

NEES, ARNOTT AND SOME FORGOTTEN ACANTHACEAE TYPES FROM ASIA

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During the 1830s Walker Arnott sent a collection of Asian Acanthaceae to be identified by Nees von Esenbeck in Breslau. This material was used by Nees as the basis for describing one genus and 22 new species in Hooker's *Companion to the Botanical Magazine* in 1836. Both the publication and the collection were subsequently forgotten. During the course of work on the Flora of Ceylon the types were rediscovered in the general herbarium at Edinburgh. The present paper links Nees' names with the types in Edinburgh, lectotypifying where appropriate and commenting on the taxonomic status of each species.

INTRODUCTION

During the course of preparing an account of *Strobilanthes* for the Flora of Ceylon, my attention was drawn to a paper by Nees von Esenbeck in Hooker's *Companion to the Botanical Magazine* in 1836. This was entitled 'Characters of New Species of Asian Acanthaceae' and contained descriptions of one new genus (*Physichilus*) and no less than 21 new species, principally from Ceylon but also from other parts of Asia.

The first thing that puzzled me about this paper was the fact that it had been comprehensively ignored by all authorities on Asian Acanthaceae except Bremekamp (1944). Neither Thomas Anderson (1867) nor C. B. Clarke (1885) made any reference to it and they were perhaps unaware of its publication. However, what was really surprising was that Nees himself ignored it entirely in his own account of Acanthaceae in De Candolle's *Prodromus*, making no reference to it except before his description of *Physichilus*.

The second thing that puzzled me was the apparent absence of type specimens for the species described by Nees. I assumed they would be at Kew, partly because of Nees' association with Hooker and partly because there were extensive collections by Walker, Wight and others cited by Nees in his paper in the Kew Herbarium. However, careful searching revealed that in some cases there were no specimens that could be identified as possible types while in others where Nees had annotated specimens of a particular species there were good reasons for rejecting them as types. One point of particular importance lay in the gender of the genus *Strobilanthes*. In his account of Acanthaceae in Wallich's *Plantae Asiaticae Rariores* (1832), and in the 1836 paper under discussion here, Nees treated *Strobilanthes* as feminine, as did the original author, Blume. However, in his account in the *Prodromus* (1847) he treated it as masculine. All specimens of *Strobilanthes* described in the 1836 paper and annotated by Nees at Kew were treated as masculine. It therefore seemed probable that he did not see these specimens until some time after he described them in 1836.

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The explanation lay in the *Prodromus*. Here Nees stated clearly where he had seen specimens of each species described. In the case of the species described in the 1836 paper he cited specimens from Bentham's, Hooker's and Wight's herbaria, but the one consistent element was the citation of a specimen from Arnott's herbarium in every case.

Arnott's herbarium was originally given to Glasgow University and from there placed on permanent loan in the herbarium of the Royal Botanic Garden Edinburgh. Arnott's specimens are usually mounted on blue sheets and it was not difficult to find these at Edinburgh. Not only did I find suitable type specimens for all the species described by Nees in the 1836 paper but in most cases the specimens were accompanied by a slip of paper attached to the herbarium sheet carrying Nees' own annotation. This may well indicate that the specimens were unmounted when Nees saw them, although I cannot be certain of this. Several species, however, have no attached slip annotated by Nees but in nearly every case these correspond to species to which Nees ascribed sole or joint authorship to Arnott, either in the 1836 paper or in the *Prodromus*.

I am not certain how Nees came to see these specimens and to prepare his paper. It seems most likely that Arnott sent the specimens to Nees for determination at Breslau having given manuscript names to a few of them. Nees presumably examined the specimens, wrote determinations on slips of paper and prepared descriptions before returning the specimens to Arnott. He probably intended to publish the paper jointly with Arnott since he ascribed most of the names to 'nobis' (Fig. 2) whereas his usual practice was to indicate his authorship by writing 'NE' or, more commonly, 'N ab E'. Apart from the case of *Leptacanthus walkeri* (Fig. 3), which Arnott had wrongly identified as *L. rubicundus*, he only abandoned the use of 'nobis' for infraspecific taxa, his sole new genus, *Physichilus*, and most significantly for the species he named in Arnott's honour, *Strobilanthes arnottiana*. It seems most likely that Arnott received the descriptions from Nees and then gave them to Hooker for publication but did not claim joint authorship with Nees. His contribution to the paper was limited to a footnote on page 313 in which he amplified Nees' description of the fruit of *Leptacanthus walkeri* (Fig. 3).

