Taiwania, **52**(3): 247-252, 2007

A Proposal for the Amendment of Article 53.3 Ex. 9 (ICBN, Vienna Code, 2006)

Tseng-Chieng Huang[(1)], Ming-Jou Wu[(2)], Shing-Fan Huang[(3,4)]

(Manuscript received 20 May, 2007; accepted 10 July, 2007)

ABSTRACT: There are 167 taxa listed in the Flora of Taiwan, 2nd edition, with epithets of [formosa] and its derivatives, and [formosensis] in the different taxonomic ranks which literaturaly designate the island of Taiwan. Namely these are 2 formosae, 103 formosana, 42 formosanum, 11 formosanus, 1 formosense and 8 formosensis. In order to avoid confusion in using the epithets of formosae, formosana, formosanum, formosanus, formosense and formosensis for Formosan (Taiwan) plants under the same genus, we propose to amend Art. 53.3 Ex. 9 with addition of a phrase [formosae, formosana, formosanum, formosanus, formosense and formosensis for native and endemic plants on Taiwan only] to the end of the sentence of Article 53.3 Ex. 9 of International Code of Botanical Nomenclature (ICBN, Vienna Code, 2006).

KEY WORDS: nomenclature, epithets formosa and derivatives, amend, ICBN, Art. 53.3 Ex. 9.

INTRODUCTION

The word [Formosa] is well known as a geographical name for Taiwan Island by westerners for a long time since [Formosa] was used by a Portuguese explorer. [Formosa] is an adjective meaning "beautiful" in Latin, and [formosensis] is a geographical word for the Island of Taiwan in Latin. Hence, they are two words with different meaning. The epithet [formosa] or its derivatives used as a name for native or endemic plants of Taiwan (Boufford et al., 2003, Appendix 1) literally designate the Island of Taiwan by Taiwanese and Japanese taxonomists and by most western botanists, e.g., *Poa formosae* Ohwi. However, the epithet [formosa] or its derivatives used in naming plants outside of Taiwan indicate the word "beautiful" by western taxonomists, e.g., *Lespedeza thunbergii* (DC.) Nakai subsp. *formosa* (Vogel) H. Ohashi. In Article 53.3 Example 9 of the International Code of Botanical Nomenclature states "Epithets so similar that they are likely to be confused if combined under the same generic or specific name: chinensis and sinensis; ceylanica and zelanica; napaulensis, nepalensis, and nipalensis; polyanthemos and polyanthemus; macrostachys and macrostachyus; heteropus and heteropodus; poikilantha and poikilanthes; pteroides and pteroideus; trinervis and trinervius; macrocarpon and macrocarpum; trachycaulum and trachycaulon" (McNeill et al., 2006). In order to avoid the possible confusion regarding epithet [formosa] in Taiwan's plants, the survey of taxa applied with [formosa] and its derivatives were undertaken, and we proposed to amend the Article 53.3 Ex. 9 of international code (Vienna Code, 2006) of botanical nomenclature.

MATERIALS AND METHODS

A checklist (Appendix 1) with epithet [formosa] and its derivatives including formosae, formosana, formosanum, formosanus, formosense, formosensis was compiled by checking the following two literatures: Flora of Taiwan 2nd ed. (Bufford et al., 2003) and International Plant Names Index (2004), which includes the data sources of Index Kewensis, Gray Card Index and Australian Plant Name Index: By searching the internet website: http://www.ipni.org.

