



New and noteworthy records to the Angolan orchid flora revealed by the little-known watercolours of Helen Faulkner (1888–1979)

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Abstract

Helen Faulkner lived in Angola between 1937 and 1942, where she collected and made watercolour sketches of the plants she encountered on her forays. Most of her herbarium specimens are preserved at the National Herbarium in Pretoria (PRE) and the Royal Botanic Gardens, Kew (K). Her botanical artwork, not only of plants from Angola but also of plants from Mozambique and Tanzania, is preserved in 18 notebooks deposited at the Archives of the Royal Botanic Gardens Kew. Many, but not all, of her watercolours are cross-referenced to herbarium specimens. This paper provides an identification for all 49 Angolan orchid sketches representing at least 46 different species. Only about half have a corresponding herbarium specimen of which the identification was also checked. Furthermore, comments are provided on some of the remarkable plants she saw, such as *Eulophia obstipa*, *Platycoryne trilobata*, and *Habenaria decaptera*. Four of the illustrated species represent new country records for Angola, namely *Eulophia susbsaprophytica*, *Habenaria calvilabris*, *Habenaria gonatosiphon*, and *Orthochilus thomsonii*.

Key words: Angola, botanical history, botanical illustrations, plant taxonomy

Introduction

When Mrs. Helen Faulkner (Fig. 1) died on 26 January 1979 in Mwambeni, near Tanga in Tanzania, she had collected more than 5,000 herbarium specimens and drawn more than 800 watercolour sketches of plants (Polhill 1980). Although she was not a professional botanist, the quality of her collections and her sharp eye in recording the local flora, resulted in the discovery of many new taxa and consequently, she is honoured in at least 16 plant names, the latest ones only dating back to 2010 (IPNI 2025).

Helen Faulkner studied art and ballet, and married Major Hamly George Faulkner in 1921. In the late 1930s the Faulkners moved to Benguela Province in Angola, and it was in the region of Alto Catumbela that Helen started her botanical career. Impressed by the diversity of plants and encouraged by the Government Botanist John Gossweiler (1872–1952), she began painting and making herbarium specimens of the plants she encountered on her forays. Between 1937 and 1942, when the Faulkners moved to Mozambique, she made 375 watercolour sketches and many more herbarium specimens.

The first set of her Angolan specimens is in the South African National Herbarium (PRE, herbarium codes following Thiers 2025) in Pretoria with a duplicate set of 475 numbers at the Herbarium of Royal Botanic Gardens, Kew (K). Additional duplicates of these and of her later collections can be found at B, BM, BR, COI, E, EA, FT, IFAN, LISC, LUA, P, SRGH, NY, U, and US (Polhill & Polhill 2015, Figueiredo & Smith 2024). Her 18 sketchbooks, covering her time in Angola as well as later on in Mozambique and Tanzania, are in the archives at Kew.

I first came upon her specimens and drawings when going through the K herbarium in preparation of a checklist of Angolan orchids. Many of her specimen labels refer to a “drawing”, and indeed some specimens in the K cupboards are accompanied by a drawing, although these are not numbered and not all specimens with a reference to a drawing had one accompanying it. A similar check in PRE showed that most of the Faulkner orchid specimens referenced a drawing but none of her drawings are present in that institution. Help in resolving this mystery came from Roger and Diana Polhill, authors of “East African Plant Collectors” (Polhill & Polhill 2015), who pointed out to me that the watercolour

sketches in the herbarium were individual re-paintings of her notebook drawings, commissioned by the Royal Botanic Gardens Kew and presented by Faulkner in 1948, and that the actual notebooks were in the archives at Kew. With the help of Dr. David Goyder of K, I managed to get photographs of the various orchid drawings in her notebooks.



FIGURE 1. Helen Faulkner (1888–1979,) at her home in Tanga, Tanzania. Reproduced with the kind permission of Philip Cribb, Royal Botanic Gardens, Kew.

PRE holds 25 orchid specimens collected by Faulkner in Angola (numbers 172 and 430–454). Most of these, but not all, have a duplicate at K. Whereas most of the specimens at K were named, those at PRE were often only identified to genus level and some were unidentified. In both cases several were misidentified or had names now reduced to synonymy. Scattered over notebooks 1 to 7, Faulkner illustrated a total of 49 orchids, 24 of these do not have an associated herbarium specimen and, as far as I can ascertain, have never been identified.

The objective of this paper is to consolidate the information with regard to the orchids collected and drawn by Helen Faulkner in Angola, to provide identifications for drawings and herbarium specimens where possible, and to elaborate on some of her remarkable findings.