I have already commented about the way in which Nees' paper was ignored but even more remarkable is the overlooking of the type specimens. They were mixed with the general collections from India in the Edinburgh herbarium and had not been identified as being types. Apart from Nees' and Arnott's own annotations there is no evidence that they were seen by anyone. It is clear, therefore, that when Anderson, Clarke, Bremekamp and others discussed and changed the status of species described in this paper, they had not seen the types at all. Bremekamp, for example, never saw the specimen on which his new genus *Microstrobilus* was based.

It seems worthwhile, therefore, to go through the 23 species described in the 1836 paper commenting briefly on each, discussing any problems that arise and specifying the type. In the protologue to each of his new taxa, Nees did not clearly indicate a type specimen. Therefore, even in cases where only one specimen has been located that can confidently be considered as being the type (i.e. most probably holotype), I have designated it as lectotype.

1. *Ebermaiera* ('*Ebermayera*') *glauca* N. ab E.

There are two sheets of *Wight* 1932 in Arnott's herbarium, both labelled '*Ebermayera glauca* NE' in Arnott's writing. Neither is annotated by Nees but one of them has a lengthy description attached to it terminating with the words:

'*Stemodia glauca* mihi
Pavoor (?) in regno Travancorens
Decbr. 22. 1817'

This appears to be Klein's original description and name which Nees cites at the end of his own description of *Ebermaiera glauca* and from which the epithet *glauca* is derived. This is clearly the specimen Nees saw and explains why he did not annotate the specimen, there already being a name attached to the sheet. I take this to be the type of *Ebermaiera glauca* Nees.

Ebermaiera glauca is in fact conspecific with the earlier *Adenosma spatulata* Blume as noted by Enayat Hossein on the sheet (Fig. 1) and is correctly:

Staurogyne spatulata (Blume) O. Koorders, *Exkursionfl. Java* 3: 211 (1912).

Basionym: *Adenosma spatulata* Blume, *Bijdr. Fl. Ned. Ind.* 14: 757 (1826). Type: Indonesia.

Syn.: *Ebermaiera glauca* Nees in Hook., *Comp. Bot. Mag.* 2: 310 (1836). Lectotype (chosen here): India (Travancore), *Wight* 1932 (E-GL, sheet with Klein's description and manuscript name *Stemodia glauca* attached).

2. *Adenosma balsamica* ('*balsamea*') Spr.

This is not a new species but merely a record considered interesting by Nees. *Wight* 1930 is in Arnott's herbarium and annotated '*Adenosma balsamea* Spr.' in Nees' handwriting and signed 'NE'.

This species is now placed in *Hygrophila* as *Hygrophila balsamica* (L.f.) Raf., *Fl. Tellur.* 4: 66 (1838).

3. *Physichilus serpyllum* N. ab E.

This is the only new genus described by Nees in this paper. The Campbell specimen cited by Nees is in Arnott's herbarium; it is annotated '*Physichilus serpyllum* N. ab E' and is the only specimen that can be considered the type. *Physichilus* is now included in the genus *Hygrophila* so this plant is correctly:

Hygrophila serpyllum (Nees) T. Anderson, *J. Linn. Soc. Bot.* 9: 456 (1867).

Basionym: *Physichilus serpyllum* Nees in Hook., *Comp. Bot. Mag.* 2: 310 (1836). Lectotype (chosen here): India (Mysore), *Campbell* s.n. (E-GL, sheet annotated by Nees).

4. *Gymnostachyum ceylanicum* N. ab E.

There is no specimen in Arnott's herbarium annotated with this name by Nees. There is however a Walker collection annotated with the name in Arnott's writing. As Nees cites this species in the *Prodromus* (1847: 93) under the joint authorship of 'W. Arn. & N. ab E.' it seems that he was

taking up Arnott's manuscript name and that the specimen annotated *Gymnostachyum ceylanicum* in Arnott's writing should be taken as the type. The plant should be cited, therefore, as:

Gymnostachyum ceylanicum Arn. ex Nees in Hook., Comp. Bot. Mag. 2: 311 (1836). Lectotype (chosen here): Ceylon, Walker 213 (E-GL).