RESULTS AND DISCUSSION

Totally there are 2 formosae, 103 formosana, 42 formosanum, 11 formosanus, 1 formosense and 8 formosensis listed in the Flora of Taiwan, 2nd edition (Tables 1 & 2). All these words designate the Island

1. Institute of Plant Biology, National Taiwan University, 1, Sec. 4, Roosevelt Rd., Taipei 106, Taiwan.
2. Graduate Institute of Biological Resources and Technology, National Hualien University of Education, 123, Huahsi Road, Hualien 970, Taiwan.
3. Department of Applied Science, National Hsinchu University of Education, 521, Nanda Road, Hsinchu 300, Taiwan.
4. Corresponding author. Email: sfhuang4898@mail.nhcue.edu.tw

臺灣大學學術期刊資料庫

Table 1. Number of different epithets in different generic and infrageneric ranks and in different classes (Boufford et al., 2003).

taxa \ class	Pteridophytes	Gymnosperms	Dicots	Monocots	Total no.
species	11	3	83	36	133
subspecies	0	0	6	1	7
variety	1	4	17	4	26
forms	0	0	1	0	1
Total no.	12	7	107	41	167

Table 2. Number of different epithets in different classes (Boufford et al., 2003).

epithet \ class	Pteridophytes	Gymnosperms	Dicots	Monocots	Total no.
formosae	1	0	0	1	2
formosana	5	6	70	22	103
formosanum	6	0	25	11	42
formosanus	0	0	5	6	11
formosense	0	0	1	0	1
formosensis	0	1	6	1	8
Total no.	12	7	107	41	167

of Taiwan. Among the list, *Elaeagnus formosana* Nakai published in 1916 and *Elaeagnus formosensis* Hatusima published in 1952 could be confused since they are all derived from [formosa] designating the Island of Taiwan.

In order to avoid confusion in the application of the epithets, including formosae, formosana, formosanum, formosanus, formosense and formosensis, for Formosan (Taiwan) plants under the same genus, we propose to amend the Article 53.3 Examples 9 as follows: “Epithets so similar that they are likely to be confused if combined under the same generic or specific name: chinensis and sinensis; ceylanica and zelanica; napaulensis, nepalensis, and nipalensis; polyanthemos and polyanthemus; macrostachys and macrostachyus; heteropus and heteropodus; poikilantha and poikilanthes; pteroides and pteroideus; trinervis and trinervius; macrocarpon and macrocarpum; trachycaulum and trachycaulon; formosae, formosana, formosanum, formosanus, formosense and formosensis for native and endemic plants of Taiwan only”.

The concise statement of this article will be submitted to *Taxon* as a formal proposal for consideration by the Nomenclature Section of the XVIII International Botanical Congress in Melborne, Australia in August, 2011.

ACKNOWLEDGEMENTS

The advice from Prof. Robert Folger Thorne (RSAB) is greatly appreciated. To Ms. Shiu-Yu Yang, we are thankful for her compiling and checking the list of epithets.

LITERATURE CITED

Boufford, D., E. H. Ohashi, T.-C. Huang, C.-F. Hsieh, J.-L. Tsai, K.-C. Yang, C.-I Peng, C.-S. Kuoh and A. Hsiao. 2003. A Checklist of the Vascular Plants of Taiwan. In: Huang, T.-C. et al. (eds.), Flora of Taiwan, 2nd ed. **6**: 18-139. Editorial Committee, Dept. Bot., NTU, Taipei, Taiwan.

McNeill, J., F. R. Barrie, H. M. Burdet, V. Demoulin, D. L. Hawksworth, K. Marhold, D. H. Nicolson, J. Prado, P. C. Silva, J. E. Skog, N. J. Turland, and J. H. Wiersema. 2006. International Code of Botanical Nomenclature (Vienna Code), adopted by the Seventeenth International Botanical Congress Vienna, Austria, July, 2005. A. R. G. Gantner Verlag KG [Regnum Vegetabile volume 146].

The International Plant Names Index. 2004. Published on the Internet http://www.ipni.org [accessed 2 May, 2007].

臺灣大學學術期刊資料庫

Appendix 1. A list of Taiwan's vascular plants with epithets related to [Formosa] and its derivatives compiled from the Flora of Taiwan, 2nd edition (Boufford et al., 2003). **Boldface** as accepted names and *italic* as synonyms.