Material and methods

I visited the K Orchid Herbarium in March 2012 where I databased and photographed all orchid specimens collected in Angola, including the specimens collected by Helen Faulkner. I extracted all Angolan orchid records at the PRE and took them on loan to the Bews Herbarium (NU) for further identification. Photographs of the drawing notebooks were made available to me with permission from the Kew Archives Collection and with the help of Dr. David Goyder.

All identifications of specimens and drawings were done by myself. I mostly used the Orchidaceae fascicles of Flora Zambesiaca (la Croix & Cribb 1995, 1998) to key out the specimens and check if they fitted the morphological descriptions. Protologues were also consulted, particularly for endemic species. Names follow the African Plant Database (2025) for species, and Martos *et al.* (2014) for the generic circumscription of the Eulophiinae. Identifications of the drawings were further discussed with Nicholas Wightman, expert Zambian botanist and director of the Zambezi Horticultural and Botanical Research Institute (ZAHBRI).

Identification of drawings and herbarium specimens

A list of 49 Angolan orchid drawings, representing 44 species and two records only identified to the genus level, contained in notebooks 1 to 7 is presented in Table 1, which contains the current identification of each of the drawings, as well as a reference to the herbarium specimens in PRE and K and their respective identifications in those institutions.

The following genera are represented: *Eulophia* Brown (1821: t573) (20 drawings), *Habenaria* Willdenow (1805: 44) (10 drawings), *Orthochilus* Richard (1850: 284, t. 82) (7 drawings), *Disa* Bergius (1767: 348) (3 drawings), *Satyrium* Swartz (1800: 214) (3 drawings), *Brachycorythis* Lindley (1838: 363) (2 drawings), *Ansellia* Lindley (1844: t. 12), *Nervilia* Gaudichaud (1829: 422), and *Platycoryne* Reichenbach (1855: 212) (1 drawing). All of these are ground-dwelling orchids, except one, *Ansellia* sp., which is an epiphyte.

TABLE 1. List of drawings made by Helen Faulkner by drawing number and notebook.

Drawing / Notebook	Collector no.	Duplicates	Scientific Name	ID PRE	ID K
1/1	Faulkner 434	K, PRE	<i>Orthochilus milnei</i> (Rchb.f.) Bytebier	<i>Eulophia</i> sp.	<i>Eulophia corallorhiziformis</i> / <i>E. norlindhii</i>
2/1	Faulkner 442	K, PRE	<i>Eulophia mumbwaensis</i> Summerh.	<i>Eulophia</i>	<i>Eulophia mumbwaensis</i>
3/1	?Faulkner 446B	PRE	<i>Eulophia subsaprophytica</i> Schltr.		
4/1	Faulkner 450	K, PRE	<i>Eulophia parvula</i> (Rendle) Summerh.	<i>Eulophia parvula?</i>	<i>Eulophia pyrophila</i>
5/1	Faulkner 452	K, PRE	<i>Platycoryne trilobata</i> Summerh.	<i>Platycoryne trilobata</i>	<i>Platycoryne trilobata</i>
6/1			<i>Orthochilus thomsonii</i> (Rolfe) Bytebier		
7/1			<i>Eulophia malangana</i> (Rchb.f.) Summerh.		
8/1	Faulkner 446	K, PRE	<i>Satyrium trinerve</i> Lindl.	<i>Satyrium trinerve</i>	<i>Satyrium leucomomos</i>
9/1	Faulkner 436	K, PRE	<i>Eulophia obstipa</i> P.J.Cribb & la Croix	<i>Eulophia obstipa</i>	<i>Eulophia obstipa</i>
10/1	Faulkner 448	PRE	<i>Eulophia macaulayae</i> Summerh.	<i>Eulophia</i> sp.	?
11/1	Faulkner 453	K, PRE	<i>Eulophia venulosa</i> Rchb.f.	<i>Eulophia</i> sp.	<i>Eulophia venulosa</i>
12/1	Faulkner 438	PRE	<i>Nervilia shirensis</i> (Rolfe) Schltr.	<i>Nervilia shirensis</i>	?
13/1			<i>Eulophia streptopetala</i> Lindl.		
14/1	Faulkner 437	PRE	<i>Satyrium riparium</i> Rchb.f.	<i>Satyrium riparium</i>	?
15/1	Faulkner 445	PRE	<i>Brachycorythis pubescens</i> Harv.	no ID	?
16/1	Faulkner 443	K, PRE	<i>Orthochilus aurantiacus</i> (Rolfe) Bytebier	<i>Eulophia welwitschii</i>	<i>Eulophia welwitschii</i>
17/1			<i>Eulophia coeloglossa</i> Schltr.		
18/1			<i>Orthochilus welwitschii</i> Rchb.f.		
19/1			<i>Habenaria</i> sp.		