5. *Barleria arnottiana* N. ab E.

There are two sheets in Arnott's herbarium at Edinburgh collected by Walker and labelled '*Barleria arnottiana*' in Arnott's handwriting. Neither of these sheets has any annotation by Nees attached to it but one of them clearly had a label gummed to it at some time. I am therefore making the inference that this one had Nees' label attached and should therefore be selected as a lectotype.

At Kew there is a Walker collection from Ceylon actually annotated '*Barleria arnottiana* N. ab E.' in Nees' writing. I am rejecting this as a lectotype since Nees in the *Prodromus* (1847: 232) cites *Barleria arnottiana* as 'Nees in Hb. Arnott'. The Kew specimen derives from Hooker's herbarium and was probably only seen by Nees much later. It is very unlikely that he used the Kew specimen in preparing his description.

The correct citation for this species should, therefore, be:

Barleria arnottiana Nees in Hook., Comp. Bot. Mag. 2: 311 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet with missing label).

6. *Barleria macraei* Arn.

There is a single sheet in Arnott's herbarium at Edinburgh which has Arnott's manuscript name on it but no annotation by Nees. I take this to be the type of *Barleria macraei* and also the type of the later and therefore superfluous *B. pentandra* Arn. ex Nees in A.DC., Prodr. 11: 232 (1847). The annotations are entirely in Arnott's hand but apparently using two pens, probably indicating that some of the words were added later. I have indicated the words that I believe to be later additions by brackets in the following quotation, which is exactly as written in other respects.

Barleria macraei Arn. (in herb. Hook.)

pentandra Arn. [scored through]

Ceylon (Walker)

(*B. pentandra* Arn.)

In addition a pencilled addition, possibly in Arnott's hand, reads 'ead ac Macrae n. 14'. I take this to mean that Arnott originally named the plant *Barleria macraei* (from comparison with a specimen in herb. Hooker presumably collected by Macrae), which is the name Nees took up in 1836. Subsequently, Arnott had second thoughts about the identity of the two plants and renamed his Walker specimen *Barleria pentandra*. Nees then took up this second, superfluous name in the *Prodromus*, citing it as Arnott ex Nees.

Barleria macraei was included by C. B. Clarke within *B. involucreta* Nees, but whether rightly or not I do not know. For the time being I prefer to cite it as:

Barleria macraei Arn. ex Nees in Hook., Comp. Bot. Mag. 2: 311 (1836). Lectotype (chosen here): Ceylon, Walker (E-GL).

Syn.: *Barleria pentandra* Arn. ex Nees in A.DC., Prodr. 11: 232 (1847), *nom. superfl.*

Type as for *B. macraei*.

7. *Lepidagathis ceylanica* N. ab E.

There are two sheets in Arnott's herbarium which are annotated by Nees. One of these is labelled '*Lepidagathis ceylanica* nob. α ' and the other '*Lepidagathis ceylanica* var. β .' These correspond to the type and the variety β described by Nees in the 1836 paper.

There is, however, a problem in the typification of *L. ceylanica* because Nees appears to cite variety β of *Lepidagathis javanica* Blume as the type of the new species. Since this is a Javanese plant collected at Tjanjor and *Lepidagathis ceylanica* is otherwise endemic to Ceylon there is a major difficulty. I cannot explain why Nees cited the Javanese collection unless he thought it was the same as the Ceylon plant but he obviously had doubts about it as it is not cited in the *Prodromus* (1847: 259). However, the use of the epithet *ceylanica* indicates to me that Nees was clearly describing a plant from Ceylon which he may or may not have considered to be the same as the one from Java. Moreover, in Arnott's herbarium there is a specimen from Ceylon which he had seen and labelled as variety α of *L. ceylanica*. I think that the plant from Tjanjor on which Blume's *Lepidagathis javanica* var. β was based should not be considered as the type of *Lepidagathis ceylanica*, and the specimen in Arnott's herbarium collected by Walker in Ceylon and annotated '*Lepidagathis ceylanica* nob. α ' by Nees should be taken as the type:

Lepidagathis ceylanica Nees in Hook., Comp. Bot. Mag. 2: 311 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated '*Lepidagathis ceylanica* nob. α ').

