

Inga[?] *houstoni* (L'Hér.) A.P. DC., Prodr. 2: 442. 1825.

Calliandra houstoni (L'Hér.) Benth., Hook. Journ. Bot. 2: 139. 1840.

CALLIANDRA ANOMALA (Kunth) Macbride, Contrib. Gray Herb. 59: 4. 1919.

Inga anomala Kunth, Mimoses et autres Plantes Légumineuses du Nouveau Continent, 70, t. 22. 1819 (-24).

Calliandra kunthii Benth., Hook. Journ. Bot. 2: 139. 1840.

C. grandiflora (L'Hér.) Benth., Trans. Linn. Soc. 30: 557. 1875, pro parte.

Thanks is expressed to my colleagues at the Bailey Hortorium for their counsel in resolving this problem, and to Drs. F. A. Stafleu and H. E. Moore for bibliographic assistance.

Proposed by: GEORGE S. BUNTING (Maracay, Venezuela).

BANISTERIA ADR. JUSS.

(213) A proposal to conserve the generic name **Banisteria** Adr. Juss. against *Banisteria* L.; an alternative to the proposal (194) of C. V. Morton, Taxon 16 (1): 74-76. 1967.

Banisteria Adr. Juss. in St. Hil. Fl. Bras. mer. 3: 35. 1832 nom. cons. prop. Lectotype: *Banisteria campestris* Adr. Juss. in St. Hil. Fl. Bras. mer. 3: 36, 168. 1832 typ. cons. prop.

Banisteria L. Sp. Pl. 427. 1753 nom. rej. prop. Lectotype: *Banisteria brachiata* L. Sp. Pl. 428. 1753 typ. cons. [= *Heteropteris brachiata* (L.) DC.¹].

DISCUSSION

I. Selection of author from whom to conserve.

Linnaeus did not include in his genus *Banisteria* any species referable to the large neotropical genus *Banisteria* sensu Adrien de Jussieu and many later authors, including

Niedenzu. Therefore *Banisteria* Adr. Juss. is a later homonym of *Banisteria* L. (Art. 48, ICBN). This situation was recognized by Robinson and Small, who erected the genus *Banisteriopsis* to replace *Banisteria* Adr. Juss., which Small correctly rejected. Mr. C. V. Morton argues in his recent proposal that nomenclatural stability will be best served by conserving the well-known name *Banisteria* sensu Jussieu and Niedenzu and setting aside *Banisteriopsis*. I agree with him that this is the best course, since many new combinations in *Banisteriopsis* will otherwise be necessary. However, the method of effecting this conservation should be carefully considered. There are three authors (Cavanilles, Kunth, and Adrien de Jussieu) who may logically be considered as possible authors of the genus *Banisteria* as we wish to conserve it. The pertinent historical facts and the advantages and disadvantages of each of these possibilities are discussed briefly below.

1. Cavanilles (1790) was apparently the first author to describe in *Banisteria* species which were retained in that genus as later circumscribed by Adrien de Jussieu. These species were *B. muricata* and *B. ferruginea*; Cavanilles included them in *Banisteria* among other species now referred to *Heteropteris*, *Hiraea*, *Mascagnia*, *Stigmaphyllon*, and perhaps other genera as well. Cavanilles' circumscription of *Banisteria* was obviously not the modern one, but using the type method *Banisteria* could be conserved as of Cavanilles, 1790, with the type *B. muricata* Cav. This species was well illustrated by Cavanilles, and was later treated as a *Banisteria* by Kunth (1822, p. 139), de Candolle (1824, p. 589), Jussieu (1840, p. 281; 1843, p. 393), and Niedenzu (1928, p. 438). Cuatrecasas made the combination in *Banisteriopsis* (1958, p. 503), and the type, a Joseph de Jussieu specimen, is extant at Paris (Field Museum negative no. 37469). The advantage of conservation with Cavanilles as author is obvious: This is the earliest date from which the genus can be conserved with a type which allows us to preserve the circumscription of Jussieu and Niedenzu. But there is a paradoxical difficulty in this conservation: The reason for conserving *Banisteria* sensu Jussieu is that it is a later homonym of *Banisteria* L. However, *Banisteria* L. emend. Cav. is not a later homonym, as defined by Articles 47 and 48 of the Code, because Cavanilles included two of Linnaeus' species (*B. purpurea* and *B. angulosa*) in his circumscription of the

¹ This name has previously been cited *H. brachiata* (L.) H.B.K., but Kunth did not definitely indicate that the names were to be used in that combination, as required by Art. 33 of the Code; he merely stated in a footnote to his new genus *Heteropteris* that *Banisteria brachiata* L. was referable to *Heteropteris*. de Candolle seems to have been the first author to actually make the combination.

genus. *Banisteria* L. emend. Cav. becomes a later homonym (*Banisteria* Cav.) only when it is conserved with a non-Linnaean type, e.g. *B. muricata*. Thus conservation of *Banisteria* Cav. would be a curious sort of double process, essentially two conservations at once. We would be creating the later homonym by fixing its type, and at the same time we would be conserving our new homonym against the earlier homonym, *Banisteria* L. This could be done, but it seems unnecessarily arbitrary in this case, since a simpler and more natural conservation can be made from Jussieu.

