

Oskar Brattström - Nigerian butterflies

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Version 1.0

# SWALLOWTAILS and SWORDTAILS (Family Papilionidae)



**Citrus Swallowtail**  
(*Papilio demodocus*)

# SWALLOWTAILS and SWORDTAILS

## (Family Papilionidae)

Swallowtails and swordtails are generally the largest butterflies found in Nigeria, even if some species, like the [White Lady](#) (*Graphium angolanus*), can be relatively small compared to large species from other families. They are strong fliers that are hard to catch with a sweep net, but they can often be observed more closely when nectaring or mud-puddling. About 30 species are known to occur in Nigeria, but many of them are rare and localised. Males are often found mud-puddling in large numbers, but females of many species can be hard to find as they often stay high up in the tree tops. This guide includes all but four of the species known to occur in Nigeria. The missing species (*Papilio rex*, *Graphium illyris*, *G. agamedes*, and *G. ucalegon*) will be added in future updates.



DAVE MONTREUIL

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# ACKNOWLEDGEMENTS

The author would like to thank Nadia Van Gordon who proofread all the text sections, Jon Baker who provided many valuable comments, all the photographers who provided the photos, without which a project such as this would be close to impossible, all the early field testers who helped me work out technical issues, Steve Collins and the African Butterfly Research Institute (ABRI) for all the support over the years, A.P. Leventis Ornithological Research Institute (APLORI) for their incredible work to promote biodiversity in Nigeria, the Nigerian Bird Atlas Project for leading the way on Nigerian Citizen Science, and Ulf Ottosson for his constant enthusiasm and dedication to conservation. This project is dedicated to the memory of Dr. Torben B. Larsen. Without his early support I would probably never have began my work with Nigerian butterflies.



# PHOTOGRAPHERS

All photos are used with the explicit permission of the photographers or have been published online under a Creative Commons license, allowing reuse for non-commercial purposes. Some images have been lightly modified to better represent the morphology of the Nigerian populations of certain species. Images from the following photographers are used in this chapter: Nick Baker, Oskar Brattström, Peter Bygate, Thomas Desloges, Bernard Dupont, Rogério Ferreira, Martin Grimm, Regine Hakenbeck, Adrian Hoskins, Markus Lilje, Dave Montreuil, Matt Muir, [observateursalonga@inaturalist.org](mailto:observateursalonga@inaturalist.org), Michael Ochse, Domenica Prinzivalli, Szabolcs Sáfián, Charles J Sharp, Simon Tonge, Rainer Wendt, Mark Williams and Bart Wursten.

## INCLUDED GENERA

(CLICKABLE LINKS)

*Papilio*

*Graphium*





## SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

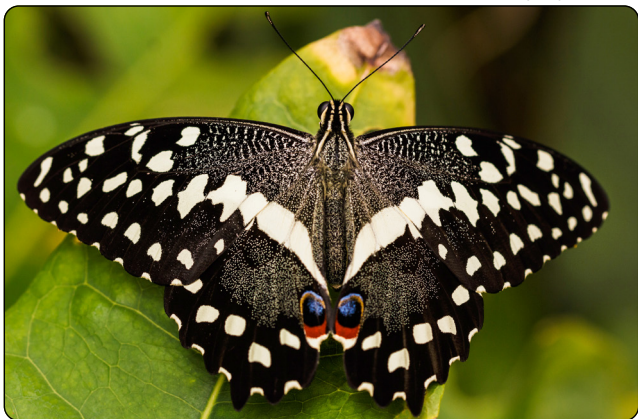
### *Papilio demodocus demodocus* Esper, 1798 Citrus Swallowtail

BERNARD DUPONT

The **Citrus Swallowtail** (*Papilio demodocus*) is a very common species, that occurs in almost all part of West Africa. It is generally found in a range of savannah habitats, but has also managed to colonise everything from gardens in major cities, and cleared land inside deep rainforest. This is due to human cultivation of various Citrus plants, since they are the main larval hostplants of the species. The lack of long hindwing tails sets it apart from the otherwise similar [Western Emperor Swallowtail](#) (*Papilio menestheus*), a common forest species.