Variety β was never given a name by Nees but was later included in *Lepidagathis walkeriana* Nees in the *Prodromus* (1847: 260). Although the sheet in Arnott's herbarium labelled 'var. β ' might be considered part of the type material, there are other more suitable specimens which could be selected as a lectotype for that species, e.g. Walker in Hb. Hooker (K).

8. *Ruellia dura* N. ab E.

There is a single Campbell specimen annotated by Nees '*Ruellia dura* nob.' which I take to be the type.

Ruellia dura was transferred to *Hemigraphis* as *H. dura* (Nees) T. Anders., but Nees' name is antedated by *Ruellia urens* Roth so a new combination *Hemigraphis urens* has to be made.

Ruellia urens Roth is the type of Bremekamp's genus *Gantelbua* but I do not think there are reasons for retaining it even though I have not examined the *Hemigraphis* group very carefully. Certainly it is close to the other weedy species of *Hemigraphis* such as *H. hirta* (Vahl) T. Anderson being without bracteoles and having a similar corolla. It is true that the pollen is different from that of other species of *Hemigraphis* which have been investigated, but both Bremekamp (1944) and Scotland (1993: 489) have demonstrated that there are several types of pollen within *Hemigraphis* and the pollen is not in any case very anomalous.

Hemigraphis urens (Roth) J.R.I. Wood, **comb. nov.**

Basionym: *Ruellia urens* Roth, Nov. Pl. Sp. 302 (1821). Type: India, Heyne.

Syn.: *Ruellia dura* Nees in Hook., Comp. Bot. Mag. 2: 311 (1836). Lectotype (chosen here): India, Campbell s.n. (E-GL, sheet annotated by Nees).

Hemigraphis dura (Nees) T. Anderson, J. Linn. Soc. Bot. 9: 461 (1867).

Gantelbua urens (Roth) Bremek., Verh. Ned. Akad. Wetens. Afd. Nat. Sect. 2, 41(1): 147 (1944).

9. *Ruellia erecta* Roth

This is not a new species but a description based on *Wight* 1941. This is, in fact, the only plant described in the 1836 paper which I have failed to locate in Arnott's herbarium. The plant in question may be *Ruellia patula* Jacq. but this is speculation.

10. *Strobilanthes walkeri* Arn.

There are two sheets in Arnott's herbarium both labelled *Strobilanthes walkeri* in Arnott's handwriting and I take these to be the original syntypes. There is no specimen annotated by Nees but this is not to be expected since it is Arnott's manuscript name that Nees took up.

I have selected the sheet with flowers and young fruit as the lectotype, largely because the second sheet is somewhat immature and is labelled 'junior' in Arnott's hand. Although both clearly represent the same species, the choice of a lectotype is not entirely academic. C. B. Clarke never saw either of these specimens and therefore assumed that the type corresponded to a large-fruited plant collected in Ceylon (*Thwaites* C.P. 3517) and described a new variety *stenocarpa* with small seeds and capsules (1884: 441). In fact the reverse is true and Clarke's var. *stenocarpa* matches the type quite well.

***Strobilanthes walkeri* Arn.** ex Nees in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, *Walker* s.n. (E-GL, sheet with flowers and young fruit).

Syn.: *Strobilanthes walkeri* var. *stenocarpa* C.B. Clarke in Hook. f., Fl. Br. Ind. 4: 441 (1884). Type: Ceylon, *Thwaites* C.P. 3517 (K, sheets annotated by Clarke).

11. *Strobilanthes hookeri* N. ab E.

There is no sheet in Arnott's herbarium annotated by Nees but there is one labelled '*S. hookeri* NE' in Arnott's writing to which a label was clearly once attached. I take this to be the type.

In view of the epithet *hookeri* I felt it necessary to check the Kew herbarium carefully for other possible types, particularly as I could find no Macrae specimen at Edinburgh. There were two specimens at Kew from Hooker's herbarium annotated by Nees but neither can be accepted as types. One was labelled ' α ' and the other ' β glaber' but since Nees did not recognize varieties of *S. hookeri* until the account in the *Prodromus* (1847) they cannot be part of the original material used by Nees. There is a Macrae specimen but this comes from Bentham's herbarium, has no association with Hooker, and is labelled in Nees handwriting '*Goldfussia hookerana*' – a name which Nees never took up.

***Strobilanthes hookeri* Nees** in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, *Walker* s.n. (E-GL, sheet annotated '*S. hookeri* NE' from which label has been removed).

12. *Strobilanthes calycina* N. ab E.

