

Typification of *Myrmecophila thomsoniana* (Orchidaceae)

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Summary. The holotype specimen of *Myrmecophila thomsoniana* (Rchb. f.) Rolfe is identified in W. A neotype and an epitype for *Myrmecophila thomsoniana* var. *minor* (Strachan ex Fawc.) Dressler are selected and an isoepitype identified.

Key Words. Cayman Islands, epitype, holotype, Laeliinae, neotype

Introduction

Schomburgkia thomsoniana was described by H.G. Reichenbach (1887) based on a fresh inflorescence from a plant, of then unknown origin, which had originally been exhibited at the first Royal Horticultural Society Orchid Show held at Liverpool the previous summer (Anon 1886). The owner of the plant, W.J. Thomson, had fulfilled a promise to John Day to provide him with material to make a painting. Having done so on 5 June 1887, Day promptly forwarded the panicle to Reichenbach the next day for identification (Day 1887 Scrapbook 52: 53, reproduced in Cribb & Tibbs 2004). Reichenbach (1887) reported at the end of the description that he had also received some of Thomson's flowers via James O'Brien, secretary of the RHS Orchid Committee.

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The following year, William Fawcett, then Director of Public Gardens and Plantations for Jamaica visited the Cayman Islands for agricultural inspections. He collected orchids in Grand Cayman and Cayman Brac which were identified at Kew by Rolfe, as *M. thomsoniana* (Fawcett 1888; 1889).

The Jamaican government physician, Henry Strachan, collected in the Cayman Islands in 1892. Following correspondence on the subject with Rolfe, Fawcett published Strachan's diagnosis of two varieties of *M. thomsoniana*, which he named *albopurpurea* and *minor* respectively (Fawcett, 1894). Strachan's succinct diagnosis is as follows:

"*S. thomsoniana* var. *albo-purpurea*. Flower larger, colour cream or white and purple, lip with throat deep purple and tip but little recurved.

"*S. thomsoniana* var. *minor*. Flower smaller, colour canary-yellow and purple, lip without much purple in the throat, and tip extremely recurved.

"*Var. minor* was the only one I collected in Cayman Brac, but in Grand Cayman I found both varieties, and *var. albo-purpurea* was in greater abundance than *minor*. In habit and general structure the varieties show no marked difference."

Rolfe (1901) confirmed that no specimens were submitted by Strachan as types of either variety and (correctly) noted that "*albopurpurea* agrees better with Reichenbach's original type". Dressler & Carnevali (2000) and Dressler (2003) provide an analysis of the subsequent confused nomenclatural history of *M. thomsoniana*. They had seen the John Day painting at K and recognised that it was of the Grand Cayman variety. Withner (1993), believing that the type of *S. thomsoniana* was lost proposed the Fawcett Cayman Brac specimen deposited in NY as a

neotype (incorrectly called a “lectotype” by Withner). Contemporaneously with Dressler & Carnevali (2000) Nir (2000) had followed Withner in adopting the rank of species for Strachan’s varieties and in confusing the Reichenbach concept with var. *minor*. Nir proposed a neotype from his own gatherings in Grand Cayman for *albopurpurea* (Nir 76, NY).

It therefore remains to confirm the existence and identity of Reichenbach’s type specimen and to select a valid type for var. *minor*. This study is based on searches of the literature and collections at the following herbaria: K (in person), NY (virtual) and W (virtual). Enquiries at IJ have not turned up any Fawcett or Strachan material. All cited specimens have been seen by the author in person or digitally other than Nir 76, NY.

Myrmecophila thomsoniana (*Rchb. f.*) Rolfe (1917: 51) var. **thomsoniana**; Kennedy (1979:208); Dressler (2003: 234); Burton (2008a: 52); Proctor (2012: 207).

Schomburgkia thomsoniana Rchb. f. (Reichenbach 1887: 38). Fawcett (1889: 531); Veitch (1887 – 94: 102); Hitchcock (1893: 133); Savage-English (1913: 368); Adams (1971: 148); Proctor (1984: 258); Dressler & Carnevali (2000: 82); Cribb & Tibbs (2004: 335). Type: Cayman Islands, Grand Cayman, without locality or collector from the wild, gathering from cultivated plant owned by W.J. Thomson s.n. (holotype, W, Reichenbach Herb. Orchid. Nr. 20748, W0048193).