DOMENICA PRINZIVALLI



# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

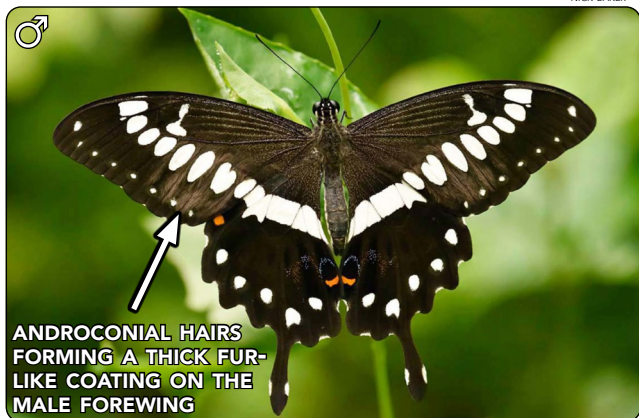
## *Papilio menestheus menestheus* Drury, 1773 Western Emperor Swallowtail

The **Western Emperor Swallowtail** (*Papilio menestheus*) is a large butterfly that is common in most types of wet forest in West Africa. It is similar to a smaller species, the [Citrus Swallowtail](#) (*Papilio demodocus*), but the long tail on the hindwing missing in the latter makes it easy to distinguish between the two. The male has large areas of silky-looking hairs forming fur-like patches on the forewing. These are missing in the female, making it easy to separate the sexes.

PETER BYGATE



NICK BAKER



## SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

### *Papilio hesperus hesperus* Westwood, 1843 Emperor Swallowtail

The **Emperor Swallowtail** (*Papilio hesperus*) is a huge butterfly, only surpassed in size in Nigeria by the beautiful [Giant Blue Swallowtail](#) (*P. zalmoxis*) and the enormous [Giant African Swallowtail](#) (*P. antimachus*). It is found across all of the southern forest regions in Nigeria, but is only ever common in the east. The combination of the large size and distinct wing-shape and pattern makes it an unmistakable species. Males are frequently found mud-puddling, usually just single individuals, together with large groups of males of smaller, and more common, species of swallowtails.



THOMAS DESLOGES



BART WURSTEN



# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Papilio dardanus dardanus* Brown, 1776 Mocker Swallowtail

The **Mocker Swallowtail** (*Papilio dardanus*) is a fascinating butterfly found in most forests of Africa, including many drier woodlands as well as urban gardens. The sexes are very different, with the male being pale yellow with black markings and long hindwing tails. The female lacks these tails, and instead has a black and white pattern that mimics a poisonous butterfly species, the **Friar** (*Amauris niavius*). A second very rare female form (less than 1%) with orange hindwing markings rather than white is sometimes found in West Africa.

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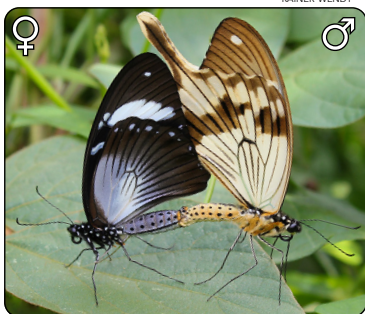


THOMAS DESLOGES



*Amauris niavius*

RAINER WENDT



*Papilio dardanus*

# **SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)**

*Papilio phorcas phorcas* Cramer, 1775  
*Papilio phorcas congoanus* Rothschild, 1896  
**Apple-green Swallowtail**

The nominate subspecies of the **Apple-green Swallowtail** (*Papilio phorcas phorcas*) is found in many south-western Nigerian forests, but it is more sensitive to habitat degradation than most other forest swallowtails. In the eastern part of the country it is represented by the subspecies *congoanus* that looks similar. The female has two morphs, one looks similar to the male with light green bands, but the other has yellow bands, and an extra row of large yellow spots at the edges of the wings. The species can sometimes be quite common, but its distribution is patchy. As is typical for swallowtails, females are always much harder to find than males.