.....continued on the next page

TABLE 1. (Continued)

Drawing / Notebook	Collector no.	Duplicates	Scientific Name	ID PRE	ID K
20/1			<i>Disa ochrostachya</i> Rchb.f.		
21/1			<i>Habenaria gonatosiphon</i> Summerh.		
22/1	Faulkner 444	K, PRE	<i>Eulophia calantha</i> Schltr.	<i>Eulophia calantha</i>	<i>Eulophia calantha</i>
24/1			<i>Habenaria calvilabris</i> Summerh.		
25/1			<i>Eulophia angolensis</i> (Rchb.f.) Summerh.		
26/1			<i>Eulophia rhodesiaca</i> Schltr.	<i>Eulophia</i> sp.	<i>Eulophia rhodesiaca</i>
27/1	Faulkner 435	K, PRE	<i>Eulophia seleensis</i> (De Wild.) Butzin	<i>Eulophia</i> sp.	<i>Eulophia seleensis</i>
28/1			<i>Satyrium paludosum</i> Rchb.f.		
29/1			<i>Eulophia gonychila</i> Schltr.		
30/1	Faulkner 454	PRE	<i>Orthochilus euanthus</i> (Schltr.) Bytebier	<i>Eulophia</i> sp.	?
31/1			<i>Eulophia latilabris</i> Summerh.		
32/1			<i>Brachycorythis pleistophylla</i> Rchb.f.		
33/1			<i>Disa hircicornis</i> Rchb.f.		
34/1			<i>Eulophia</i> cf. <i>malangana</i> (Rchb.f.) Summerh.		
35/2			<i>Orthochilus odontoglossus</i> (Rchb.f.) Bytebier		
36/2	Faulkner 430	K, PRE	<i>Habenaria macrura</i> Kraenzl.	<i>Habenaria macrura</i>	<i>Habenaria macrura</i>
37/2	Faulkner 433	K, PRE	<i>Habenaria mechowii</i> Rchb.f.	<i>Habenaria mechowii</i>	<i>Habenaria mechowii</i>
38/2	Faulkner 432	K, PRE	<i>Habenaria macroplectron</i> Schltr.	<i>Habenaria macroplectron</i>	<i>Habenaria macroplectron</i>
39/2	Faulkner 431	K, PRE	<i>Habenaria ichneumonea</i> (Sw.) Lindl.	<i>Habenaria ichneumonea</i>	<i>Habenaria ichneumonea</i>
26/3	Faulkner 451	K, PRE	<i>Eulophia rhodesiaca</i> Schltr.		
40/4	Faulkner 449	PRE	<i>Disa similis</i> Summerh.	<i>Disa</i> sp.	?
41/4			<i>Eulophia cucullata</i> (Afzel. ex Sw.) Steud.		
42/4	Faulkner 447	K, PRE	<i>Orthochilus odontoglossus</i> (Rchb.f.) Bytebier	<i>Eulophia odontoglossa</i>	<i>Eulophia shupangae</i>
43/4			<i>Habenaria malacophylla</i> Rchb.f.		
44/5			<i>Habenaria</i> sp.		
45/5			<i>Habenaria decaptera</i> Rchb.f.		
46/6			<i>Eulophia livingstoneana</i> (Rchb.f.) Summerh.		
47/6	Faulkner 441	K, PRE	<i>Eulophia nyasae</i> Rendle	<i>Eulophia</i> sp.	<i>Eulophia nyasae</i>
48/7	Faulkner 172	K, PRE	<i>Eulophia rolfeana</i> Kraenzl.	<i>Eulophia</i> sp.	<i>Eulophia longisepala</i>
49/7			<i>Ansellia africana</i> Lindl.		