I. PTERIDOPHYTA

Adiantum formosanum Tagawa
Antrophyum formosanum Hieron.
Asplenium formosae H. Christ
Botrychium formosanum Tagawa sensu C. M. Kuo
Diplazium formosanum Rosenst.
Dryopteris formosana (H. Christ) C. Chr.
Loxogramme formosana Nakai
Plagiogyria formosana Nakai
Polypodium formosanum Baker
Polystichum formosanum Rosenst.
Pteris formosana Baker
Woodwardia orientalis Sw. var. **formosana** Rosenst.

II. GYMNOSPERMA

Amentotaxus formosana Li
Calocedrus macrolepis Kurz var. **formosana** (Florin) Cheng & Fu
Chamaecyparis formosensis Matsum.
Chamaecyparis obtusa Siebold & Zucc. var. **formosana** (Hayata) Rehder
Juniperus formosana Hayata
Keteleeria davidiana (Franchet) Beissner var. **formosana** Hayata
Tsuga chinensis (Franch.) Pritz. ex Diels var. **formosana** (Hayata) Li & H. Keng

IIIA. DICOTYLEDONS

Acer buergerianum Miq. var. **formosanum** (Hayata) Sasaki
Aconitum fukutomei Hayata var. **formosanum** (Tamura) T. Y. A. Yang & T. C. Huang
Adenia formosana Hayata
Adinandra formosana Hayata var. **obtusissima** (Hayata) H. Keng
Aglaia formosana Hayata
Alnus formosana (Burkill ex Forbes & Hemsl.) Makino
Angelica dahurica (Fisch.) Benth. & Hook. var. **formosana** (Boiss.) K. Y. Yen et al.
Arabis formosana (Masam. ex S. F. Huang) T. S. Liu & S. S. Ying
Argyreia formosana Ishigami ex Yamaz.
Aster formosanus Hayata
Astronia formosana Kaneh
Begonia formosana (Hayata) Masam.
Begonia formosana (Hayata) Masam. f. **albomaculata** T. S. Liu & M. J. Lai
Berchemia formosana C. K. Schneid.
Boehmeria formosana Hayata
Callicarpa formosana Rolfe
Callicarpa formosana Rolfe var. **glabrata** T. T. Chen, S. M. Chaw & Yuen P. Yang
Callicarpa formosana Rolfe var. **longifolia** Suzuki
Camellia sinensis (L.) Kuntze f. **formosensis** Kitam.
Capparis sikkimensis Kurz subsp. **formosana** (Hemsl.) Jacobs
Cardiandra formosana Hayata
Castanopsis formosana (Skan) Hayata
Celtis formosana Hayata
Cerastium formosanum Ohwi
Chenopodium formosanum Koidz.
Chrysosplenium lanuginosum Hook. f. & Thomson var. **formosanum** (Hayata) H. Hara
Clematis formosana Kuntze
Cnidium monnieri (L.) Gusson var. **formosanum** (Yabe) Kitag.
Cochlearia formosana Hayata
Comanthosphace formosana Ohwi
Crateva adansonii DC. subsp. **formosensis** Jacobs
Cuscuta japonica Choisy var. **formosana** (Hayata) Yunck.
Cynanchum formosanum (Maxim.) Hemsl. ex Forbes & Hemsl.
Dischidia formosana Maxim.
Elaeagnus formosana Nakai
Elaeagnus formosensis Hatus sensu T. C. Huang
Entada pursaetha DC. var. **formosana** (Kaneh.) F. C. Ho
Euchresta formosana (Hayata) Ohwi
Euphorbia formosana Hayata