MARK WILLIAMS



RAINER WENDT

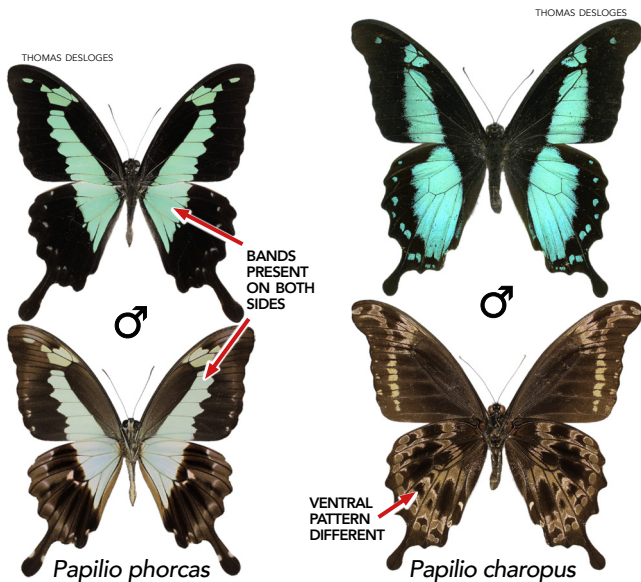




# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Papilio charopus charopus* Westwood, 1843 Tailed Green-banded Swallowtail

The **Tailed Green-banded Swallowtail** (*Papilio charopus*) is the only Nigerian swallowtail with both metallic green bands and well-developed hindwing tails. The slightly smaller [Apple-green Swallowtail](#) (*Papilio phorcas*) can look similar, but seen side-by-side the paler green colour is quite different. The ventral pattern also helps to distinguish between the two species. In Nigeria, the **Tailed Green-banded Swallowtail** (*P. charopus*) only occurs on the Obudu and Mambilla Plateaux (from around 1300m elevation and upwards). It usually flies at canopy level in dense forest, and the sexes look similar.



# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Papilio nireus nireus* Linnaeus, 1758

## Narrow-banded Green Swallowtail

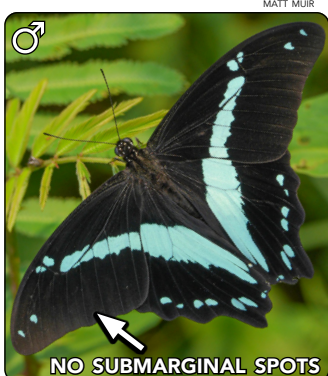
BERNARD DUPONT

This common forest species is found widely accross sub-Saharan Africa. It tolerates drier and degraded habitats better than most forest swallowtails. In West Africa, three similar species co-occur, and they can be hard to tell apart.

The **Narrow-banded Green Swallowtail** (*Papilio nireus*) is usually the most common of the three. Males are often seen mud-puddling with closed wings. The female is similar, but the dorsal bands are less bright and the ventral pattern also lighter.

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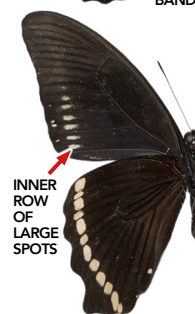
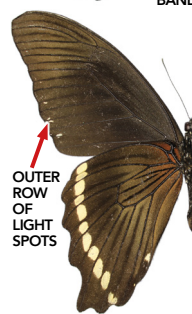
MATT MUIR



NO SUBMARGINAL SPOTS

Scroll down to group identification guide!