New and noteworthy records for the Angolan flora

Eulophia obstipa Cribb & la Croix in la Croix & Cribb (1998: 534) (Fig. 2)

This species was only described in 1998 in Flora Zambesiaca based on *Faulkner 436* collected in September 1940 at Alto Catumbela. The holotype specimen is at K with an isotype preserved at PRE. Helen Faulkner illustrated the species as painting number 9 in notebook 1. She re-painted it separately on good quality paper, which she did for a number of drawings, and presented the illustration to Kew in 1948. Until recently only one specimen, *Richards 20554*, collected in Tanzania (Mpanda, Ufipa, T4) in October 1968 by Mary Richards could be attributed to this species, besides the type gathering. A third gathering, *Cruse 32* from Mufulira in Zambia, mentioned in Flora Zambesiaca is probably this species, but could not be assigned to it with certainty according to la Croix & Cribb (1998). It thus seems that this is

a rare species despite the note from Faulkner in her notebook saying “An orchid common in burnt off ground in the forest”. It may be more common than the few specimens would indicate as my colleague, Nicholas Wightman, and I have found it in Lusaka East Forest Reserve and near Palabana in Lusaka Province, Zambia, and Caroline Conradie also saw it near Mbala in the Northern Province of Zambia. However, it is incredibly difficult to spot on burnt ground in miombo forest as the inflorescence is narrow and inconspicuous, the flowers are small, the leaves are vestigial and it flowers before the rains set in when few botanists look for plants.



FIGURE 2. Drawings nos 9 & 10 from Notebook 1. No. 9 (left and middle) is a drawing of *Faulkner 436* the type specimen of *Eulophia obstipa*. No 10 (right and bottom) is a drawing of *Faulkner 448*, *Eulophia macaulayae*. Reproduced with the kind permission of the Board of Trustees of the Royal Botanic Gardens, Kew.

Platycoryne trilobata Summerhayes (1958: 67) (Fig. 3)

This is the second species that was described on the basis of a specimen collected and illustrated by Faulkner. Summerhayes (1958) revised the genus *Platycoryne* and designated *Faulkner 452*, also from Alto Catumbela and collected in October 1940, as the type. It was the only specimen referred to in the protologue. Since then, it has been recorded from Angola and Zambia, but remains a rather inconspicuous and rare species only found in wet dambos. The species is illustrated as drawing number 5 in notebook 1, but there is no separate illustration in K.



FIGURE 3. Drawings nos 4 and 5 from Notebook 1. No 4 (left) is *Faulkner 450*, *Eulophia parvula*. No. 5 (right) is *Faulkner 452* the type specimen of *Platycoryne trilobata*. Reproduced with the kind permission of the Board of Trustees of the Royal Botanic Gardens, Kew.

Habenaria decaptera Reichenbach (1882: 531) (Fig. 4)

Painting number 45 in notebook 5 immediately drew my attention. Unfortunately, there is no herbarium specimen associated with this painting. Nevertheless, the painting is detailed and shows all aspects of the plants including the habit, front and side view of the flower, and the leaves (Fig. 4A). I was pretty sure that it belongs to the genus *Habenaria*, which is one of the genera I am actively working on, but I had never seen this species before. White flowers are rather unusual in African *Habenaria* and the trilobed lip with the side lobes starting in the middle of the lip is even more unusual. Despite this, I was not immediately able to name this taxon. It did not key out in Flora Zambesiaca, which, in the absence of a flora treatment for Angola, is the best tool to identify plants occurring in Angola. Then, recently, I was sent a photograph (Fig. 4B) by António Martins, an Angolan naturalist. The image was made in the Kuvango River floodplain near Capelongo (Huila Province) in October 2020 and was clearly the same plant as the one painted by Mrs Faulkner. Since I was sure that this was not one of the species occurring in the Flora Zambesiaca area, I went through the species descriptions of *Habenaria* endemic to Angola. One description was a good match, namely that of *Habenaria decaptera*. This species was described by Reichenbach fil. in 1882 on the basis of a specimen collected by Alexander von Mechow (*von Mechow 438*, collected in January/February 1880 around Malange [Malanje] in Malanje Province). There are duplicates of this collection in the Reichenbach Herbarium in Vienna (W-R), as well as in Munich (M) and Zurich (Z). There is also a trace drawing of the type at Kew. As far as I'm aware, Helen Faulkner was only the second person to see this species, which she found on a grassy mound in the Alto Catumbela swamp on 26 January 1938 and again on 3 February 1941. Her painting remained unnamed until now. Together with the record from Martins, it significantly expands the known range of this species by about 500 km southwards and can now be assumed to occur in the Benguela, Huila, and Malanje Provinces of Angola.



FIGURE 4. *Habenaria decaptera*. **A.** Drawing no. 45 from notebook 5. Reproduced with the kind permission of the Board of Trustees of the Royal Botanic Gardens, Kew. **B.** Photograph taken at the Kuvango River floodplain (Huila Province, Angola) in October 2020. Reproduced with the kind permission of António Martins.

