

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA



Twenty-seventh meeting of the Plants Committee  
Geneva (Switzerland), 8 – 13 July 2024

Appendices of the Convention

Nomenclature matters

Flora

Report of the specialist on botanical nomenclature

OVERVIEW OF FLORA NOMENCLATURE MATTERS FOR THE PERIOD COP19-COP20

1. This document has been submitted by the specialist on botanical nomenclature of the Plants Committee (Ms. Ronell R Klopper).\*
2. At its 19th meeting (CoP19; Panama City, 2022), the Conference of the Parties adopted or revised ten sets of decisions on nomenclature matters for flora as included in the Annex to document [PC26 Doc. 43.1](#). Progress in their implementation since the 26th meeting of the Plants Committee (PC26; Geneva, June 2023) is reported either in the present document or under other agenda items of the present meeting, as follows:

Decisions in effect on nomenclature matters for flora	PC27 reference document
Nomenclature for aloes ( <i>Aloe</i> spp.): Decisions 19.279 and 19.280	PC27 Doc. 41.2
Cactaceae Checklist and its Supplement: Decisions 18.304 (Rev. CoP19) to 18.306 (Rev. CoP19)	Present document, <b>Section 1</b>
Production of a CITES Checklist for rosewoods ( <i>Dalbergia</i> spp.): Decisions 18.307 (Rev. CoP19) and 18.308 (Rev. CoP19)	Present document, <b>Section 1</b>
Nomenclature for ebonies ( <i>Diospyros</i> spp.) (populations of Madagascar): Decisions 19.281 and 19.282	PC27 Doc. 41.4
Standard nomenclature for cumarus ( <i>Dipteryx</i> spp.): Decision 19.283	PC27 Doc. 41.5
Standard nomenclature for African mahoganies ( <i>Khaya</i> spp.): Decision 19.284	PC27 Doc. 41.6
Nomenclature of Appendix-II listed orchids (Orchidaceae spp.): Decisions 19.285 and 19.286	PC27 Doc. 41.3
Nomenclature for pachypodiums ( <i>Pachypodium</i> spp.): Decision 19.287 and 19.288	PC27 Doc. 41.7
Standard nomenclature for roseroots ( <i>Rhodiola</i> spp.): Decision 19.289	PC27 Doc. 41.8

\* The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

Nomenclature for yews ( <i>Taxus</i> spp.): Decisions 19.290 and 19.291	Present document, <b>Section 1</b>
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3. In addition to the Decisions listed above, at PC26, the Plants Committee considered additional nomenclature matters outlined in paragraph 17 to 18 of document PC26 Doc. 43.1. **Section 2** to the present document resumes from the recommendations of the Plants Committee (see PC26 SR) and presents a way forward for consideration at the present meeting.
4. In **Section 3** to the present document, I have included a set of new flora nomenclature matters that the Plants Committee might wish to consider for further action, some of which could take the form of new standard nomenclature references or draft decisions for consideration of the Conference of the Parties at CoP20.
5. To facilitate consideration of the proposed way forward for each of the matters outlined throughout Sections 1 to 3, **Section 4** to the present provides an overview of the proposed way forward, including proposed recommendations for consideration of the Plants Committee at PC27.
6. Additionally, at its 19th meeting, the Conference of the Parties adopted three sets of nomenclature Decisions with mandates addressed to both the Animals and Plants Committee. Progress in their implementation is reported under the following agenda items of the joint session of the PC27 and the 33rd meeting of the Animals Committee (AC33):

Decisions in effect on joint nomenclature matters	PC27/AC33 reference document
Nomenclature of Appendix III listings: Decisions 18.313 (Rev. CoP19) and 18.314 (Rev. CoP19)	PC27 Doc. 40.1 / AC33 Doc. 47.1
Higher taxon listings in the Appendices: Decisions 19.272 and 19.273	PC27 Doc. 40.2 / AC33 Doc. 47.2
Development of a standardized global checklist of species: Decision 19.274	PC27 Doc. 40.3 / AC33 Doc. 47.3

Section 1: Progress in the implementation of nomenclature decisions for Cactaceae, *Dalbergia* spp., and yews

7. Regarding Decisions 18.304 (Rev. CoP19) to 18.306 (Rev. CoP19) on *Cactaceae Checklist and its Supplement*:
  - a) At its 26th meeting, the Plants Committee had considered document PC26 Doc. 43.3 on the *Cactaceae Checklist and its Supplement*, which reported on responses received to Notification to the Parties 2023/026 that was published as part of the implementation of Decision 18.305 (Rev. CoP19). The Committee advised to support the suggestions by Mexico, additional clarifications of names/taxa as proposed by the United Kingdom, and the proposed format of the checklist as a fully electronic and machine-readable document; but hesitated to include additional information as proposed by the United Kingdom. The nomenclature specialist was requested to present draft decisions at PC27 (summary record PC26 SR).
  - b) In accordance with the recommendations of the Plants Committee at PC26, the draft decisions could read:

**Directed to the Secretariat, in close consultation with the nomenclature specialist of the Plants Committee**

**20.AA** *The Secretariat, in close consultation with the nomenclature specialist of the Plants Committee, shall, subject to external funding, propose an updated checklist for the family Cactaceae, taking into account information contained in document PC26 Doc. 43.3 and agreements contained in summary record PC26 SR, as well as other available information, and report to the Plants Committee.*

**Directed to the Plants Committee**

**20.BB** *The Plants Committee shall advise the Secretariat on the updated checklist for the family Cactaceae and report its recommendations to the Conference of the Parties, including with regard to the adoption of the checklist as standard nomenclature reference in Resolution Conf. 12.11 (Rev. CoP20) on Standard nomenclature.*