## Comparison of males from the three 'un-tailed' Green-banded Swallowtails



*P. nireus*

*P. sosia*

*P. chrapkowskoides*

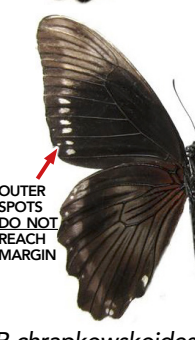
SZABOLCS SÁFIÁN



Mud-puddling males of *Papilio chrapkowskoides* (left) and *Papilio nireus* (right)

ALL SET SPECIMENS ABOVE WERE COLLECTED AND PHOTOGRAPHED BY THOMAS DESLOGES

## Comparison of females from the three 'un-tailed' Green-banded Swallowtails



*P. nireus*

*P. sosia*

*P. chrapkowskoides*

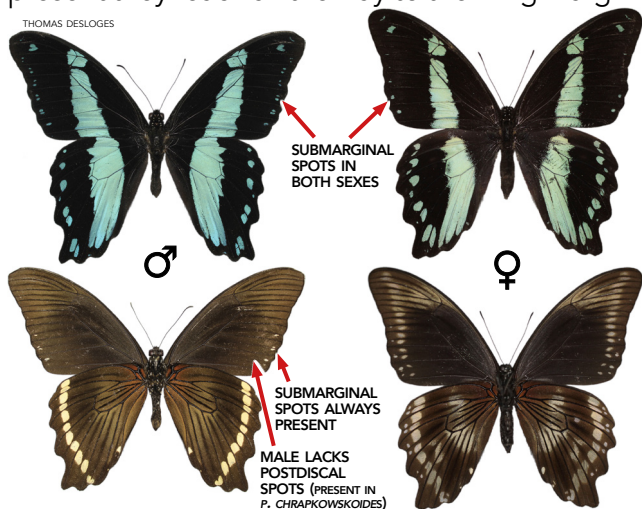
ALL SET SPECIMENS ABOVE WERE COLLECTED AND PHOTOGRAPHED BY THOMAS DESLOGES

# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Papilio sosia sosia* Rothschild & Jordan, 1903 **Medium-banded Green Swallowtail**

The **Medium-banded Green-Swallowtail** (*Papilio sosia*) is the rarest of the three un-tailed species of **Green Swallowtails**. It is also the one most sensitive to habitat degradation, and will normally only be found in forests of good quality. Morphologically it falls in between the other two species in the group, the [Narrow-banded Green Swallowtail](#) (*P. nireus*) and [Broad-banded Green Swallowtail](#) (*P. chrapkowskoides*). Females can sometimes be hard to tell apart, especially between *P. sosia* and *P. chrapkowskoides*. Females of *P. nireus* normally have narrower green bands and lack submarginal spots on either side of the forewing. If any spots are present they reach all the way to the wing margin.

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# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

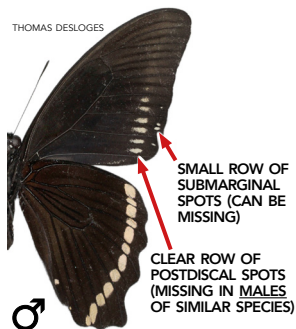
## *Papilio chrapkowskoides nurettini* Koçak, 1983 Broad-banded Green Swallowtail

The **Broad-banded Green-Swallowtail** (*Papilio chrapkowskoides*) is a common forest species that is quite tolerant to habitat degradation. However, it will not be found as far north as the even more tolerant **Narrow-banded Green Swallowtail** (*P. nireus*). The male always has a row of small green submarginal spots on the dorsal forewing (these are normally missing in *P. nireus*). On the ventral forewing there is usually a row of small submarginal spots, but more importantly, a second row of larger spots placed further inwards. These spots are always missing in males of similar species. The female is difficult to tell apart from the **Medium-banded Green-Swallowtail** (*P. sosia*).