Eulophia subsaprophytica Schlechter (1915: 576) (Fig. 5A)

Painting number 3 in notebook 1 is *Eulophia subsaprophytica*. This species was described based on a specimen collected by Stolz (*Stolz 1807*) from Mulinda Forest (Rungwe District, Mbeya Region) in Tanzania. Although widespread and distributed over neighbouring countries such as the DR Congo, Malawi, Tanzania, Zambia, and Zimbabwe, it has not been recorded from Angola before.

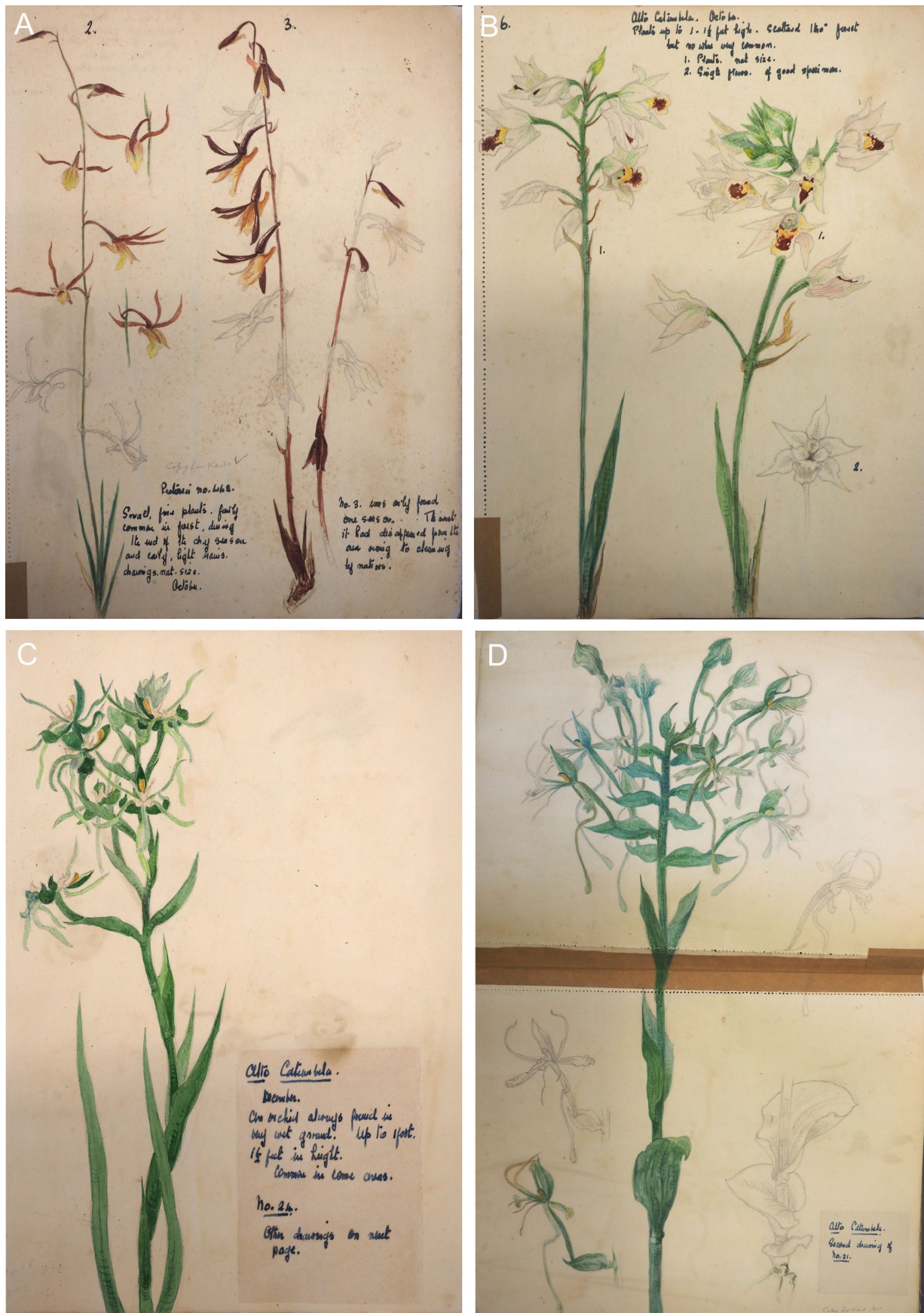


FIGURE 5. New Angola country records based on Faulkner's drawings. **A.** Drawing 3 on the right, *Eulophia subsaprophytica* (with drawing 2 on the left *Eulophia mumbwaensis*). **B.** Drawing 6, *Orthochilus thomsonii*. **C.** Drawing 24, *Habenaria calvilabris*. **D.** Drawing 21, *Habenaria gonatosiphon*. Reproduced with the kind permission of the Board of Trustees of the Royal Botanic Gardens, Kew.