Schomburgkia thomsoniana var. *albopurpurea* Strachan ex Fawcett (1894: 74) (type not designated); Rolfe (1901: 325); Schlechter (1913: 43). Type: Cayman Islands, Grand Cayman, Nir 76, (neotype, NY 259256 & 259257, selected by Nir 2000).

Schomburgkia thomsoniana var. *atropurpurea* Hook.f. (Hooker 1902: t. 7815), **orth. var.**

Schomburgkia brysiانا var. *atropurpurea* (Hook. f.) H.G. Jones (1963:8, 1966:58; 1976:120),

nom. illeg.

Laelia thomsoniana (Rchb.f.) Williams (1941: 77); Hawkes (1951: 178).

Schomburgkia albopurpurea (Strachan ex Fawc.) Withner (1993: 21).

Myrmecophila albopurpurea (Strachan ex Fawc.) Nir (2000: 250), **synon. nov.**

DISTRIBUTION. Cayman Islands, Grand Cayman only, both historically and at the present day.

SPECIMENS EXAMINED. WITHOUT LOCATION: June 1887 *Thomson* s.n. (cultivated)

Reichenbach Herb. Orchid. Nr. 20748, holotype on sheet W0048193, protologue material on

W0048194. Downloaded 2 September 2013;

<http://herbarium.univie.ac.at/database/detail.php?ID=401986>

<http://herbarium.univie.ac.at/database/detail.php?ID=401987>; June 1887 *Thomson* s.n.

(cultivated, to Veitch) K(H/1447/95 48); May 1888 *Fawcett* s.n. K000774978; July 1892

collector/owner unknown, sent to O'Brien K000774977; original John Day 6 June 1887 painting

K; Hort. K326-1911; K horticultural unnumbered vouchers dated 16 July 1915, 9 June 1925

and one other, unnumbered and undated. **GRAND CAYMAN.** W. George Town, May 1888

Fawcett s.n. K000584011; South Coast, May 1888 *Fawcett* s.n. K000584012; 17 June 1913

Savage-English s.n. K000774975; North East of Island, 15 June 1938 *Maggs* II64 K000774976.

HABITAT. The species is present in ten of thirty-one formations and thirty-three of the seventy-one associations (International Vegetation Classification System (Grossman *et al.* 1988)

identified as naturally and semi-naturally occurring in the three islands by Burton (2008b).

Habitats span all but the most extreme xeric and marine environments in the islands.

CONSERVATION STATUS. EN A3bc (Barrios & Burton 2014; Burton & Barrios 2014).

Habitat destruction is the major threat to the species as a whole and the varieties individually (Burton 2008a).

NOTES. The Reichenbach original type material comprise two sheets: W048193 the specimen (Sheet 1), and on W0048193 (Sheet 2) a manuscript draft description, Day's letter dated 6 June 1887, Reichenbach's own sketch, made on 6 June 1887, of one of the flowers provided by James O'Brien and a cutting relating to the owner of the plant from a contemporary edition of The Freemason. Reichenbach's sketch precludes designation of the Day painting as an epitype. Nothing is known of how Thomson came into possession of the source plant but it is clear from Day's letter and note accompanying the painting in the Sketchbook, Reichenbach's comments to the type description and the notes made by Rolfe on H/1447/95 48 that Thomson had been pursued for specimens on any re-flowering of the plant by the leading London amateur and professional orchidists and that Thomson had obliged not only Day.

It is immediately apparent that the inflorescence on Sheet 1 corresponds in every way with Day's painting, (original inspected at Kew 18 June 2013, published in full in Cribb & Tibbs (2004: 335) and in part in Dressler (2003: 229), including disposition of the side branch and the number and position of bracts, flowers and bud. Both painting and specimen have or had 12 flowers and one mature, unopened bud. The final published description describes the

inflorescence as having 15 flowers, as does the Reichenbach manuscript on Sheet 2.