There are two specimens in Arnott's herbarium collected in Ceylon by Walker and annotated by Nees. One of these is annotated '*Strobilanthes calycina* β N ab E' and corresponds to the unnamed variety β with a glabrous stem described by Nees. The other sheet is annotated '*Strobilanthes*

calycina nob.' and I take this to be the type. *S. colorata* Nees, also published in this paper (No. 15), is conspecific with *S. calycina*.

Strobilanthes calycina Nees in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated 'Strobilanthes calycina nob' by Nees).

Syn.: *Strobilanthes colorata* Nees in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees). [See notes below under *S. colorata*.]

13. *Strobilanthes trifida* N. ab E.

There is a single sheet of this species in Arnott's herbarium collected by Walker. This is annotated by Nees 'Strobilanthes trifida nob.' and is indisputably the type.

Although recognized by Clarke and Bremekamp as a distinct species, I concur with Anderson in regarding it as part of the variable *Strobilanthes lupulina* Nees which is widely distributed in Ceylon and southern India.

Strobilanthes lupulina Nees in Wall., Pl. As. Rar. 3: 85 (1832). Type: India, Wallich 2355a (iso. K-W).

Syn.: *Strobilanthes trifida* Nees in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).

14. *Strobilanthes sexennis* N. ab E.

Although there are several sheets of *S. sexennis* in Arnott's herbarium only one of them has been annotated by Nees. This sheet carries the comment, presumably by Walker, that the plant flowers every sixth year and this was used by Nees in choosing the epithet. Nees' annotation on this sheet reads 'Strobilanthes sexennis nob.' (Fig. 2) and this is the sheet that must be taken as the type. However, several different pieces are pasted to the sheet. The largest piece, on the right of the sheet, clearly matches Nees' description of the stem as 'cingulato-rugosis' while that in the bottom left corner has entire leaves and lacks the wrinkled stem so matching the taxon later described by Nees as *S. cerinthoides*. This should, therefore, be excluded from consideration as part of the type.

Strobilanthes sexennis Nees in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees, excluding portion at bottom left of the sheet).

15. *Strobilanthes colorata* N. ab E.

There is a single sheet of this species in Arnott's herbarium. It is annotated 'Strobilanthes colorata nobis' in Nees' hand and it is the only possible type. *S. colorata* is, however, conspecific with *S. calycina* which is the most widely used name (see No. 12, above).

16. *Strobilanthes arnottiana* N. ab E.

The sheet in Arnott's herbarium annotated by Nees 'Strobilanthes arnottiana N ab E' is clearly the type. The correct citation is:

Strobilanthes arnottiana Nees in Hook., Comp. Bot. Mag. 2: 312. (1836).
Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).