臺灣大學學術期刊資料庫

Excoecaria formosana (Hayata) Hayata
Farfugium japonicum (L.) Kitam. var. **formosanum** (Hayata) Kitam
Ficus formosana Maxim.
Ficus formosana Maxim. f. **shimadae** Hayata
Galium formosense Ohwi
Gentiana davidii Franch. var. **formosana** (Hayata) T. N. Ho
Glycine max (L.) Merr. subsp. **formosana** (Hosok.) Tateishi & H. Ohashi
Gynura divaricata (L.) DC. subsp. **formosana** (Kitam.) F. G. Davies
Hedera rhombea (Miq.) Bean var. **formosana** (Nakai) H. L. Li
Helicia formosana Hemsl
Heliotropium formosanum I. M. Johnst.
Helwingia japonica (Thunb.) Dietr. subsp. **formosana** (Kaneh. & Sasaki) H. Hara & S. Kuros.
Hypericum formosanum Maxim.
Ilex formosana Maxim.
Lasianthus formosensis Matsum.
Lepidagathis formosensis C. B. Clarke ex Hayata
Liquidambar formosana Hance
Mallotus paniculatus (Lam.) Müll. Arg. var. **formosanus** (Hayata) Hurus.
Marsdenia formosana Masam.
Medinilla formosana Hayata
Michelia compressa (Maxim.) Sargent var. **formosana** Kaneh.
Mitella formosana (Hayata) Masam.
Nemosenecio formosanus (Kitam.) B. Nord.
Notoseris formosana (Kitam.) C. Shih
Ormosia formosana Kaneh.
Oxalis acetosella L. subsp. **griffithii** (Edgew. & Hook. f.) H. Hara var. **formosana** S. F. Huang & T. C. Huang
Pachycentria formosana Hayata
Palaquium formosanum Hayata
Paraphlomis formosana (Hayata) T. H. Hsieh & T. C. Huang
Pasania formosana (Skan ex Forbes & Hemsl.) Schottky
Patrinia formosana Kitam.
Peucedanum formosanum Hayata
Phoebe formosana (Hayata) Hayata
Pogostemon formosanus Oliv.
Reevesia formosana Sprague
Rhamnus formosana Matsum.
Rhododendron formosanum Hemsl.
Rhynchotechum formosanum Hatus.
Ribes formosanum Hayata
Rubus formosensis Kuntze
Salvia formosana (Murata) Yamaz.
Salvia formosana (Murata) Yamaz. var. **matsudae** (Kudo) T. C. Huang & J. T. Wu
Salvia nipponica Miq. var. **formosana** (Hayata) Kudo
Sedum formosanum N. E. Br.
Sinopanax formosana (Hayata) H. L. Li
Sloanea formosana H. L. Li
Spiraea formosana Hayata
Stellera formosana (Hayata) H. L. Li
Strobilanthes formosanus S. Moore
Styrax formosana Matsum.
Styrax formosana Matsum. var. **hayataiana** (Perkins) H. L. Li
Symplocos formosana Brand
Syzygium formosanum (Hayata) Mori
Taraxacum formosanum Kitam.
Tetrastigma formosanum (Hemsl.) Gagnep.
Theligonum formosanum (Ohwi) Ohwi & T. S. Liu
Trachelospermum formosanum Y. C. Liu & C. H. Ou
Trigonotis formosana Hayata
Trigonotis formosana Hayata var. **elevatovenosa** (Hayata) S. D. Shen & J. C. Wang,
Turpinia formosana Nakai
Vaccinium wrightii A. Gray var. **formosanum** (Hayata) H. L. Li
Veronicastrum formosanum (Masam.) Yamaz.
Viburnum formosanum Hayata
Viburnum plicatum Thunb. var. **formosanum** Y. C. Liu & C. H. Ou
Viola formosana Hayata
Viola formosana Hayata var. **stenopetala** (Hayata) J. C. Wang, T. C. Huang & T. Hashim.
Wendlandia formosana Cowan
Youngia japonica (L.) DC. subsp. **formosana** (Hayata) Kitam.