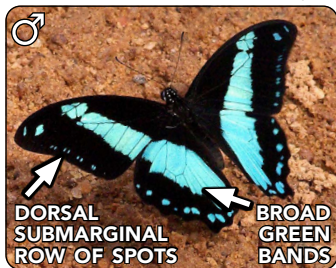
MARK WILLIAMS



THOMAS DESLOGES



PETER BYGATE





# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Papilio cyproeofila cyproeofila* Butler, 1868  
*Papilio cyproeofila praecyola* Suffert, 1904  
**Common White-banded Swallowtail**

*Papilio gallienus* Distant, 1879  
**Narrow-banded Swallowtail**

These large forest species can be told apart from similar swallowtails by their marginal hindwing spots. The **Narrow-banded Swallowtail** (*P. gallienus*) is only found in the Cross River area. It is much rarer than the **Common White-banded Swallowtail** (*P. cyproeofila*), that is broadly distributed in forested habitats in the south. The colour and width of the light dorsal band, as well as the hindwing shape, makes it possible to tell them apart in the field. The text by the images explains the key differences.

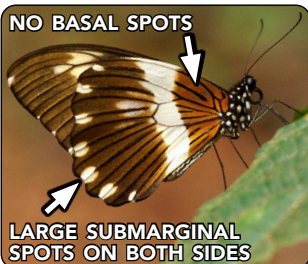


*Papilio cyproeofila*

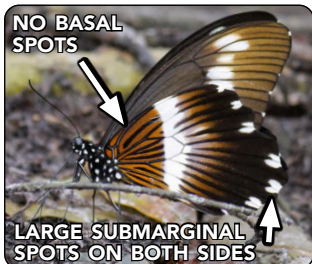


MATT MUIR

PETER BYGATE



*Papilio cyproeofila*



*Papilio gallienus*



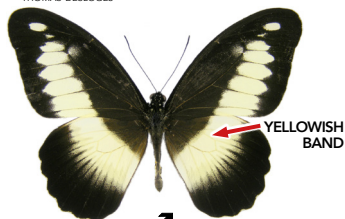
# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Papilio zenobia* Fabricius, 1775  
**Zenobia Swallowtail**

*Papilio andronicus* Ward, 1871

The rare **Zenobia Swallowtail** (*P. zenobia*) is found in wet forests in southern Nigeria. It is similar to the larger **Common White-banded Swallowtail** (*P. cyproeofila*), but has a broader, more yellow dorsal band, lacks the marginal spots, and has two black spots at the ventral hindwing base. Males of the **Mimetic Swallowtail** (*P. cynorta*) and the **Mountain Mimetic Swallowtail** (*P. plagiatu*s) look similar, but their forewing bands are broken up by the veins. **Papilio andronicus** has only been found twice in Nigeria (Rhoko, Cross River). It can be told apart from **P. zenobia** by the lack of black ventral spots, and the more jagged wing margins and forewing band. The sexes are similar in both species.

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♂

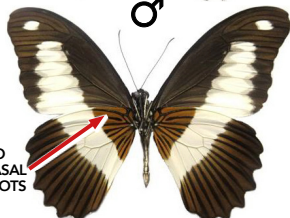


*Papilio zenobia*

MARK WILLIAMS



♂



*Papilio andronicus*

# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Papilio cynorta cynorta* Fabricius, 1793 Mimetic Swallowtail

SZABOLCS SÁFIÁN

This small swallowtail is the most common of the Nigerian *Papilio* species with white wing-bands. It is also the most ecologically tolerant, and can be found all the over southern parts of the country, also in drier forests. It is similar to the

[Mountain Mimetic Swallowtail](#) (*Papilio plagiatus*), but they only rarely overlap. Compared to that species, the male of the **Mimetic Swallowtail** (*Papilio cynorta*) has a larger white forewing apical spot. The light band is also less pure white. Males of both species differ from other white banded Nigerian swallowtails since their forewing veins break the bands up into discrete spots. Females can be identified by the shape and size of their forewing patches.