- c) Should these draft decisions be recommended by the Plants Committee for adoption at CoP20, current Decisions 18.304 (Rev. CoP19) to 18.306 (Rev. CoP19) could be considered completed and therefore proposed for deletion.
8. Regarding Decisions 18.307 (Rev. CoP19) and 18.308 (Rev. CoP19) on *Production of a CITES Checklist for rosewoods (Dalbergia spp.)*:
- a) The current standard reference for the genus *Dalbergia* was adopted at CoP19 [see Resolution Conf. 12.11 (Rev. CoP19)].
- b) As pointed out in document PC26 Doc. 43.1, the *Dalbergia* checklist sets a new standard for CITES nomenclature references and includes several novel ways of delivering the required information in a user-friendly manner.
- c) Noting that it has proven useful to Parties, and that no major issues or updates have been brought to the attention of the Secretariat, it is possible that the intention behind Decisions 18.307 (Rev. CoP19) to 18.308 (Rev. CoP19) to maintain the checklist up to date can be achieved under the provisions of Resolution Conf. 12.11 (Rev. CoP19).
- d) The Plants Committee might therefore wish to recommend the deletion of Decisions 18.307 (Rev. CoP19) to 18.308 (Rev. CoP19) at CoP20.
9. Regarding Decisions 19.290 and 19.291 on *Nomenclature for yews (Taxus spp.)*:
- a) At PC26, the Plants Committee recommended to ensure that the checklist encompass the entire genus, even though only some species are listed. It was highlighted that the number of listed species may increase since taxa previously considered subspecies are now accepted at species level. The World Flora Online Taxonomic Expert Network for Conifers at the Royal Botanic Garden Edinburgh (RBGE) was identified as a suitable contact to be considered in this work (see also summary record PC26 SR).
- b) Since PC26, the Secretariat has incorporated the additional recommendations from the Plants Committee in the terms of reference of the checklist and has formally identified RBGE as a suitable partner for its development.
- c) However, at the time of writing, the formalization of the agreement between the Secretariat and RBGE remains ongoing, and it is unlikely that a checklist will be ready with sufficient time for consideration by the Plants Committee ahead of CoP20.
- d) The Plants Committee might therefore wish to recommend at CoP20 the continuation of Decisions 19.290 and 19.291 for their implementation during the period CoP20 to CoP21.

Section 2: Way forward for additional flora nomenclature matters, following recommendations from PC26

10. Concerning the correct name for *Dipteryx oleifera*:
- a) At PC26, the Plants Committee recommended to use the older name *Dipteryx oleifera* in accordance with the rules of the *International Code of Nomenclature for algae, fungi, and plants* following rejection of the name conservation proposal for the name *Dipteryx panamensis* by the Nomenclature Committee for Vascular Plants of the International Association for Plant Taxonomy; and to remove this item from the nomenclature work programme of the Plants Committee.
- b) This matter has been addressed through the implementation of Decision 19.283, as reported in document PC27 Doc. 41.5 on *Standard nomenclature for cumarus (Dipteryx spp.)*.

11. Concerning the correct name for *Bulnesia sarmientoi*:
- a) At PC26, the Plants Committee recommended to include both *Gonopterodendron sarmientoi* and *Plectrocarpa sarmientoi* as synonyms, while keeping *Bulnesia sarmientoi* as the accepted name; and update the Species+ database accordingly.
  - b) Following PC26, the Secretariat consulted the four range States on which names are used by them and received responses from Paraguay and Argentina. Both Parties confirm that they use the name *Gonopterodendron sarmientoi*.
  - c) The nomenclature specialist has noted that the latest publications on the classification of this group tend to consider the genus *Plectrocarpa* spp. to be different from the genus *Gonopterodendron* spp. If however, in future, these genera were to be merged, the name *Plectrocarpa* would be considered as the accepted name of the genus, as it was validly published before the genus name *Gonopterodendron* and thus have priority under the rules of the *International Code of Nomenclature for algae, fungi, and plants*.
  - d) Based on PC26 agreements, responses by two range States, and additional information by the nomenclature specialist, the Secretariat proposes to request UNEP-WCMC to amend the database entries for the species in the CITES Checklist Database to consider *Gonopterodendron sarmientoi* as the accepted name, and to consider *Bulnesia sarmientoi* and *Plectrocarpa sarmientoi* as synonyms.
12. Concerning the correct treatment and placement of *Turbinicarpus ×roseiflorus* on the Appendices:
- a) At PC26, the Plants Committee noted that the genus *Turbinicarpus* is listed as a higher taxon listing under Appendix I and recommended including the natural hybrid in Appendix I as well.
  - b) Following PC26, the Secretariat consulted with UNEP-WCMC regarding this recommendation and notes that this name is included in the current standard reference for cacti as an illegitimate name. As this name was included in CITES databases before the current standard nomenclature reference for cacti was adopted, there are trade records associated to it, which is why UNEP-WCMC cannot delete the name and kept it as a synonym (see information document [PC24 Inf. 15](#)).
  - c) Based on this information, the Plants Committee could consider recommending addressing these outstanding issues as part of the ToRs of a revised nomenclature checklist for the Cactaceae family (see draft Decisions in paragraph 7b supra).
13. Concerning the possibility of updating the standard nomenclature reference for the bulb genus *Cyclamen*:
- a) At PC26, the Plants Committee recommended to update the *CITES Bulb Checklist* for all three genera, considering options to develop separate checklists for each genus; and to consider the option of using time-stamped database extracts.
  - b) Draft decisions for the consideration at CoP20 could read:

***Directed to the Secretariat, in close consultation with the nomenclature specialist of the Plants Committee***

**20.AA** *The Secretariat, in close consultation with the nomenclature specialist of the Plants Committee, shall, subject to external funding, propose separate updated checklists based on time-stamped database extracts for the genera Cyclamen, Galanthus, and Sternbergia, taking into account information contained in document PC26 Doc. 43.3 and agreements contained in summary record PC26 SR, as well as other available information, and report to the Plants Committee.*

