount of both yellow-orange and black markings on either side. They can be confused with the [Dotted Borders \(Mylothris\)](#), but the **Creamy Small White** (*Dixeia orbona*) is smaller, and there is usually an extra row of small black spots on the ventral hindwing, inside of the normal marginal row, which is never present in any species of the [Dotted Borders \(Mylothris\)](#).



## WHITES &amp; SULPHURS (PIERIDAE)

*Appias sylvia sylvia* (Fabricius, 1775)  
Common Albatross

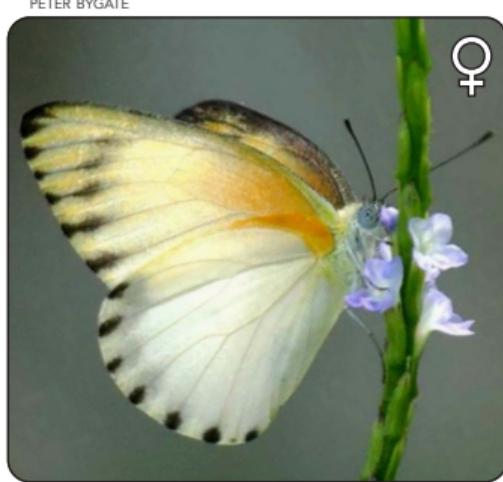
The **Albatrosses** (*Appias*) can easily be mistaken for some of the **Dotted Borders** (*Mylothris*), but the genera can usually be told apart by the shape of the marginal dots at the hindwing veins. In *Mylothris* these dots are neatly rounded, while in *Appias* they are cut off by the wing margin making them look more triangular. The **Common Albatross** (*Appias sylvia*) is a widespread forests species, and the only West African *Appias* species where the male has any orange colour on the dorsal forewings. The female is variable, and usually has less orange scales in the forewing apical patch than the photographed specimen, but the ground-colour of the dorsal forewing is usually light orange. Both sexes have rounded forewings compared to the similar **Sabine Albatross** (*Appias sabina*).



## WHITES & SULPHURS (PIERIDAE)

### *Appias sabina sabina* (Felder & Felder, 1865) Sabine Albatross

This species is similar to the [Common Albatross \(\*Appias sylvia\*\)](#) in both size and habitat choice, but they can be separated from each other by looking at the forewing shape and colouration. Both sexes of the **Sabine Albatross** (*Appias sabina*) have more pointed wings than the other *Appias* species, the male also lacks any orange colouration on the dorsal side. The female has an orange ground colour on most of the forewings, with broad black markings. The male looks similar to the [African Albatross \(\*Appias epaphia\*\)](#), but as the latter is a savannah species, they rarely overlap. The **Sabine Albatross** is generally less common than the other *Appias* species, but can be very common in certain locations.



## WHITES &amp; SULPHURS (PIERIDAE)

*Appias epaphia epaphia* (Cramer, 1779)  
African Albatross

Compared to wet forest habitats of other Nigerian *Appias* species, the **African Albatross** (*Appias epaphia*) is more at home in open habitats and secondary forests. The female has a larger amount of dark markings than most Nigerian Pieridae. The male looks similar to the [Sabine Albatross \(Appias sabina\)](#), but their habitat choice is usually enough to tell them apart. The forewing of the **African Albatross** male is slightly less pointed, and the black markings smaller, but sometimes males of both species look too similar to be told apart.



♂



♂

SZabolcs Sáfián



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RAINER WENDT (IMAGES ABOVE AND BELOW)



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## WHITES &amp; SULPHURS (PIERIDAE)

Genus *Leptosia* – Spirits

The Spirits is a small genus with six West African members. They are all quite similar, small white butterflies, with rounded wings and a slow weak flight. The genus is mainly found in wetter forests, but some species like the **African Spirit** (*Leptosia alcesta*) can be quite tolerant of habitat degradation and are also found in drier forests and riverine vegetation. All six West African species can be found in Nigeria, but as they are all quite similar and variable they are not easy to recognise in the field, so in this guide they won't be treated in detail. They can be confused with the [Ghost](#) (*Pseudopontia paradoxa*), but this species has no marking at all on the wings, while even the least marked of the *Leptosia* species always have some dark markings.