臺灣大學學術期刊資料庫

IIIB. MONOCOTYLEDONS

Agropyron formosanum Honda
Agrostis infirma Buse var. **formosana** (Hack.) Veldkamp
Aletris formosana Hayata
Alpinia formosana K. Schum.
Anoectochilus formosanus Hayata
Anthoxanthum horsfieldii (Kunth ex Benn.) Mez var. **formosanum** (Honda) Veldkamp
Appendicula formosana Hayata
Arisaema formosanum (Hayata) Hayata
Arundo formosana Hack.
Bletilla formosana (Hayata) Schltr.
Bletilla formosana (Hayata) Schltr. f. **kotoensis** (Hayata) T. P. Lin; Yang et al.
Calamus formosanus Becc.
Carex formosensis H. Lév. & Vaniot
Colocasia formosana Hayata
Collabium formosanum Hayata
Cymbidium formosanum Hayata sensu Yuen P. Yang et al.
Cypripedium formosanum Hayata
Eccoilopus formosanus (Rendle) A. Camus
Epipremnum formosanum Hayata
Erianthus formosanus Stapf
Festuca formosana Honda
Gastrochilus formosanus (Hayata) Hayata
Iris formosana Ohwi
Leptaspis formosana C. C. Hsu
Lilium formosanum Wallace
Liparis formosana Rchb. f.
Musa basjoo Siebold var. **formosana** (Warb.) S. S. Ying
Poa formosae Ohwi
Peristylus formosanus (Schltr.) T. P. Lin
Phreatia formosana Rolfe
Platanthera mandarinorum Rchb. f. subsp. **formosana** T. P. Lin & K. Inoue
Pleione formosana Hayata sensu Yuen P. Yang & al.
Thrixspermum formosanum (Hayata) Schltr.
Tricyrtis formosana Baker
Tricyrtis formosana Baker var. **grandiflora** S. S. Ying
Tricyrtis formosana Baker var. **lasiocarpa** (Matsum.) Masam.
Tricyrtis formosana Baker var. **ovatifolia** (S. S. Ying) S. S. Ying
Tricyrtis formosana Baker var. **stolonifera** (Matsum.) Masam.
Trisetum spicatum (L.) Rich. var. **formosanum** (Honda) Ohwi
Veratrum formosanum Loes.
Xyris formosana Hayata

臺灣大學學術期刊資料庫

提議修改維也納版國際命名法規 53.3 條款例證 9

黃增泉[1]、吳明洲[2]、黃星凡[3,4]

(收稿日期：2007 年 5 月 20 日; 接受日期：2007 年 7 月 10 日)

摘　　要

[Formosa] 有「美麗的」以及「專指臺灣島」兩個意思。臺灣植物誌第二版所收錄之學名中，含有 [formosa]、[formosa] 之拉丁文衍生字、以及 [formosensis] 等字眼者共有 167 個，其含意均專指臺灣島。此包括 2 個 [formosae]、103 個 [formosana]、42 個 [formosanum]、11 個 [formosanus]、1 個 [formosense] 以及 8 個 [formosensis]。為了避免台灣產之同屬植物，以 [formosa] 及其拉丁衍生字為尾名 (epithet) 使用於不同種或種下分類群，而造成的混淆，我們提議將下述字句：[formosae, formosana, formosanum, formosanus, formosense and formosensis for native and endemic plants on Taiwan only] 加入維也納版國際命名法規 (2006 年) 53.3 條款例證 9 之文句後段。

關鍵詞：命名、尾名、[Formosa] 及衍生字、國際命名法規、53.3 條款、例證 9。

1. 國立臺灣大學植物科學研究所，106 台北市羅斯福路 4 段 1 號，臺灣。
2. 國立花蓮教育大學生物資源與生物科技研究所，970 花蓮市華西路 123 號，臺灣。
3. 國立新竹教育大學應用科學系，300 新竹市南大路 521 號，臺灣。
4. 通信作者。Email: sfhuang4898@mail.nhcue.edu.tw

臺灣大學學術期刊資料庫