***Directed to the Plants Committee***

**20.BB** *The Plants Committee shall advise the Secretariat on the updated checklists for the genera Cyclamen, Galanthus, and Sternbergia, and report its recommendations to the Conference of the Parties, including with regard to the adoption of the checklists as standard nomenclature reference in Resolution Conf. 12.11 (Rev. CoP20) on Standard nomenclature.*

14. Concerning the problems caused by homonym names and how best to deal with them on Species+, using *Dracaena marginata* as an example:
- a) At its 26th meeting, the Plants Committee recommended to add a note in the CITES Checklist and Species+ for *Dracaena marginata* Aiton, to alert users about the homonym name (*Dracaena marginata* Lam.) relating to a non-listed species. It was further recommended that: the wording of the note be clear to end-users of the database, and that the United Kingdom of Great Britain and Northern Ireland consult with its enforcement unit to assist in suggesting appropriate wording; and that a simple form of identification material be developed to distinguish the two species. The United Kingdom agreed to consult with the nomenclature specialist to refine and share some materials already developed to that end (PC26 SR).
  - b) The recommendation has been implemented and updates are included in CITES databases, as recommended.
15. Concerning the possibility of producing a standard nomenclature reference for the agarwood-producing genera *Aquilaria* and *Gyrinops*:
- a) At its 26th meeting, the Plants Committee recommended to support the development of a checklist for *Aquilaria* and *Gyrinops*. It was agreed that a phylogenetic study might be ideal, but that it could have huge funding implications. Therefore, it was suggested to obtain a time-stamped extract from the *Plants of the World Online* (POWO) database as an immediate measure, and to consider future decisions to produce an updated checklist that includes a phylogenetic study; and to present these in the nomenclature report at PC27 (see summary record PC26 SR).
  - b) In accordance with this recommendation, the nomenclature specialist has produced time-stamped database extracts for the two genera from the POWO database, which are respectively available in Annex 1 and Annex 2 to the present document for the consideration of the Plants Committee. These could be included as standard nomenclature references in Resolution Conf. 12.11 (Rev. CoP19) on *Standard nomenclature*.
  - c) The Secretariat also notes that it is aware of ongoing phylogenetic studies of these two genera in some agarwood range States. These studies could possibly form a starting point for compiling an overall phylogeny of these taxa.
  - d) To develop updated nomenclature checklists based on a clarified phylogenetic taxonomy, as recommended at PC26 based on findings presented in the review of the agarwood-producing genera *Aquilaria* spp. and *Gyrinops* spp. (PC26 Doc 27), draft decisions could read:

***Directed to the Secretariat, in consultation with the nomenclature specialist of the Plants Committee and range States and other Parties***

**20.AA** *The Secretariat shall, subject to external funding:*

- a) *commission a study and field work, to:*
  - i) *review existing databases for available data and information regarding the phylogenetic structure of the genera Aquilaria spp. and Gyrinops spp.;*
  - ii) *in collaboration with range States and other Parties, as appropriate and if not available otherwise, obtain representative sets of samples of agarwood specimens from all agarwood range States, that are suitable for phylogenetic analyses;*
  - ii) *undertake the necessary analyses to clarify the phylogeny of Aquilaria spp. and Gyrinops spp.; and*
  - iii) *in collaboration with the nomenclature specialist of the Plants Committee, propose an updated checklist of the two genera for the consideration of the Plants Committee.*

### **Directed to the Plants Committee**

**20.BB** *The Plants Committee shall advise the Secretariat on the updated checklists for the genera Aquilaria and Gyrinops and report its recommendations to the Conference of the Parties, including with regard to the adoption of the checklists as standard nomenclature references in Resolution Conf. 12.11 (Rev. CoP20) on Standard nomenclature.*

### **Directed to range States and other Parties**

**20.CC** *Range States and other Parties are invited to provide funding for the implementation of the study under Decision 20.AA, and to facilitate the collection and analysis of representative sets of samples of agarwood specimens from all range States, that are suitable for phylogenetic analyses, as appropriate.*

### Section 3: New flora nomenclature matters to be considered by the Plants Committee

#### 16. Concerning the nomenclature of *Beaucarnea*:

- a) There seems to be uncertainty amongst Parties as to whether two species (previously included in *Calibanus* but now widely treated as *Beaucarnea* species) are subject to CITES regulations. Based on robust molecular and morphological evidence the genus *Calibanus* was included in *Beaucarnea* by Rojas-Pina *et al.* (2014) [Rojas-Pina, V., Olsen, M.E., Alvaro-Cardenas, L.O. & Eguiarte, L.E. 2014. Molecular phylogenetics and morphology of *Beaucarnea* (Ruscaceae) as distinct from *Nolina*, and the submersion of *Calibanus* into *Beaucarnea*. *Taxon* 63(6): 1193–1211 (2014)].
- b) *Beaucarnea* was listed on Appendix II following a successful proposal at 17th meeting of the Conference of Parties (CoP17, Johannesburg, 2016; see proposal CoP17 Prop. 50). The proposal did not reference the Rojas-Pina *et al.* (2014) paper and made no mention of the two *Calibanus* species (*C. hookeri* and *C. glassianus*). Furthermore, *B. inermis* appears as an accepted name in the list of species in the proposal, whereas it was included in the synonymy of *B. recurvata* by Rojas-Pina *et al.* (2014). It is therefore interpreted that the proposal did not follow the taxonomy of Rojas-Pina *et al.* (2014) and did not include what is now *Beaucarnea hookeri* and *B. glassiana* (both endemic to Mexico).
- c) The two species that used to be in *Calibanus* share many morphological characters with *Beaucarnea* species, but are much smaller than the tree-like pony-tail palms. *Beaucarnea glassianus* is similar to *B. compacta* in having an aboveground globular to conical stem. While *B. hookeri* has an underground or semi-underground globular stem. These characters would make them popular for collectors and for the horticultural and pot-plant trade.
- d) The inclusion of *Calibanus* spp. in *Beaucarnea* (as *Beaucarnea hookeri* and *B. glassiana*) constitutes a substantive change from a CITES perspective, as it would change the intent of the original listing. If these two species should be regarded as CITES-listed, a formal amendment proposal would need to be submitted for consideration at a CoP meeting.
- e) *Beaucarnea* was indicated by the joint intersessional working group on nomenclature as one of the groups to be prioritised for the preparation of standard nomenclature references (see paragraph 7 of PC27 Doc. 40.2 / AC33 Doc. 47.3 on the *Development of a standardized global checklist of species*). The Rojas-Pina *et al.* (2014) article would be suitable for inclusion as a standard nomenclature reference in Resolution Conf. 12.11 (Rev. CoP19) to support the wider concept of *Beaucarnea* (i.e., including *Calibanus*) if that classification is preferred by Parties.