Habenaria calvilabris Summerhayes (1962: 303) (Fig. 5C)

Painting 24 in sketchbook 1 represents *Habenaria calvilabris*. This species was described based on a specimen collected by Mary Richards (*Richards 12449*) at Lake Chila in Mbala (Northern Province, Zambia). It has been recorded from countries surrounding Angola such as the DR. Congo, Burundi, Zambia, and Zimbabwe, but not yet from Angola.

Habenaria gonatosiphon Summerhayes (1960: 134) (Fig. 5D)

Painting 21 in sketchbook 1 is *Habenaria gonatosiphon*. This taxon was described based on a specimen collected by Edgar Milne-Redhead and Peter Taylor (*Milne-Redhead & Taylor 7982*) from the Ulamboni Valley (Songea District, Ruvuma Region) in Tanzania. It also occurs in the DR Congo, Malawi, and Zambia, so it is not surprising that it was found in Angola, yet it has not been recorded from there.

Orthochilus thomsonii (Rolfé 1897: 66) Bytebier in Martos *et al.* (2014: 20) (Fig. 5B)

Painting 6 in sketchbook 1 is *Orthochilus thomsonii*. This striking species was described as *Eulophia thomsonii* based on specimen collected by Joseph Thompson (*Thomson s.n.*) on his trip through Tanganyika in 1880. Since it furthermore occurs in the DR Congo, Malawi, and Zambia, it could also be expected to occur in Angola, but it is not recorded from there.

Miscellaneous notes on drawings and herbarium specimens

Drawing no. 2, *Faulkner 442, Eulophia mumbwaensis* Summerhayes (1927: 416)

The label on the specimen refers to “drawing 1” but drawing 1 does not match this specimen. The correct drawing to go with this specimen is drawing 2.

Drawing no. 3, *Eulophia subsaprophytica* Schlechter (1915: 576)

The drawing does not carry a reference to a specimen. However, in PRE the sheet of *Faulkner 446*, which is *Satyrium trinerve* Lindley (1838: 344), also has a specimen of *Eulophia subsaprophytica* mounted on it. I have given that specimen the collector number *Faulkner 446B*.

Drawing no. 8, *Faulkner 446, Satyrium trinerve* Lindley (1838: 344)

The Kew sheet only contains a specimen of *Satyrium trinerve*, whereas the PRE sheet is a mixed collection and also contains a specimen of *Eulophia subsaprophytica*.

Drawing no. 19, *Habenaria* sp.

Despite this being a fairly detailed drawing, I have been unable to identify it to species level. It most likely belongs to *Habenaria* section *Pentaceras* Schlechter (1915: 496).

Drawing no. 44, *Habenaria* sp.

This seems to be a plant with peloric (abnormal) flowers. The drawing shows no clear petals, no spur and no side lobes to the lip, all of which are typical characteristics of peloric *Habenaria* flowers. Peloric forms are occasionally encountered in the genus *Habenaria* but very rarely encountered in other genera of orchidoid orchids. These peloric forms often have quite a different appearance than the normal form, which is no doubt what attracted Faulkner to painting it.

Drawing no. 47, *Faulkner 441, Eulophia nysae* Rendle (1894: 44)

There are 2 sheets of this collection in PRE.

Drawing no. 49, *Faulkner 172*, *Eulophia rolfeana* Kraenzl. in Baum (1903: 213)

There are 3 sheets of this collection in PRE. One of the sheets is a mixed collection and also contains a specimen of either *Eulophia katangensis* (De Wildeman 1902: 22) De Wildeman (1919: 121) or *Eulophia rhodesiaca* Schltr. in Fries (1916: 248). This could possibly be linked to drawing 26 (*Eulophia rhodesiaca*), although that drawing has no reference to a specimen.

Discussion and conclusion

Angola still lacks a comprehensive flora treatment. Herbarium specimens are crucial in documenting this flora. However, most herbarium specimens are two-dimensional and without any original colours. Thus, they can be difficult to identify. Coloured drawings, such as the ones made by Helen Faulkner, can be a great help to assist in the identification of closely related species. For instance, the herbarium specimen *Faulkner 443*, was identified as *Orthochilus welwitschii* Reichenbach (1865: 186), a cream to yellow-flowered species with a maroon spot in the throat. However, the painting shows a uniformly orange-flowered plant, which is clearly *Orthochilus aurantiacus* (Rolfe 1897: 67) Bytebier in Martos *et al.* (2014: 18).