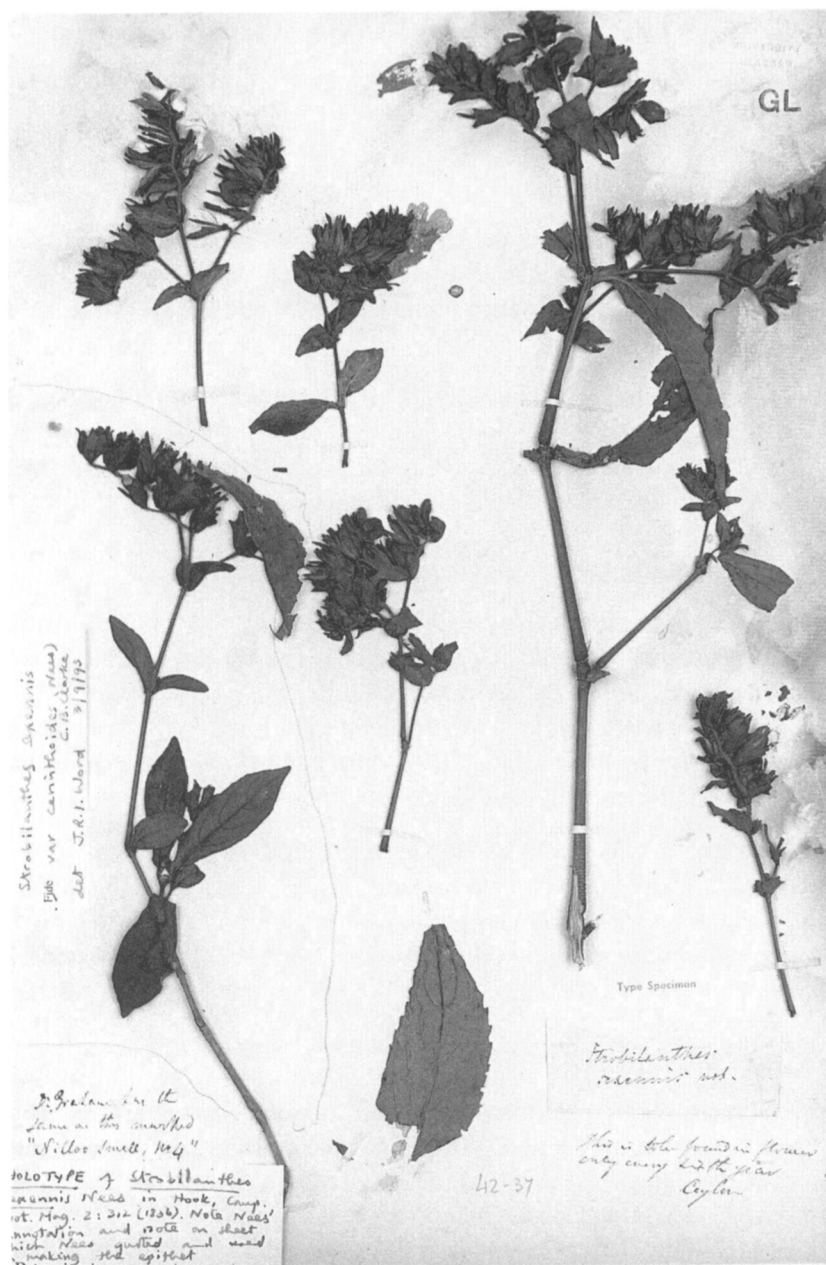


FIG. 2. Lectotype of *Strobilanthes sexennis* Nees, showing Nees' annotation gummed to the sheet together with the note, possibly in Walker's hand, on which the name *sexennis* was based (bottom right). The piece at the bottom left is not part of the lectotype (see p. 110).

17. *Strobilanthes anceps* N. ab E.

There are several Walker collections of this species in Arnott's herbarium but only one carries Nees' annotation, '*Strobilanthes anceps* nob.' and this should be taken as the type:

Strobilanthes anceps Nees in Hook., Comp. Bot. Mag. 2: 312 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).

18. *Strobilanthes hirsutissima* N. ab E.

There is a single sheet of this species in Arnott's herbarium simply annotated '*Strobilanthes hirsutissima*' in Nees' writing. This is the only possible type.

Following Anderson and Clarke (but not Bremekamp) I regard this species as a variety of *S. sexennis*:

Strobilanthes sexennis Nees var. **hirsutissima** (Nees) T. Anderson in J. Linn. Soc. Bot. 9: 483 (1867).

Basionym: *Strobilanthes hirsutissima* Nees in Hook., Comp. Bot. Mag. 2: 313 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).

19. *Goldfussia paniculata* N. ab E.

There is a single sheet of this species annotated in Nees' handwriting '?*Strobilanthes paniculata* nob. an *Goldfussiae* generis?'. No collector is named on the sheet but the locality is given as Java and the specimen is, therefore, the only possible type.

Goldfussia paniculata was transferred to *Strobilanthes* by Miquel and later made the type of the genus *Microstrobilus* by Bremekamp (1944: 250). I do not accept many of Bremekamp's segregate genera and prefer to retain this species as:

Strobilanthes paniculata (Nees) Miquel, Fl. Bat. 2: 802 (1858).

Basionym: *Goldfussia paniculata* Nees in Hook., Comp. Bot. Mag. 2: 313 (1836). Lectotype (chosen here): Java, *sin. coll.* (E-GL, sheet annotated by Nees).

Syn.: *Microstrobilus paniculatus* (Nees) Bremek., Verh. Ned. Akad. Wetens. Afd. Nat. Sect. 2, 41(1): 250 (1944).

20. *Leptacanthus walkeri* N. ab E.

There are several sheets of this species in Arnott's herbarium but only one annotated by Nees with the words '*Leptacanthus walkeri* N ab E'. This is the obvious choice for the type, particularly as it is also annotated by Arnott with the words 'fruit 4-seeded, a double cone' which are quoted in a footnote on page 313 as Arnott's sole contribution to the paper (Fig. 3).