#### 17. Concerning the correct name for *Nardostachys grandiflora*:

- a) Himalayan spikenard is currently listed as *Nardostachys grandiflora* DC. on CITES Appendix II, but no standard reference for it is included in Resolution Conf. 12.11 (Rev. CoP19). The nomenclatural history of this species is complex and it has been confused with *Valeriana jatamansi* Jones in the past. An article by Mabberley & Noltie (2014) [Mabberley, M.B. & Noltie, H.J. 2014. A note on *Valeriana jatamansi* Jones (Caprifoliaceae s.l.). *Blumea* 59: 37–41] explains the nomenclatural history and clarifies the nomenclature of this species, showing that according to the rules of the *International Code of Nomenclature for algae, fungi, and plants* the correct name should be *Nardostachys jatamansi* (D.Don) DC.

- b) The CITES Checklist of Species and Species+ should be updated to reflect the correct name of this species, and Mabberley & Noltie (2014) should be proposed as a standard nomenclature reference.

18. Concerning a standard nomenclature reference for *Anacampseros* (= *Avonia*):

- a) *Anacampseros* spp. and *Avonia* spp. have been listed on Appendix II as higher taxon listings since 1975. There is currently no standard reference for these taxa in Resolution Conf. 12.11 (Rev. CoP19). Since the original listing of these genera, at least 20 new species and several infraspecific taxa were described. In 2010, based on molecular and morphological evidence, *Avonia* (together with *Talinaria* and *Xenia*) were included in the synonymy of *Anacampseros*. At the same time, a new family, Anacampserotaceae was described for these plants and their close relatives. [Nyffeler, R. & Egli, U. 2010. Disintegrating Portulacaceae: a new familial classification of the suborder Portulacineae (Caryophyllales) based on molecular and morphological data. *Taxon* 59(1): 227–240.]
- b) *Anacampseros coahuilensis* (endemic to Mexico) was treated as *Talinaria coahuilense* at the time that *Anacampseros* spp. and *Avonia* spp. were listed on CITES Appendix II. If this species is to be regarded as CITES-listed, it would constitute a substantive change and a formal amendment proposal would need to be submitted and accepted at a CoP meeting. *Anacampseros vulcanensis* (= *Xenia vulcanensis*) (endemic to Argentina) was only described in 1984 and would thus be included in the original intent of the listing as a split-off species (the genus *Xenia* was only segregated from *Anacampseros* in 1992). However, it needs to be decided if the inclusion of *Xenia salvadorensis* (endemic to El Salvador), which was described in 2006 and seem to lack a combination in *Anacampseros*, would be substantive or not.
- c) Because of the change in generic circumscription and the large amount of new species described since the original listing, there is a dire need for a standard reference covering these plants. *Anacampseros* (= *Avonia*) was indicated by the joint intersessional working group on nomenclature as one of the groups to be prioritised for the preparation of standard nomenclature references (see paragraph 7 of PC27 Doc. 40.3 / AC33 Doc. 47.3 on the *Development of a standardized global checklist of species*). While such a CITES Checklist is developed, a time-stamped download from a global nomenclature resource could be proposed as an interim standard reference.

Section 4: Overview of the proposed way forward

19. To facilitate consideration of the recommendations in Sections 1 to 3, the following table summarizes the proposed recommendations for all the flora nomenclature matters addressed in the present document:

Section	Flora nomenclature matter	Proposed way forward for consideration of the Plants Committee
Section 1	Cactaceae Checklist and its Supplement: Decisions 18.304 (Rev. CoP19) to 18.306 (Rev. CoP19)	a) agree that Decisions 18.304 (Rev. CoP19) to 18.306 (Rev. CoP19) have been implemented and can be proposed for deletion; b) recommend the adoption of the draft decisions in paragraph 7 b) of the present document;
Section 1	Production of a CITES Checklist for rosewoods ( <i>Dalbergia</i> spp.): Decisions 18.307 (Rev. CoP19) and 18.308 (Rev. CoP19)	c) agree that Decisions 18.307 (Rev. CoP19) and 18.308 (Rev. CoP19) can be proposed for deletion; d) note that any required revisions to the checklist can be coordinated under the provisions of Resolution Conf. 12.11 (Rev. CoP19);
Section 1	Nomenclature for yews ( <i>Taxus</i> spp.): Decisions 19.290 and 19.291	e) recommend the continuation of Decisions 19.290 and 19.291 at CoP20, aiming for a final checklist on <i>Taxus</i> spp. ready for consideration at CoP21;
Section 2	<i>Dipteryx oleifera</i> (PC26 follow up)	f) note that no further action is needed, as per paragraph 10 of the present document;
Section 2	<i>Bulnesia sarmientoi</i> (PC26 follow up)	g) request UNEP-WCMC to amend the database entries for the species in the CITES Checklist Database to consider <i>Gonopterodendron sarmientoi</i> as the accepted name, and to consider <i>Bulnesia sarmientoi</i> and <i>Plectrocarpa sarmientoi</i> as synonyms;