Reichenbach appears to have counted the tiny, abortive terminal buds on each branch of the inflorescence.

Although a pencil line and annotation by Atwood on the specimen distinguishes the three detached flowers² it is not necessary to make such a supposition; the flowers could easily be from the stem attached to the sheet to which only three flowers and the bud remain attached.

Due to Strachan's assertion that var. *minor* occurred in Grand Cayman, and the size similarities among Fawcett's specimens (Fawcett, 1894), of the K specimens examined, only H/1447/95 48 and K000774976 can be safely attributed to var. *thomsoniana*, though K000774978 is probably also that variety.

Myrmecophila thomsoniana var. minor (*Strachan ex Fawc.*) Dressler (2003: 234); Burton (2008a: 52), Proctor (2012: 207).

Schomburgkia thomsoniana var. *minor* Strachan ex Fawc. (1894: 74) (type not designated);

Rolfe (1901: 325); Hooker (1902: t. 7815); Schlechter (1913: 43); Proctor (1984: 259);

Dressler and Carnevali (2000: 82). Type: Cayman Islands, Cayman Brac, Fawcett s.n.

(neotype K, sheet K000584010, selected here

(<http://specimens.kew.org/herbarium/K000584010>); epitype Matilda Smith 1901 original

painting, selected here; isoepitype K.

² "All apparently from same plant. Sheet 2 (sic) of 2. A. Probably inflorescence conveyed by John Day. B (referring to the three detached flowers). Probably the flowers conveyed by J O'Brien. 1994, 30 Nov 1994. Det/rev J.T. Atwood".

Schomburgkia brysiانا var. *minor* (Hook. f.) H.G. Jones (1963: 8, 1966: 58, 1976:119); Adams (1971: 148); Proctor (1980: 73), **nom. illeg.**

Schomburgkia thomsoniana auct. non Rchb. f., Withner (1993: 46).

Myrmecophila thomsoniana auct. non Rchb. f., Nir (2000: 251).

DISTRIBUTION. Cayman Islands, Cayman Brac and Little Cayman only. Strachan asserted that var. *minor* occurred in Grand Cayman but was less abundant (Fawcett, 1894). At the present day, although a few var. *minor* occur in cultivation in Grand Cayman, no specimens have been located or reported in the wild.

SPECIMENS EXAMINED. WITHOUT LOCATION: original June 1901 Matilda Smith painting, published in Hooker, J.D. (1902) Bot. Mag., t. 7815, K; Hort. K355.88 labelled “Type of Bot. Mag. t 7815”; copy Nellie Roberts June 1901 painting, RHS. **CAYMAN BRAC.** May 1888 *Fawcett* s.n. K000584010; May 1888 *Fawcett* s.n. NY168072.

NOTES. There is no original Strachan material at K and apparently none at IJ. The near-contemporaneous material that could be considered for designation as neotype of var. *minor* are the two Fawcett 1888 specimens labeled Cayman Brac. Of these K000584010, with its complete pseudobulb, four leaves and greater number of flowers, is to be preferred over NY168072.

There are also two candidates for designation as epitype to resolve the colour ambiguity. In June 1901 specimens of Fawcett’s collections flowered in the Kew greenhouses for the first

time and also in Sir Trevor Lawrence's collection. It is most likely that Lawrence had acquired a specimen from Kew (Rolfe, 1901). Lawrence's plant received an Award of Merit from the RHS Orchid Committee (Anon, 1901a; 1901b). The painting of one of its flowers by Nellie Roberts in the RHS collection confirms that the Lawrence plant was var. *minor*.