2. Kunth (1822) was the first author to begin restricting *Banisteria* to a more coherent assemblage. He did this by excluding *Heteropteris*, which he published as a new genus. *Banisteria* as treated by Kunth consisted for the most part of species now referred to *Stigmaphyllon*, and in his generic description he described the stigma of *Stigmaphyllon*, not that of *Banisteria* sensu Jussieu. Thus an objective application of the Code's "Guide for the Determination of Types" would result in the choice of a species of *Stigmaphyllon* as the lectotype of *Banisteria* sensu H.B.K. However, one of the new species described by Kunth, *Banisteria pauciflora*, is a *Banisteria* sensu Jussieu, and Mr. Morton has chosen this species as the lectotype of *Banisteria*, which he proposes to conserve from H.B.K. This conservation would not have the advantage of Cavanilles' early date, and it would rely on a procedure as arbitrary as conservation from Cavanilles, since Kunth's *Banisteria* also included a Linnaean species (*B. fulgens* L.). Thus *Banisteria* L. emend. H.B.K. is not a later homonym needing conservation until it has been conserved with a non-Linnaean type.

3. Adrien de Jussieu (1832) described *Stigmaphyllon* as a new genus and at the same time circumscribed *Banisteria* in such a way as to exclude all of Linnaeus' species. His concept of the genus is that accepted by Niedenzu and all other modern authors, whether they call it *Banisteria* or *Banisteriopsis*. Conservation from Jussieu would be taxonomically satisfying, in that the genus would be nomenclaturally attributed to the author whose taxonomy we now follow. There would be no problem of conserving a name that would not really be a later homonym until after conservation with a particular type, because *Banisteria* Adr. Juss. really is a later homonym, as defined by

Article 48 of the Code and as recognized by Jussieu himself (1840, 1843). Choice of a lectotype can be made following the Code's "Guide," rather than arbitrarily, as with Cavanilles and Kunth. The disadvantage to conservation from Jussieu is the date, 42 years later than Cavanilles. However, the danger of displacement by another name seems minimal in this case. *Banisteria* was a widely used name, and no competing synonyms were published between 1790 and 1832, as far as I can determine. Niedenzu cited none, and Niedenzu was quite thorough in his review of the literature.

Summary: Conservation from Cavanilles would confer an early date of publication, while conservation from Jussieu would allow a tidy correlation of nomenclature and current taxonomy, and could be effected with a minimum of arbitrariness. Conservation from Kunth would have none of these advantages. If early publication were of primary importance, I would suggest conservation from Cavanilles, but in this case that does not seem necessary. I am therefore proposing conservation from Jussieu.

II. Selection of lectotypes.

Jussieu described 16 species of *Banisteria* in the Flora Brasiliæ (1832). I have chosen *B. campestris* as the lectotype because it was known to Jussieu in both flowering and fruiting conditions, and because it was well illustrated by him with a plate showing technical details. The figures from this plate (p. 168 in Fl. Bras.) were reproduced in Plate XIII of Jussieu's Monographie (1843), so presumably this species represented Jussieu's idea of a "typical" *Banisteria*. *Banisteria campestris* was retained in *Banisteria* by Jussieu in his later works (1840, p. 282; 1843, p. 399), and the species has been accepted by Grisebach (Fl. Bras. 12 (1): 50. 1858), Skottsberg (K. Svenska Vet.-Ak. Handl. 35 (6): 12. 1901), and Niedenzu (1928, p. 418).

Banisteriopsis C. B. Rob. ex Small, 1910, being a later name, will become a synonym for *Banisteria* however the latter is conserved, and there is no need to list it as a rejected name. Small accidentally listed a species of *Heteropteris* as the type, but Cuatrecasas has corrected this error by designating *Heteropteris cornifolia* H.B.K. [= *Banisteriopsis cornifolia* (H.B.K.) C. B. Rob. ex Small] as lectotype. Mr. Morton proposes, as a matter of nomenclatural expediency, that Cuatrecasas'

choice be set aside in favor of *Banisteria pauciflora* H.B.K. [= *Banisteriopsis pauciflora* (H.B.K.) C. B. Rob. ex Small] as the conserved type. However, Article 8 of the Code states that the author who first designates a lectotype must be followed unless "it can be shown that the choice was based upon a misinterpretation of the original description." No such misinterpretation has been shown in this case, so we must accept Cuatrecasas' choice of the lectotype.

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NEWS

CALL FOR PROJECTS

The EDP-IR Index of Projects in Biological Systematics

The number of projects in biological systematics that use electronic data processing for information retrieval (EDP-IR) is increasing rapidly. An index of such projects is being compiled to inform systematists of current projects and to avoid costly duplication of computer programming, key punching, etc. This Index will appear in a future issue of *Taxon*.

The current Index includes the areas of biological systematics (*sensu lato*) and supporting disciplines. Thus, projects in biogeography, for example, are invited. The Index is restricted to projects involving electronic data processing methods and equipment, or projects that have data in a form suitable for conversion to use by EDP equipment without complete recoding. Thus, projects using a Friden Flexowriter, for example, are included, but those using edge-notched punched cards are excluded. The type of information being retrieved may be anything of value to systematics. This includes such things as literature references, specimens of species preserved in a museum or herbarium, or growing in a botanical

garden, and lists of taxa with a certain character. Projects of all sizes will be included, if they meet the above restrictions.

Systematists engaged in such projects are invited to submit details to either of the persons named below. Details should include the following:

1. Principal investigator's name and address.
2. Title of project.
3. Dates of initiation and (if any) of termination of the project.
4. Purpose of project, including (when applicable):
 - a. Taxa under study.
 - b. Collections being studied.
 - c. Literature being studied.
5. Literature references to publications about the project or resulting from it, and copies of the same, if available.
6. Computer programs (if any) that have been developed; what they do, what computer they are operating on, what language (e.g., FORTRAN, COBOL) they are written in; are program decks available, etc.
7. Type of hardware being utilized (Flexowriter, NCR 735, etc.).
8. Data availability; are the data available for use by others, if so, in what form, etc.

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