Section	Flora nomenclature matter	Proposed way forward for consideration of the Plants Committee
Section 2	<i>Turbinicarpus</i> × <i>roseiflorus</i> (PC26 follow up)	h) recommend addressing outstanding issues as part of the terms of reference of a revised nomenclature checklist for the Cactaceae family;
Section 2	<i>Cyclamen</i> (PC26 follow up)	i) recommend the adoption of the draft decisions in paragraph 13 b) of the present document;
Section 2	Problems with homonym names, using <i>Dracaena marginata</i> as an example (PC26 follow up)	j) note that the matter has been addressed and resolved;
Section 2	<i>Aquilaria</i> and <i>Gyrinops</i> (PC26 follow up)	k) consider and, if appropriate, recommend the adoption of the time-stamped database extracts in Annexes 1 and 2 as new standard nomenclature references for adoption at CoP20; l) as a complement to the above, recommend the adoption of the draft decisions in paragraph 15 d) of the present document;
Section 3	Nomenclature of <i>Beaucarnea</i> (new item)	m) consider whether <i>Beaucarnea hookeri</i> and <i>B. glassiana</i> need to be included in the higher taxon listing in Appendix II, and if appropriate, request range States to submit an amendment proposal to that effect for consideration at CoP20; n) consider the suitability of Rojas-Pina <i>et al.</i> (2014) as a standard nomenclature reference as recommended in paragraph 16 e) for consideration of the Conference of the Parties at CoP20 via a revision to Resolution Conf. 12.11 (Rev. CoP19);
Section 3	Correct name for <i>Nardostachys grandiflora</i> (new item)	o) request UNEP-WCMC to amend the database entries for the species in the <i>CITES Checklist Database</i> to consider <i>Nardostachys jatamansi</i> as the accepted name, and to consider <i>N. grandiflora</i> as a synonym; p) consider the suitability of Mabberley & Noltie (2014) as a suitable standard nomenclature reference as recommended in paragraph 17 b) of this document for consideration of the Conference of the Parties at CoP20 via a revision to Resolution Conf. 12.11 (Rev. CoP19);
Section 3	Standard reference for <i>Anacampseros</i> (= <i>Avonia</i> ) (new item)	q) consider and make recommendations regarding the substantive/non-substantive nature of the inclusion of <i>Xenia</i> spp. and <i>Talinaria</i> spp. in <i>Anacampseros</i> as explained in paragraph 18 b) of this document; r) consider and if appropriate recommend the creation of a time-stamped database extract as an interim standard nomenclature references for consideration of the Conference of the Parties at CoP20 via a revision to Resolution Conf. 12.11 (Rev. CoP19); s) consider and if appropriate recommend the development of a standard reference for consideration at CoP21 and propose draft decisions to that effect.

### Recommendations

20. The Plants Committee is invited to consider the proposed way forward for all nomenclature matters for flora addressed in the present document, as summarized in Section 4 (paragraph 19).



# Plants of the World Online

(extract made on 13/02/2024)

## ***Aquilaria*** Lam., Encycl. 2: 610 (1788) [Thymelaeaceae]

Assam to S. China and New Guinea. 36 CHC CHH CHS 40 ASS BAN EHM 41 CBD  
LAO MYA THA VIE 42 BOR MLY MOL PHI SUM 43 NWG.

21 Species

*Agallochum* Lam., Encycl. 1: 48 (1783).

*Aloexylum* Lour., Fl. Cochinch.: 267 (1790).

*Ophispermum* Lour., Fl. Cochinch.: 280 (1790).

*Gyrinopsis* Decne., Ann. Sci. Nat., Bot., sér. 2, 19: 41 (1843). *Decaisnella* Kuntze,  
Revis. Gen. Pl. 2: 581 (1891), nom. illeg.

*Aquilariella* Tiegh., Bull. Soc. Bot. France 40: 77 (1893).

***Aquilaria apiculata*** Merr., Philipp. J. Sci. 20: 411 (1922).

Philippines (Mindanao). 42 PHI. Phan.

***Aquilaria baillonii*** Pierre ex Lecomte, Fl. Indo-Chine 5: 179 (1915).

Cambodia. 41 CBD LAO VIE. Phan.

***Aquilaria banaense*** P.H.Hô, Bull. Mus. Natl. Hist. Nat., B, Adansonia 8: 241 (1986).

Vietnam. 41 VIE. Phan.

***Aquilaria beccariana*** Tiegh., Bull. Soc. Bot. France 40: 77 (1893).

W. Malesia. 42 BOR MLY SUM. Phan.

*Aquilaria grandifolia* Domke, Notizbl. Bot. Gart. Berlin-Dahlem 11: 348  
(1932). *Gyrinopsis grandifolia* (Domke) Quisumb., J. Arnold Arbor. 27: 406 (1946).

*Aquilaria cumingiana* var. *parvifolia* Airy Shaw, Bull. Misc. Inform. Kew 1940: 261  
(1940).

***Aquilaria brachyantha*** (Merr.) Hallier f., Meded. Rijks-Herb. 44: 16 (1922).

Philippines (Luzon). 42 PHI. Nanophan.

*Pittosporum ferrugineum* var. *filarium* DC., Prodr. 1: 246 (1824).

\* *Gyrinopsis brachyantha* Merr., Philipp. J. Sci., C 7: 313 (1912).

***Aquilaria citrinicarpa*** (Elmer) Hallier f., Meded. Rijks-Herb. 44: 18 (1922).

Philippines (Mindanao). 42 PHI. Phan.

\* *Gyrinopsis citrinicarpa* Elmer, Leafl. Philipp. Bot. 5: 1631 (1913).

***Aquilaria crassna*** Pierre ex Lecomte, Bull. Soc. Bot. France 61: 411 (1914 publ. 1915).

Indo-China. 41 CBD LAO THA VIE. Phan.