The Kew flowering also prompted Rolfe's (1901) accurate exposition on the status of the species and its varieties. Published in the November Orchid Review it unfortunately appears to have been overshadowed by Hooker's (1902), less accurate, but illustrated, article in Curtis's Botanical Magazine. The original Matilda Smith painting for Bot. Mag. t. 7815, providing as it does the forms of a living pseudobulb, inflorescence and flowers together with detail of the column and pollinia in addition to the critical colour differences of strong yellow tepals and purple lip in var. *minor* versus, at most, light yellow and blackish maroon lip in var. *thomsoniana*, best reflects the protologue and is therefore here designated epineotype. The single flower in an annotated capsule on sheet K355.88 bearing the identifier "*Schomburgkia thomsoniana* 355.88 Jamaica (sic), Hort Kew June 14 1901, Type of Bot. Mag. t. 7815" is an isoepitype.

Hooker (1902) was responsible for errors that have been repeated by subsequent authors. He referred to the Grand Cayman variety as *atropurpurea* (probably a misreading of Rolfe's notes on the specimens) and confused the orchid's owner, Lancashire-based businessman W.J. Thomson, with Robert Thomson, former Conservator at Cinchona, Jamaica and a Kew alumnus (Anon 1906). In further correction, the painting in the Bot. Mag. is signed by Matilda Smith, not Walter Hood Fitch, as asserted by Cribb & Tibbs (2004). W.H. Fitch had ended his relationship

with Kew and Curtis in 1877 and had died in 1892 (Helmsley 1915). The Smith original and the engraving, by J.N. Fitch, are both in the Kew Library.

Acknowledgements

I am indebted to the staff of the institutions associated with this study, in particular: Armin Locker, W; Sarah Barrios, Mike Fay, Colin Clubbe, Julia Buckley and in particular Andre Schuiteman who also commented on an early draft, K; Liz Gilbert and Naomi Bristow, RHS; Keron C. St. E. Campbell, IJ. I am grateful to Phil Seaton and to colleagues in the Cayman Islands: Stuart Mailer, Kirkland Nixon and Ann Stafford. Financial assistance was provided by the Governor's Fund and Walkers law firm.

References

- Adams, C.D. (1971). Orquideas de las Islas Caymanas. *Orquideologia* 6(3): 144 – 149.
- Anon (1886). Royal Horticultural Society's Provincial Show, Liverpool. *Gard. Chron.* n.s. vol. 26: 21 – 23.
- Anon (1901a). (Report of) The Orchid Committee. *Gard. Chron.* ser. 3, vol. 10: 15 – 16.
- Anon (1901b). (Report of) Societies, Royal Horticultural. *Orchid Rev.* 9: 251.
- Anon (1906). Botanical Institutions of Jamaica. *Bull. Misc. Inform., Kew* 1906: 61 – 68.
- Barrios, S. & Burton, F.J. (2014). *Myrmecophila thomsoniana* var. *thomsoniana*. The IUCN Red List of Threatened Species 2014: e.T56499988A56503870.
<http://dx.doi.org/10.2305/IUCN.UK.2014-1.RLTS.T56499988A56503870.en>. Downloaded on 18 April 2016.

- Burton, F.J. (2008a). *Threatened Plants of the Cayman Islands: The Red List*. Royal Botanic Gardens, Kew.
- Burton, F.J. (2008b). *Vegetation Classification for the Cayman Islands*. In Burton, F.J. (2008a).
- Burton, F.J. & Barrios, S. (2014). *Myrmecophila thomsoniana* var. *minor*. The IUCN Red List of Threatened Species 2014: e.T56499985A56503895. <http://dx.doi.org/10.2305/IUCN.UK.2014-1.RLTS.T56499985A56503895.en>. Downloaded on 18 April 2016.
- Cribb P. & Tibbs, M. (2004). *A Very Victorian Passion: the Orchid Paintings of John Day*. Blacker Publishing and Royal Botanic Gardens, Kew.
- Dressler, R.L. (2003). "*Schomburgkia*" *thomsoniana*. A Case of Confused Identity. *Orquideologia* 22(3): 227 – 235.
- Dressler, R. L. & Carnevali, G. (2000). The Wild Banana Orchid of the Cayman Islands. *Orchid Digest* 64: 81 – 83.
- Fawcett, W. (1888). Cayman Islands. *Bull. Misc. Inform., Kew* 1888: 160 – 163.
- Fawcett, W. (1889). Flora of the Cayman Islands (in Colonial Notes). *Gard Chron.* ser. 3, vol. 5: 531.
- Fawcett, W. (1894). An Orchid from the Cayman Islands. *Bull. Bot. Dept., Jamaica*, n.s. 1:74 – 75.
- Grossman, D. H., Faber-Langendoen, D., Weakley, A.S., Anderson, M., Bourgeron, P., Crawford, R., Goodin, K., Landaal, S., Metzler, K., Patterson, K.D., Pyne, M., Reid, M. &