Four of the illustrated species that lack reference to an herbarium specimen and are here identified for the first time, turn out to be new records for Angola, indicating the diagnostic quality of the Faulkner paintings. *Eulophia subsaprophytica*, *Habenaria calvilabris*, *Habenaria gonatosiphon*, and *Orthochilus thomsonii* are not listed in Figueiredo & Smith (2008), the African Plant Database (2025), or Plants of the World Online (POWO, 2024) as occurring in Angola. None of these records is really surprising since they also occur in neighbouring countries. Nevertheless, they can now be added to the orchid diversity of Angola. Living in a remote area in the early 1940's, with little access to photographic technology, painting was perhaps the best way for Faulkner to capture the beauty of the living plants, yet it required expertise, experience and lots of time. The combination of a painting and an herbarium specimen is ideal for identification purposes as specimens can be dissected or examined under a microscope, whereas the painting shows the original colour of the flower. As more and more observations become digital and posted on social media, such as iNaturalist, observers should realise that herbarium specimens still have an important role to play, particularly for poorly known or poorly documented taxa.

Helen Faulkner illustrated 374 Angolan plants in her notebooks. Here, I only dealt with 49 of them i.e., those belonging to the orchid family. Already several of these turned out to be very interesting records and one can only speculate how many new and exciting records are still hidden amongst the remainder of the drawings. I can only encourage other botanists with an interest in Angola to study these drawings, and I would certainly recommend the Kew Archives to have these notebooks scanned and made available online.

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References

- African Plant Database. (2025) African Plant Database (version 4.0.0) Conservatoire et Jardin botaniques de la Ville de Genève and South African National Biodiversity Institute, Pretoria. Available from: <http://africanplantdatabase.ch> (accessed January 2025)
- Baum, H. (1903) *Kunene-Sambesi-expedition, H. Baum, 1903*. Verlag des Kolonial-wirtschaftlichen Komitees, Berlin, 593 pp. [<http://www.biodiversitylibrary.org/item/83282>]
- Bergius, P.J. (1767) *Descriptiones Plantarum ex Capite Bona Spei*. Laur Salvi, Stockholm, 362 pp. [<https://bibdigital.rjb.csic.es/records/item/13844-descriptiones-plantarum-ex-capite-bonae-spei>]
- Brown, N.E. (1821) *Lissochilus speciosus*. Mr. Griffin's *Lissochilus*. *Botanical Register* 7: addt. 573 ('578'). [<https://www.biodiversitylibrary.org>]

org/page/62008181#page/249/mode/1up]