*Aquilaria crasna* Pierre, Fl. Forest. Cochinch.: t. 285 (1899), not validly publ.

***Aquilaria cumingiana*** (Decne.) Ridl., J. Straits Branch Roy. Asiat. Soc. 35: 80 (1901).

S. Borneo, Philippines, Maluku. 42 BOR MOL PHI. Phan.

\* *Gyrinopsis cumingiana* Decne., Ann. Sci. Nat., Bot., sér. 2, 19: 41 (1843). *Decaisnella cumingiana* (Decne.) Kuntze, Revis. Gen. Pl. 2: 581 (1891).

*Gyrinopsis cumingiana* var. *pubescens* Elmer, Leafl. Philipp. Bot. 5: 1629 (1913). *Aquilaria pubescens* (Elmer) Hallier f., Meded. Rijks-Herb. 44: 18 (1922).

*Gyrinopsis pubifolia* Quisumb., J. Arnold Arbor. 27: 406 (1946).

***Aquilaria decemcostata*** Hallier f., Meded. Rijks-Herb. 44: 17 (1922).

Philippines (Luzon). 42 PHI. Phan.

***Aquilaria filaria*** (Oken) Merr., J. Arnold Arbor. 31: 283 (1950).

E. Philippines to W. New Guinea. 42 MOL PHI 43 NWG. Phan.

\* *Pittosporum filarium* Oken, Allg. Naturgesch. 3: 1299 (1841).

*Aquilaria tomentosa* Gilg, Bot. Jahrb. Syst. 28: 145 (1900).

*Gyrinopsis acuminata* Merr., Philipp. J. Sci. 17: 294 (1920 publ. 1921). *Aquilaria acuminata* (Merr.) Quisumb., J. Arnold Arbor. 27: 403 (1946).

***Aquilaria hirta*** Ridl., J. Straits Branch Roy. Asiat. Soc. 35: 78 (1901).

Pen. Thailand to E. Sumatera. 41 THA 42 MLY SUM. Phan.

*Aquilaria moszkowskii* Gilg, Notizbl. Königl. Bot. Gart. Berlin 5: 84 (1908).

***Aquilaria khasiana*** Hallier f., Meded. Rijks-Herb. 44: 18 (1922).

Assam (S. Meghalaya). 40 ASS. Nanophan. or phan.

***Aquilaria malaccensis*** Lam., Encycl. 1: 49 (1783). *Agallochum malaccense* (Lam.) Kuntze, Revis. Gen. Pl. 1: 283 (1891). *Aquilariella malaccensis* (Lam.) Tiegh., Bull. Soc. Bot. France 40: 77 (1893).

Bangladesh to W. & C. Malesia. 40 ASS BAN EHM 41 MYA THA VIE 42 BOR MLY PHI SUM. Phan.

*Agallochum officinarum* Lam., Encycl. 1: 48 (1783).

*Agallochum praestantissimum* Lam., Encycl. 1: 48 (1783).

*Agallochum sylvestre* Lam., Encycl. 1: 49 (1783).

*Aquilaria ovata* Cav., Diss. 7: 377 (1789).

*Aloexylum agallochum* Lour., Fl. Cochinch.: 267 (1790). *Aquilaria agallocha* (Lour.) Roxb. ex Finl., Miss. Siam Hué: 94 (1826).

*Aloexylum verum* Lour., Fl. Cochinch.: 267 (1790).

*Aquilaria secundaria* DC., Prodr. 2: 5 (1825).

*Cynometra agallocha* Spreng., Syst. Veg., ed. 16. 2: 327 (1825).

*Aquilaria agallocha* Roxb., Fl. Ind., ed. 1832. 2: 422 (1832), nom. illeg.

*Aquilaria moluccensis* Oken, Allg. Naturgesch. 3(3): 1513 (1841), orth. var.

***Aquilaria microcarpa*** Baill., Adansonia 11: 304 (1875). *Aquilariella microcarpa* (Baill.) Tiegh., Bull. Soc. Bot. France 40: 77 (1893).

W. Malesia. 42 BOR MLY SUM. Phan.

*Aquilariella borneensis* Tiegh., Bull. Soc. Bot. France 40: 77 (1893). *Aquilaria borneensis* (Tiegh.) Gilg in H.G.A. Engler & K.A.E. Prantl, Nat. Pflanzenfam. 3(6a): 224 (1894).

***Aquilaria parvifolia*** (Quisumb.) Ding Hou, Fl. Males. 6: 12 (1960).

Philippines (Luzon). 42 PHI. Nanophan.

\* *Gyrinopsis parvifolia* Quisumb., J. Arnold Arbor. 27: 405 (1946).

***Aquilaria rostrata*** Ridl., Fl. Malay Penins. 3: 148 (1924).

Pen. Malaysia (Pahang, Terengganu). 42 MLY. Nanophan. or phan.

***Aquilaria rugosa*** K.Le-Cong & Kessler, Blumea 50: 138 (2005).

Vietnam. 41 VIE. Phan.

***Aquilaria sinensis*** (Lour.) Spreng., Syst. Veg., ed. 16. 2: 356 (1825).

SE. China to Hainan. 36 CHH CHS (41) vie. Phan.

\* *Ophispermum sinense* Lour., Fl. Cochinch.: 281 (1790). *Aquilaria ophispermum* Poir. in G.-F.Cuvier, Dict. Sci. Nat., ed. 2. 18: 161 (1821), nom. superfl. *Agallochum sinense* (Lour.) Kuntze, Revis. Gen. Pl. 1: 283 (1891).

*Aquilaria chinensis* Spreng., Syst. Veg., ed. 16. 2: 356 (1825), orth. var.

*Aquilaria malaccensis* Benth., Hooker's J. Bot. Kew Gard. Misc. 5: 195 (1853), nom. illeg.

*Aquilaria grandiflora* Benth., Fl. Hongk.: 297 (1861). *Agallochum grandiflorum* (Benth.) Kuntze, Revis. Gen. Pl. 1: 283 (1891).