Although recognized by Nees and Bremekamp, *Leptacanthus* was included within *Strobilanthes* by Anderson, Clarke and others. Since Nees had already used the epithet *walkeri* in *Strobilanthes* in the 1836 paper a new name had to be made:

Strobilanthes pulcherrima T. Anderson in Thwaites, Enum. Pl. Zeyl. 229 (1860).

Basionym: *Leptacanthus walkeri* Nees in Hook., Comp. Bot. Mag. 2: 313 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).



FIG. 3. Type of *Leptacanthus walkeri* Nees showing Nees' own annotation (bottom right) and Arnott's label, corrected from *rubicundus* to *walkeri* presumably after Nees examined the sheets. Note also the phrase about the fruit added by Arnott to the paper by Nees (p. 312), presumably based on the capsule (top right).

21. *Endopogon viscosus* Arn.

In his description of this species Nees described two varieties α *viscosissimus* and β *hispidus*, the alpha variety clearly corresponding to the type and therefore superfluous. In Arnott's herbarium there are four specimens, two labelled alpha and two beta. Of the two alpha sheets one has '*Justicia viscosa* Moon' written in Arnott's hand and also an annotation by Nees, '*Endopogon viscosus* nob. var. alpha', and this seems the best choice of a lectotype of the species since it was certainly seen by Nees and equated by him with the alpha variety and is also the probable source of the epithet *viscosus*.

Although no later authority except Bremekamp (1944: 180) has accepted Nees' beta variety – it is linked by a series of intermediates to the type – either of the two sheets labelled beta could be selected as a lectotype, but I select the sheet having the annotation '*Endopogon viscosus* Arn' on it but with Arnott's name crossed out and replaced with 'NE β '. Neither specimen is actually annotated by Nees. This species too is usually placed in *Strobilanthes* today although it was also treated as the type of the genus *Pseudostenosiphonium* by Lindau.

Strobilanthes viscosa (Arn. ex Nees) T. Anderson in Thw., Enum. Pl. Zeyl. 226 (1860).

Basionym: *Endopogon viscosus* Arn. ex Nees in Hook., Comp. Bot. Mag. 2: 313 (1836).
Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Arnott '*Justicia viscosa* Moon').

Syn.: *E. viscosus* var. *hispidus* Nees in Hook., Comp. Bot. Mag. 2: 313 (1836).

Lectotype (chosen here): Ceylon, Walker (E-GL, sheet annotated 'B' NE by Arnott).

Pseudostenosiphonium viscosum (Nees) Lindau in Bot. Jahrb. 18: 52 (1893).

22. *Rungia longifolia* N. ab E.

There is a single sheet in Arnott's herbarium carrying Nees' annotation '*Rungia longifolia* nob.' which must clearly be the type:

Rungia longifolia Nees in Hook., Comp. Bot. Mag. 2: 313 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).

23. *Rungia latior* N. ab E.

There is a single sheet in Arnott's herbarium with Nees' annotation '*Rungia latior* nob.' which is clearly the type:

Rungia latior Nees in Hook., Comp. Bot. Mag. 2: 313 (1836). Lectotype (chosen here): Ceylon, Walker s.n. (E-GL, sheet annotated by Nees).

24. *Andrographis ceylanica* N. ab E.

Although Nees cites both Walker and Wight collections there is only one possible type in Arnott's herbarium, a Walker collection labelled 'Col. Walker per Wight No. 59' and annotated by Nees '*Andrographis ceylanica* affini sane proxima', which must be the specimen on which Nees based his species. This view is confirmed by the absence of any suitable type elsewhere. At Kew there

is a Walker specimen but it is not annotated by Nees. The only specimen at Kew actually annotated by Nees comes from India and must also, therefore, be rejected.

A. ceylanica antedates *A. macrobotrys* within which it is often included:

Andrographis ceylanica Nees in Hook., *Comp. Bot. Mag.* 2: 313 (1836). Lectotype (chosen here): Ceylon, *Walker* s.n. (E-GL, sheet annotated by Nees).

Syn.: *Andrographis macrobotrys* Nees in A.DC., *Prodr.* 11: 516 (1847). Type: Ceylon, *Macrae* 373 in Hb. Bentham (K).

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