- De Wildeman, É. (1902) Etudes sur la flore du Katanga. *Annales du Musée du Congo (Belge). Botanique* Sér. IV, Fasc. I: 1–24. [https://bibdigital.rjb.csic.es/records/item/15820-annales-du-musee-du-congo-belge-serie-iv-botanique-tome-i-fasc-1]
- De Wildeman, É. (1919) Additions à la Flore du Congo III (Suite). *Bulletin du Jardin botanique de l'État a Bruxelles* 6 (2): 65–129. <https://doi.org/10.2307/3666433>
- Figueiredo, E. & Smith, G.F. (2008) *Plants of Angola. Plantas de Angola*. Strelitzia 22. South African National Biodiversity Institute, Pretoria, 279 pp.
- Figueiredo, E. & Smith, G.F. (2024) *Plant Collectors in Angola*. Regnum Vegetabile 161. The University of Chicago Press, Chicago & London, 354 pp.
- Fries, R.E. (1916) Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition 1911-1912: unter Leitung von Eric Graf von Rosen. Band 1. Botanische Untersuchungen. Heft II. Monocotyledones und Sympetalae. Aftonbladets Druckerei, Stockholm, 135 pp. [https://www.biodiversitylibrary.org/page/42939715#page/237/mode/1up]
- Gaudichaud-Beaupré, C. (1826-1830) *Voyage autours du monde. Botanique*. Pillet Aîné, Paris, 522 pp. [https://www.biodiversitylibrary.org/page/31615752#page/438/mode/1up]
- IPNI. (2025) *International Plant Names Index*. The Royal Botanic Gardens, Kew, Harvard University Herbaria & Libraries and Australian National Herbarium. Published on the Internet: <http://www.ipni.org> (accessed 31 January 2025)
- la Croix, I. & Cribb, P.J. (1995) Orchidaceae. In: *Flora Zambesiaca*, Vol. 11 Part 1. Flora Zambesiaca Managing Committee, London, pp. 1–320.
- la Croix, I. & Cribb, P.J. (1998) Orchidaceae. In: *Flora Zambesiaca*, Vol. 11 Part 2. Flora Zambesiaca Managing Committee, London, pp. 321–569.
- Lindley, J. (1830–1840) *The genera and species of orchidaceous plants*. Ridgways, London, 553 pp. <https://doi.org/10.5962/bhl.title.120492>
- Lindley, J. (1844) *Lissochilus roseus*. Rose-coloured *Lissochilus*. *Edwards's Botanical Register* 30: sub t. 12. [https://www.biodiversitylibrary.org/page/242585#page/48/mode/1up]
- Martos, F., Johnson, S.D., Peter, C.I. & Bytebier, B. (2014) A molecular phylogeny reveals paraphyly of the large genus *Eulophia* (Orchidaceae): A case for the reinstatement of *Orthochilus*. *Taxon* 63 (1): 9–23. <https://doi.org/10.12705/631.6>
- Polhill, R.M. (1980) Helen Faulkner, 1888-1979. *Kew Bulletin* 34 (4): 619–620. [http://www.jstor.org/stable/4119058]
- Polhill, D. & Polhill, R.M. (2015) *East African Plant Collectors*. Royal Botanic Gardens, Kew, 520 pp.
- POWO. (2024) *Plants of the World Online*. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet: <https://powo.science.kew.org/> (accessed 20 December 2024)
- Reichenbach fil., H.G. (1855) Symbolae Orchidaceae. *Bonplandia* (Hannover) 3: 212–227. [https://www.biodiversitylibrary.org/page/28141446#page/217/mode/1up]
- Reichenbach fil., H.G. (1865) Dr. Welwitsch's Orchideen aus Angola. *Flora* 48: 177–191. [https://www.biodiversitylibrary.org/page/56296#page/179/mode/1up]
- Reichenbach fil., H.G. (1882) Orchideae describuntur. *Flora* 65: 531–534. [https://www.biodiversitylibrary.org/item/981#page/532/mode/1up]
- Rendle, A.B. (1894) The plants of Milanji, Nyasa-land, collected by Mr. Alexander Whyte, FLS, and described by Messr. Britton, E.G. Baker, Rendle, Gepp, and others; with an introduction by William Carruthers, FRS, FLS. *Transactions of the Linnean Society of London, Botany* 4: 1–67. [https://www.biodiversitylibrary.org/item/13685#page/6/mode/1up]
- Richard, A. (1850) *Tentamen Florae Abyssinicae* 2. Arthus Bertrand, Paris, 518 pp. [https://www.biodiversitylibrary.org/page/6674788#page/285/mode/1up]
- Rolfe, R.A. (1897–1898) Order CXXXIII. In: Thiselton-Dyer, W.T. (Ed.) *Flora of Tropical Africa*, Vol. VII. Lovell Reeve & Co., London, pp. 12–292. [https://www.biodiversitylibrary.org/item/131#page/26/mode/1up]
- Schlechter, R. (1915) Orchidaceae Stolzianae, ein Beitrag zur Orchideenkunde des Nyasaa-Landes. *Botanische Jahrbucher fur Systematik, Pflanzengeschichte und Pflanzengeographie* 53: 477–605. [https://www.biodiversitylibrary.org/item/716#page/490/mode/1up].
- Summerhayes, V.S. (1927) African Orchids, I. *Bulletin of Miscellaneous Information (Royal Gardens, Kew)* 1927 (10): 415–419. <https://doi.org/10.2307/4107556>
- Summerhayes, V.S. (1958) African Orchids XXV. *Kew Bulletin* 13 (1): 57–87. <https://doi.org/10.2307/4117623>
- Summerhayes, V.S. (1960) African Orchids: XXVII. *Kew Bulletin* 14 (1): 126–157. <https://doi.org/10.2307/4115580>
- Summerhayes, V.S. (1962) African Orchids: XXVIII. *Kew Bulletin* 16 (2): 253–314. <https://doi.org/10.2307/4118834>

- Swartz, O. (1800) Orchidernes. *Kongl. Vetenskaps Academiens Nya Handlingar* 21: 202–252. [<https://www.biodiversitylibrary.org/page/47079156#page/236/mode/1up>]
- Thiers, B.M. (2025, updated continuously) *Index Herbariorum*. Available from: <https://sweetgum.nybg.org/science/ih/> (accessed January 2025)
- Willdenow, C.L. (1805) *Species Plantarum. Editio Quarta Tomus IV Pars I*. G.C. Nauk, Berlin, 629 pp. [<https://bibdigital.rjb.csic.es/records/item/12438-species-plantarum-editio-quarta-tomus-iv-pars-i>].