***Aquilaria subintegra*** Ding Hou, Blumea 12: 286 (1964).

Pen. Thailand. 41 THA. Nanophan.

***Aquilaria urdanetensis*** (Elmer) Hallier f., Meded. Rijks-Herb. 44: 16 (1922).

Philippines (Mindanao: Mt. Urdaneta). 42 PHI. Nanophan. or phan.

\* *Gyrinopsis urdanetensis* Elmer, Leafl. Philipp. Bot. 5: 1630 (1913).

***Aquilaria yunnanensis*** S.C.Huang, Acta Bot. Yunnan. 7: 277 (1985).

China (Yunnan). 36 CHC. Phan.

## Synonyms:

- Aquilaria acuminata* (Merr.) Quisumb. === ***Aquilaria filaria*** (Oken) Merr.
- Aquilaria agallocha* (Lour.) Roxb. ex Finl. === ***Aquilaria malaccensis*** Lam.
- Aquilaria agallocha* Roxb. === ***Aquilaria malaccensis*** Lam.
- Aquilaria bancana* Miq. === ***Gonystylus bancanus*** (Miq.) Kurz
- Aquilaria borneensis* (Tiegh.) Gilg === ***Aquilaria microcarpa*** Baill.
- Aquilaria caudata* (Gilg) Hallier f. === ***Gyrinops caudata*** (Gilg) Domke
- Aquilaria chinensis* Spreng. === ***Aquilaria sinensis*** (Lour.) Spreng.
- Aquilaria crasna* Pierre === ***Aquilaria crasna*** Pierre ex Lecomte
- Aquilaria cumingiana* var. *parvifolia* Airy Shaw === ***Aquilaria beccariana*** Tiegh.
- Aquilaria grandiflora* Benth. === ***Aquilaria sinensis*** (Lour.) Spreng.
- Aquilaria grandifolia* Domke === ***Aquilaria beccariana*** Tiegh.
- Aquilaria macrophylla* Miq. === ***Gonystylus macrophyllus*** (Miq.) Airy Shaw
- Aquilaria malaccensis* Benth. === ***Aquilaria sinensis*** (Lour.) Spreng.
- Aquilaria moluccana* (Miq.) Hallier f. === ***Gyrinops moluccana*** (Miq.) Baill.
- Aquilaria moluccensis* Oken === ***Aquilaria malaccensis*** Lam.
- Aquilaria moszkowskii* Gilg === ***Aquilaria hirta*** Ridl.
- Aquilaria ophispermum* Poir. === ***Aquilaria sinensis*** (Lour.) Spreng.
- Aquilaria ovata* Cav. === ***Aquilaria malaccensis*** Lam.
- Aquilaria pentandra* Blanco === ***Pittosporum pentandrum*** (Blanco) Merr.
- Aquilaria podocarpa* (Gilg) Hallier f. === ***Gyrinops podocarpa*** (Gilg) Domke
- Aquilaria pubescens* (Elmer) Hallier f. === ***Aquilaria cumingiana*** (Decne.) Ridl.
- Aquilaria secundaria* DC. === ***Aquilaria malaccensis*** Lam.
- Aquilaria tomentosa* Gilg === ***Aquilaria filaria*** (Oken) Merr.
- Aquilaria versteegii* (Gilg) Hallier f. === ***Gyrinops versteegii*** (Gilg) Domke
- Aquilaria walla* (Gaertn.) Hallier f. === ***Gyrinops walla*** Gaertn.

**Synonyms in other genera:**

***Agallochum*** Lam. [Thymelaeaceae]

*Agallochum grandiflorum* (Benth.) Kuntze === ***Aquilaria sinensis*** (Lour.) Spreng.

*Agallochum malaccense* (Lam.) Kuntze === ***Aquilaria malaccensis*** Lam.

*Agallochum officinarum* Lam. === ***Aquilaria malaccensis*** Lam.

*Agallochum praestantissimum* Lam. === ***Aquilaria malaccensis*** Lam.

*Agallochum sinense* (Lour.) Kuntze === ***Aquilaria sinensis*** (Lour.) Spreng.

*Agallochum sylvestre* Lam. === ***Aquilaria malaccensis*** Lam.

***Aloexylum*** Lour. [Thymelaeaceae]

*Aloexylum agallochum* Lour. === ***Aquilaria malaccensis*** Lam.

*Aloexylum verum* Lour. === ***Aquilaria malaccensis*** Lam.

***Aquilariella*** Tiegh. [Thymelaeaceae]

*Aquilariella borneensis* Tiegh. === ***Aquilaria microcarpa*** Baill.

*Aquilariella malaccensis* (Lam.) Tiegh. === ***Aquilaria malaccensis*** Lam.

*Aquilariella microcarpa* (Baill.) Tiegh. === ***Aquilaria microcarpa*** Baill.

***Cynometra*** L. [Fabaceae]

*Cynometra agallocha* Spreng. === ***Aquilaria malaccensis*** Lam.

***Decaisnella*** Kuntze [Thymelaeaceae]

*Decaisnella cumingiana* (Decne.) Kuntze === ***Aquilaria cumingiana*** (Decne.) Ridl.

**Gyrinopsis** Decne. [Thymelaeaceae]

*Gyrinopsis acuminata* Merr. === ***Aquilaria filaria*** (Oken) Merr.

*Gyrinopsis brachyantha* Merr. === ***Aquilaria brachyantha*** (Merr.) Hallier f.

*Gyrinopsis citrinicarpa* Elmer === ***Aquilaria citrinicarpa*** (Elmer) Hallier f.

*Gyrinopsis cumingiana* Decne. === ***Aquilaria cumingiana*** (Decne.) Ridl.

*Gyrinopsis cumingiana* var. *pubescens* Elmer === ***Aquilaria cumingiana*** (Decne.) Ridl.