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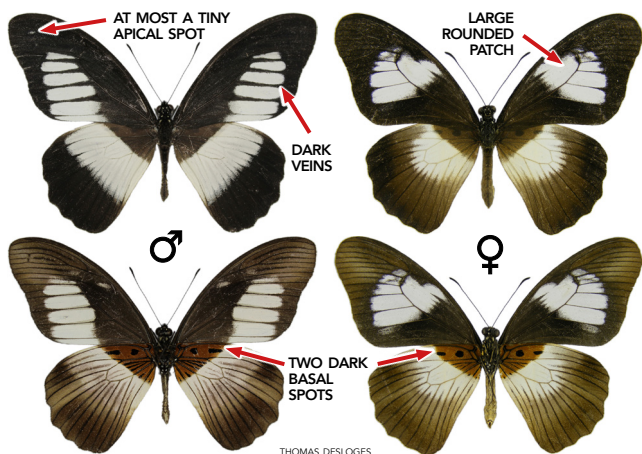
ROGERIO FÉRREIRA



# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Papilio plagiatus* Aurivillius, 1898 **Mountain Mimetic Swallowtail**

As the name implies, the **Mountain Mimetic Swallowtail** (*Papilio plagiatus*) is a species linked to mountains. In Nigeria it can be common at submontane levels on the Obudu Plateau, as well as in Gashaka-Gumpti. It does sometimes venture down to lower elevations, which means that in south-eastern Nigeria it can be found together with the similar [Mimetic Swallowtail](#) (*Papilio cynorta*). Males of the two species are similar, but the **Mountain Mimetic Swallowtail** (*P. plagiatus*) has at most a tiny apical forewing spot, and the dorsal bands are pure white. The females are quite different, and the shape of the forewing patch makes identification quite easy. It is possible the species is more common at lower altitudes than previously thought, so one to keep looking for.



## SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Papilio zalmoxis* Hewitson, 1864

### Giant Blue Swallowtail

This incredible insect is the second-largest African butterfly, only surpassed by the even larger [Giant African Swallowtail](#) (*Papilio antimachus*). The dorsal wings have a stunning metallic light blue colour, while the underside is reddish. As the species often glides up high with wings held flat, the blue colour is not always seen from below. The female is paler than the male, but is otherwise similar. This is a rare species, linked to intact rainforests, and except for males found mud-puddling, it tends to stay high up in the canopy. It is very distinctive and it should be impossible to mistake it for any other species.

MICHAEL OCHSE



MICHAEL OCHSE



**SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)***Papilio antimachus antimachus* Drury, 1782  
**Giant African Swallowtail**

This stunning species is the largest of all African butterflies, and one of the biggest in the whole world. The wingspan in large males can reach more than 20 cm! The male has more elongated forewings than the female, and unusually among butterflies the male is also larger than the female. The species is widespread, but never easy to find as it generally fly high up in the canopy. The best way to find one is to climb exposed hills in rainforest areas and look for patrolling males. Many lepidopterists have unsuccessfully spent years in the field trying to find this species, the author of this field guide included...

SZABOLCS SÁFIÁN



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PETER BYGATE





**SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)***Graphium antheus* (Cramer, 1779)**Large Striped Swordtail**

The **Large Striped Swordtail** (*Graphium antheus*) is usually found in transitional habitats in between forest and savannah, but its occurrence is also seasonal and a bit unpredictable. It can be distinguished from the similar looking [Common Striped Swordtail](#) (*Graphium polices*) by the S-shaped forewing bars and its slightly larger size.

CHARLES J SHARP



MARTIN GRIMM



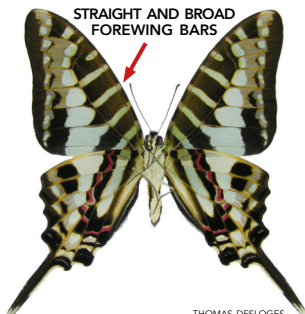
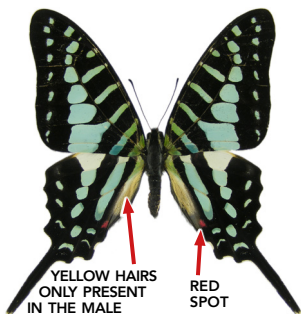
# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Graphium policeses policeses* (Cramer, 1775) Common Striped Swordtail

## *Graphium policeses telloi* Hecq, 1999 Tello's Common Striped Swordtail

The nominate subspecies of the **Common Striped Swordtail** (*Graphium policeses policeses*) is frequently seen in all types of forest habitats in southern Nigeria. Further north it is replaced by the subspecies *telloi* that have a lighter blue wing pattern and slightly bolder markings. They can both be distinguished from the [Large Striped Swallowtail](#) (*Graphium antheus*) by the different shape of the light forewing bars. There are two further [similar, but very rare, species](#) in southern Nigeria; these are discussed in detail on the next page.