- Sneddon, L. (1988). *International Classification of ecological communities: terrestrial vegetation of the United States. Vol. 1 The National Vegetation Classification System: development status, and applications.* The Nature Conservancy, Arlington, Virginia.
- Hawkes, A.D. (1951). Studies in Antillean Botany – 3. A preliminary checklist of Cuban orchids. *Brittonia* 7(3): 173 – 183.
- Helmsley, W.B. (1915). Walter Hood Fitch, Botanical Artist 1817 – 1892. *Bull. Misc. Inform., Kew* 1915: 277 – 284.
- Hitchcock, A.S. (1893). List of plants collected in the Bahamas, Jamaica and Grand Cayman. *Ann. Rep. Missouri Bot. Gard.* 4: 47 – 179.
- Hooker, J.D. (1902). *Schomburgkia thomsoniana. var. minor.* Native of the Cayman Islands, W. Indies. *Bot. Mag.* 128, t. 7815.
- Jones, H.G. (1963). Studies in *Schomburgkia*. *Amer. Orchid Soc. Bull.* 32: 5 – 12.
- Jones, H.G. (1966). Some notes on the genus *Schomburgkia* Lindl. of the Orchidaceae and its relationships. *Ann. Naturhistor. Mus. Wien* 69: 57 – 67.
- Jones, H.G. (1976). Nomenclatural revision of the West Indian species of *Schomburgkia* (Orchidaceae) *Bull. Torrey Bot. Club* 103(3): 117 – 121.
- Kennedy, G.C. (1979). The genera *Schomburgkia* and *Myrmecophila*. *Orchid Digest* 43: 205 – 211.
- Nir, M. (2000). *Orchidaceae Antillanae.* DAG Media Publishing. New York.
- Proctor, G.R. (1980). Checklist of the plants of Little Cayman. *Atoll Res. Bull.* 241: 71 – 80.

- Proctor, G.R. (1984). *The Flora of the Cayman Islands*. Her Majesty's Stationary Office, London.
- Proctor, G.R. (2012). *The Flora of the Cayman Islands* 2nd Ed. Kew Publishing, Royal Botanic Gardens, Kew. (Orchidaceae contributed by James D. Ackerman)
- Reichenbach, H.G. (1887). *Schomburgkia thomsoniana*, n. sp., *Gard. Chron.* ser. 3, vol. 2: 38.
- Rolfe, R.A. (1891). List of Garden Orchids (continued) *Schomburgkia* *Gard. Chron.* ser. 3, vol. 9: 614 – 615.
- Rolfe, R.A. (1901). *Schomburgkia thomsoniana*. *Orchid Rev.* 9: 325 – 326.
- Rolfe, R.A. (1917). The Genus *Myrmecophila*. *Orchid Rev.* 25: 50 – 51.
- Savage-English, T.M. (1913). Some notes from a West Indian coral Island. *Bull. Misc. Inform., Kew* 1913: 367 – 372.
- Schlechter, R. (1913). Die Gattung *Schomburgkia* Ldl. *Orchis* 7: 38 – 43.
- Veitch, J & Sons. (1887-1894) *A Manual of Orchidaceous Plants*. *Schomburgkia thomsoniana*. vol. 1: 102. London.
- Williams, L.O. (1941). The validity of the genus *Schomburgkia*. *Darwiniana* 5: 74 – 77.
- Withner, C. L. (1993). *The Cattleyas and their Relatives*. Vol. III. *Schomburgkia, Sophronitis, and other South American Genera*. Timber Press. Portland, Oregon.