*Gyrinopsis grandifolia* (Domke) Quisumb. === ***Aquilaria beccariana*** Tiegh.

*Gyrinopsis parvifolia* Quisumb. === ***Aquilaria parvifolia*** (Quisumb.) Ding Hou

*Gyrinopsis pubifolia* Quisumb. === ***Aquilaria cumingiana*** (Decne.) Ridl.

*Gyrinopsis urdanetensis* Elmer === ***Aquilaria urdanetensis*** (Elmer) Hallier f.

**Ophispermum** Lour. [Thymelaeaceae]

*Ophispermum sinense* Lour. === ***Aquilaria sinensis*** (Lour.) Spreng.

**Pittosporum** Banks ex Gaertn. [Pittosporaceae]

*Pittosporum ferrugineum* var. *filarium* DC. === ***Aquilaria brachyantha*** (Merr.) Hallier f.

*Pittosporum filarium* Oken === ***Aquilaria filaria*** (Oken) Merr.

# Plants of the World Online

(extract made on 13/02/2024)

## **Gyrinops** Gaertn., Fruct. Sem. Pl. 2: 276 (1791) [Thymelaeaceae]

Sri Lanka to New Guinea. 40 IND SRL 41 LAO THA 42 LSI MOL SUL 43 NWG.

9 Species

*Lachnolepis* Miq., Ann. Mus. Bot. Lugduno-Batavi 1: 132 (1863).

*Brachythalamus* Gilg, Bot. Jahrb. Syst. 28: 146 (1899).

***Gyrinops caudata*** (Gilg) Domke, Notizbl. Bot. Gart. Berlin-Dahlem 11: 349 (1932).

W. New Guinea. 43 NWG. Nanophan. or phan.

\* *Brachythalamus caudatus* Gilg, Bot. Jahrb. Syst. 28: 146 (1900). *Aquilaria caudata* (Gilg) Hallier f., Meded. Rijks-Herb. 44: 19 (1922).

***Gyrinops decipiens*** Ding Hou, Fl. Males. 6: 41 (1960).

Sulawesi. 42 SUL. Nanophan. or phan.

***Gyrinops ledermannii*** Domke, Notizbl. Bot. Gart. Berlin-Dahlem 11: 349 (1932).

W. New Guinea. 43 NWG. Nanophan.

***Gyrinops moluccana*** (Miq.) Baill., Adansonia 11: 326 (1875).

Maluku. 42 MOL. Nanophan.

\* *Lachnolepis moluccana* Miq., Ann. Mus. Bot. Lugduno-Batavi 1: 132 (1863). *Aquilaria moluccana* (Miq.) Hallier f., Meded. Rijks-Herb. 44: 19 (1922).

***Gyrinops podocarpa*** (Gilg) Domke, Notizbl. Bot. Gart. Berlin-Dahlem 11: 349 (1932).

W. New Guinea. 43 NWG. Nanophan.

\* *Brachythalamus podocarpus* Gilg, Bot. Jahrb. Syst. 28: 146 (1900). *Aquilaria podocarpa* (Gilg) Hallier f., Meded. Rijks-Herb. 44: 19 (1922).



***Gyrinops salicifolia*** Ridl., Trans. Linn. Soc. London, Bot. 9: 145  
(1916). *Gyrinopsis salicifolia* (Ridl.) Quisumb., J. Arnold Arbor. 27: 407 (1946).

W. New Guinea. 43 NWG. Nanophan.

***Gyrinops versteegii*** (Gilg) Domke, Notizbl. Bot. Gart. Berlin-Dahlem 11: 349 (1932).

Lesser Sunda Is. to W. New Guinea. 42 LSI SUL 43 NWG. Nanophan. or phan.

\* *Brachythalamus versteegii* Gilg, Nova Guinea 8: 412  
(1910). *Aquilaria versteegii* (Gilg) Hallier f., Meded. Rijks-Herb. 44: 19 (1922).

***Gyrinops vidalii*** P.H.Hô, Bull. Mus. Natl. Hist. Nat., B, Adansonia 8: 242 (1986).

NE. Thailand to Laos. 41 LAO THA. Phan.

***Gyrinops walla*** Gaertn., Fruct. Sem. Pl. 2: 276 (1791). *Aquilaria walla* (Gaertn.) Hallier  
f., Meded. Rijks-Herb. 44: 19 (1922).

SW. India, Sri Lanka. 40 IND SRL. Phan.

#### **Synonyms in other genera:**

##### ***Aquilaria*** Lam. [Thymelaeaceae]

*Aquilaria caudata* (Gilg) Hallier f. === ***Gyrinops caudata*** (Gilg) Domke

*Aquilaria moluccana* (Miq.) Hallier f. === ***Gyrinops moluccana*** (Miq.) Baill.

*Aquilaria podocarpa* (Gilg) Hallier f. === ***Gyrinops podocarpa*** (Gilg) Domke

*Aquilaria versteegii* (Gilg) Hallier f. === ***Gyrinops versteegii*** (Gilg) Domke

*Aquilaria walla* (Gaertn.) Hallier f. === ***Gyrinops walla*** Gaertn.

##### ***Brachythalamus*** Gilg [Thymelaeaceae]

*Brachythalamus caudatus* Gilg === ***Gyrinops caudata*** (Gilg) Domke

*Brachythalamus podocarpus* Gilg === ***Gyrinops podocarpa*** (Gilg) Domke

*Brachythalamus versteegii* Gilg === ***Gyrinops versteegii*** (Gilg) Domke

***Gyrinopsis*** Decne. [Thymelaeaceae]

*Gyrinopsis salicifolia* (Ridl.) Quisumb. === ***Gyrinops salicifolia*** Ridl.

***Lachnolepis*** Miq. [Thymelaeaceae]

*Lachnolepis moluccana* Miq. === ***Gyrinops moluccana*** (Miq.) Baill.