MARKUS LILJE



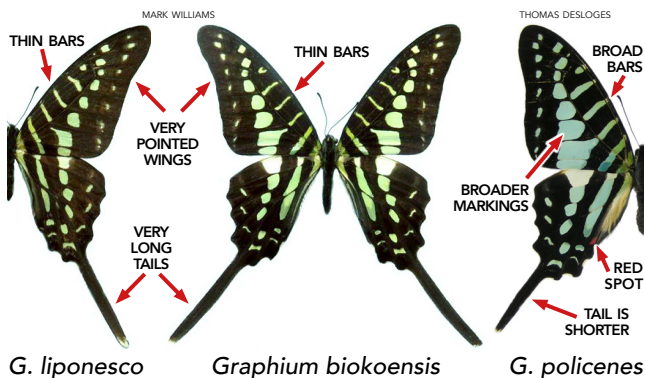
THOMAS DESLOGES

# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Graphium liponesco* (Suffert, 1904)  
**Long-tailed Striped Swordtail**

*Graphium biokoensis* Gauthier, 1984  
**Gauthier's Striped Swordtail**

Both of these rare species look similar to each other, but fortunately they are completely allopatric, meaning that they never co-occur. The **Long-tailed Striped Swordtail** (*G. liponesco*) can be found in forests in south-western Nigeria, but never east of the Niger River. On the east side of Niger it is replaced by **Gauthier's Striped Swallowtail** (*Graphium biokoensis*). Compared to the much more ecologically tolerant and numerous **Common Striped Swordtail** (*Graphium policeses*), they both have more narrow and pointed forewings, as well as longer hindwing tails and thinner forewing bars. Males lack the red ternal spot on the dorsal hindwing that is always present in *G. policeses*, but a red spot might still be present in the females.



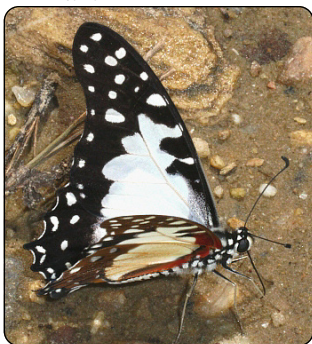
**SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)***Graphium angolanus baronis* (Ungemach, 1932)  
**White Lady**

The **White Lady** (*Graphium angolanus*) is a common savannah butterfly often found hilltopping on local inselbergs. It is one of the smallest **Papilionidae** species found in West Africa. The dorsal surface is black and white with a distinct pattern. The same pattern is repeated on the ventral surface, but with the dark elements in a more reddish tone. The sexes look similar and it is a quite easy species to identify in the field even from some distance. It is unlikely to be confused with any other West African butterfly species.

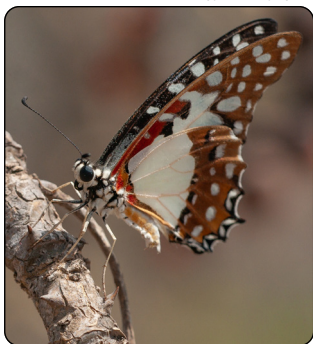


THOMAS DESLOGES

ADRIAN HOSKINS



OSKAR BRATTSTRÖM



# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Graphium leonidas leonidas* (Fabricius, 1793) Veined Swordtail

The **Veined Swordtail** (*Graphium leonidas*) is a larger species than the somewhat similar [White Lady](#) (*G. angolanus*), but the light dorsal wing pattern elements are pale blue, rather than white. The ventral pattern is also somewhat similar to the **White Lady**, but with a less reddish tone. The species is common in all kinds of savannah habitats. In captured specimens, the sexes can be told apart by a comb of yellow hairs on the inner edge of the male dorsal hindwing. These are missing in the female, who also have smaller blue spots than the male.