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*Leptosia alcesta*

ROGÉRIO FERREIRA

*Leptosia hybrida*

RAINER WENDT

*Leptosia nupta*

## WHITES &amp; SULPHURS (PIERIDAE)

Genus *Mylothris* – Dotted Borders

The **Dotted Borders** (*Mylothris*) is a large genus with around 60 species. The taxonomy is quite turbulent and many species are likely to be described in the near future. They are often hard to identify to species-level, and in some cases we do not even know if females and males are correctly matched under the same species! The genus is mostly found in forests, and the larvae feed on Mistletoe. As the name implies, Dotted Borders usually have small black dots at the edge of most of the wing veins, forming a neat row. Many other Pieridae, for example the genus [Appias](#), look similar, but their marginal black markings tend to be less perfectly rounded. In this guide most forest species are left out as they are hard to identify in the field, but examples of the variation within the genus are shown on this page.

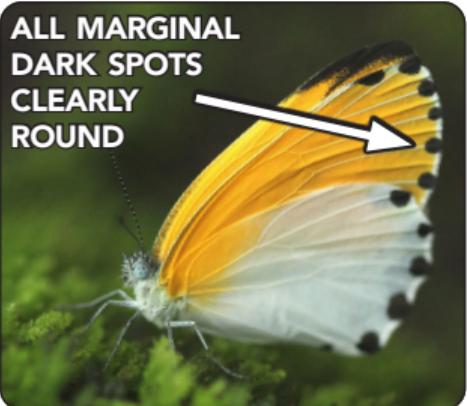
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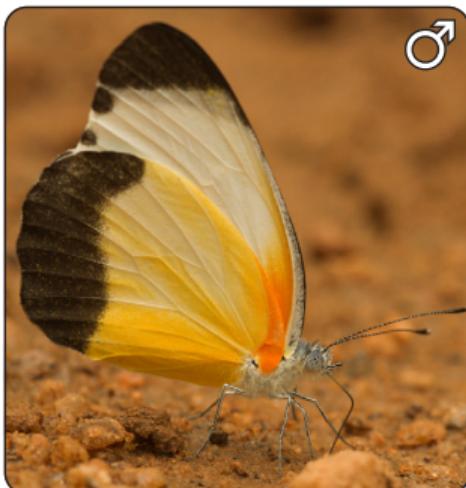
RAINER WENDT



**WHITES & SULPHURS (PIERIDAE)*****Mylothris chloris chloris* (Fabricius, 1775)  
Common Dotted Border**

Despite its name, the **Common Dotted Border** (*Mylothris chloris*) has very few dots on the wing borders. This is because the black markings are enlarged and merge together, forming a large continuous patch, especially on the hindwings. Compared to many other ***Mylothris*** species, this species is often seen flying in more open habitats. The male and female are similar, but the female has more extensive black markings on all wings, both dorsally and ventrally. Of the other common species of Pieridae it can be possibly confused with the female of the [\*\*African Caper White\*\* \(\*Belenois creona\*\)](#), but this species has the black margins broken up by several yellow spots, as well as a different dorsal pattern.

OSKAR BRATTSTRÖM



ADRIAN HOSKINS



**WHITES & SULPHURS (PIERIDAE)**

***Mylothris aburi*** Larsen & Collins, 2003  
**Savannah Dotted Border**

***Mylothris rueppellii josi*** Larsen, 1986  
**Rüppell's Dotted Border**

The **Savannah Dotted Border** (*Mylothris aburi*) is a quite common butterfly found inside open forests and woodlands across the savannah zone. **Rüppel's Dotted Border** (*M. rueppelli*), a similar species normally found in eastern and southern Africa, has an endemic subspecies on the Jos Plateau where the two species are often found together. The orange forewing patch of **Rüppell's Dotted Border** (which is the rarer of the two) is much darker, almost red, and also does not reach as far away from the body.

OSKAR BRATTSTRÖM (ALL IMAGES ON PAGE)

*Mylothris rueppelli**Mylothris aburi*