SIMON TONGE



ADEDOTUN AJIBADE





# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

## *Graphium ridleyanus* (White, 1843) Acraea Swordtail

The **Acraea Swordtail** (*G. ridleyanus*) is normally rare in Nigeria, and only found in forest/savannah transition habitats in the south-east. The wing pattern mimics those of poisonous butterflies from the genus *Acraea*, but the **Acraea Swordtail** is larger and more robust than any *Acraea* species, and has a different hindwing shape. Females are more variable than males, but are very rarely seen. Whilst not easy to see in the field, all **Papilionidae** species (such as *Graphium*) have six well-developed legs, while **Nymphalidae** species (such as *Acraea*) have their first pair of legs highly reduced, using only four legs for walking.



PETER BYGATE



*Acraea egina*

ROGÉRIO FERREIRA



*Graphium ridleyanus*

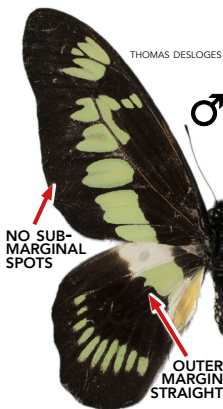
# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Graphium latreillianus theorini* (Aurivillius, 1881)  
**Coppery Swordtail**

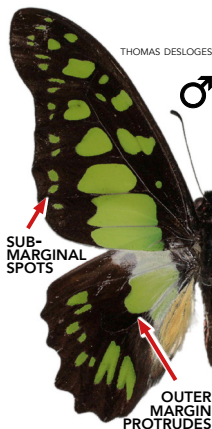
*Graphium tynderaeus* (Fabricius, 1793)  
**Electric Green Swordtail**

These two forest species have a similar pattern made up of green spots and bands. The green markings are more saturated in the **Electric Green Swordtail** (*Graphium tynderaeus*), which is normally much rarer than the **Coppery Swordtail** (*Graphium latreillianus*). They can also be told apart by the broader markings in the former, and by the shape of the hindwing band as shown in the images. Females are similar to males, but their green patterns are a bit duller.

ROGÉRIO FERREIRA



*G. latreillianus*



*G. tynderaeus*

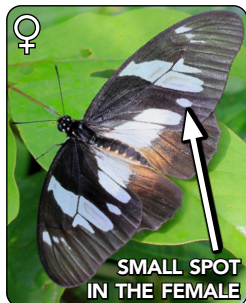
# SWALLOWTAILS & SWORDTAILS (PAPILIONIDAE)

*Graphium adamastor* (Boisduval, 1836)  
**Boisduval's White Lady**

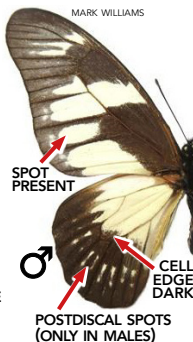
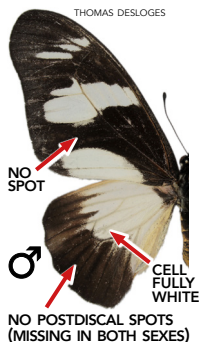
*Graphium almansor escherichi* (Gaede, 1915)  
**Honrath's White Lady**

These two species are found in transition habitats between forest and Guinea Savannah. Neither of them are common, with **Boisduval's White Lady** (*G. adamastor*) being found across Southern Nigeria, while **Honrath's White Lady** (*G. almansor*) is confined to the lower slopes of mountains. The sexes of the latter are similar (only the male shown), while there is dimorphism in the former. The notes by the images explain this in more detail.

RAINER WENDT (BOTH FEMALE PHOTOS)



PETER BYGATE



*Graphium almansor*

*Graphium adamastor* (all images above)