



# AN UPDATED ACCOUNT OF THE NAME CHANGES OF THE MONOCOTYLEDONOUS PLANT SPECIES INCLUDED IN THE FIFTH AND FINAL VOLUME OF “FLORA OF ASSAM (1940)”

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## Abstract

In North East India, “Flora of Assam” is an important flora as it includes result of pioneering floristic work on Angiosperms & Gymnosperms in the region. But, in this flora, the problems of name changes appear before the new researchers. Therefore, an attempt is made here to prepare an updated account of the new names against their old counterparts of the plants included in the 5<sup>th</sup> volumes of the flora, on the basis of recent standard taxonomic literatures. Earlier, the name changes of the plants included in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> volumes are already published & this is the final part of the work. In the process, new names of 119 monocotyledonous plant species included in the concerned flora are compiled out.

**Key words :** Name changes, Flora of Assam, Monocotyledonous plants, floristic works.

## Introduction

Scientific names of plants change for many reasons. The two main reasons are nomenclature and misidentification. Names changes are based on the rule of priority of publication, which states that if a species has been named more than once, the first correctly published name must be used; all others are synonyms. A long-established name can be even replaced by another name if new details emerge about earlier publication date. There are examples of names of economically important or well known plants, which are conserved for use even though, it is incorrect. Conservation process requires a decision at an International Botanical Congress. In case of misidentification, plants are brought into cultivation, propagated and widely distributed under an incorrect name. By the time of rectification the incorrect name may be in widespread use. The third and modern type of name change happens when advances in our botanical knowledge lead to reclassifications. Taxonomists, often in the past, proposed that a newly discovered plant should be classified as a member of a particular genus, based on the logical & hypothetical similarity of morphological characteristics shared by other members of that genus. Recently, new taxonomic information has accumulated since the advent of DNA sequencing, and that has resulted in recent reclassifications. Thus, name changes are

sometimes required to uphold the principle that names must represent true evolutionary relationships. Sometimes, to show evolutionary lineage, a genus or family must be split apart or mergers are done to bring about the desired results. Similarly, many species have been transferred from one genus to another.

But because of name changes, various difficulties arise in the preparation of new floras during and after a classical field survey. The floristic worker may identify a specimen in a herbarium, where plants are in old names, but in recent literature he finds a new name for that plant. Similarly, there is difficulty in studying old flora is that; most of the monumental floras include plant in old names. Sometimes a plant may be included in many different names in different floras making the enumeration process painstaking.

In case of North East India, the “Flora of Assam” is the oldest flora to include whole of North East India including even a part of Sylhet district of present Bangladesh. The first four volumes were published by Upendra Nath Kanjilal (1934-1940), which dealt with the Dicotyledons and Gymnosperms. Later, N. L. Bor published the fifth volume included only the Gramineae (Poaceae) among Monocotyledons. It is the basic literature, which every floristic researcher treats as a background whenever a new systematic survey starts.

Therefore, an attempt has been made to find out and enlist all confirmed new names of the plants against their old synonyms with author citations. This attempt is fully based on taxonomic literatures and the name changes of the first four volumes of the flora are already published (Borah, 2014). The current presentation aims at solving the name change related difficulties of the plants included in the “Flora of Assam, Vol : V (1940)”.

## Materials and Methods

The procedure followed here is a literary one. The standard recent taxonomic literatures (Bennet, 1987; Bhagawati *et al.*, 2006; Chowdhery *et al.*, 2009; Chowdhury, 2005; Das *et al.*, 2013; Deb, 1981 & 1983; Giri *et al.*, 2008; Ghosh, 2005; Gogoi, 1997; Goswami, 2003; Hajra, 1996; Haridasan *et al.*, 1985 & 1987; Kartikeyan *et al.*, 2009; Malakar, 1995; Nayar *et al.*, 2014; Rashid *et al.*, 2011; Rashid *et al.*, 2012; Sarkar, 1993; Sarma, 1989; Sharma *et al.*, 1993; Singh *et al.*, 2000) related to these plants are thoroughly searched. In addition, important taxonomic resources at the internet (eMonocot home, JSTOR, EFLORAS, GRIN/NPGS, IPNI, THE PLANT LIST, MMPND, TROPICOS, GBIF, PFAF, Sp2000, USDA PLANTS, BOLD Systems Taxonomic Browser, Catalogue of Life, Discover Life, Springer Reference, ITIS, Plantsystematics.org, ePIC, Biodiversity Heritage Library, Global Names Index, India Biodiversity Portal ) are also searched and the confirmed new names are brushed out. Then, they are arranged in a list according to the arrangement order of the original copy of fifth volumes of “Flora of Assam”.

## Results

The account of the name changes are presented as a family wise list, using the old family names as presented in the flora. In the listing of the species, first an old name included in the flora with author citation is presented; which is followed by the newly accepted name with citation as follows:

(1) *Dendrocalamus patellaris* Gamble : *Ampelocalamus patellaris* (Gamble) Stapleton (2) *Teinostachyum griffithii* Munro : *Schizostachyum griffithii* (Munro) R.B.Majumdar (3) *Cephalostachyum fuchsianum* Gamble : *Cephalostachyum latifolium* Munro. (4) *Neohouzeaua dullooa* (Gamble) A. Camus : *Schizostachyum dullooa* (Gamble) R.B. Majumdar (5) *Dinochloa compactiflora* (Kurz) McClure : *Melocalamus compactiflorus* (Kurz) Benth. (6) *Melocanna bambusoides* Trin. : *Melocanna baccifera* (Roxb.) Kurz. (7) *Bambusa nana* Roxb. : *Bambusa multiplex* (Lour.) Raeusch. ex Schult. (8) *Bambusa*

*arundinacea* Willd. : *Bambusa bambos* (L.) Voss. (9) *Bambusa mastersii* Munro : *Melocalamus mastersii* (Munro) R.B.Majumdar. (10) *Oxytenanthera nigrociliata* (Buse) Munro : *Gigantochloa nigrociliata* (Buse) Kurz. (11) *Oxytenanthera albociliata* Munro : *Gigantochloa albociliata* (Munro) Kurz (12) *Arundinaria hirsuta* Munro : *Yushania hirsuta* (Munro) R. B. Majumdar. (13) *Arundinaria rolloana* Gamble : *Yushania rolloana* (Gamble) T.P.Yi. (14) *Arundinaria suberecta* Munro : *Drepanostachyum khasianum* (Munro) Keng f. (15) *Arundinaria mannii* Gamble : *Cephalostachyum mannii* (Gamble) Stapleton. (16) *Arundinaria maling* Gamble : *Yushania maling* (Gamble) R.B.Majumdar & Karthik. (17) *Semiarundinaria pantlingii* (Gamble) Nakai : *Yushania pantlingii* (Gamble) R. B. Majumdar (18) *Chimonobambusa polystachya* (Kurz ex Gamble) Nakai : *Drepanostachyum polystachyum* (Kurz ex Gamble) R.B.Majumdar (19) *Chimonobambusa griffithiana* (Munro) Nakai : *Chimonocalamus griffithianus* (Munro) Hsueh & T.P.Yi. (20) *Chimonobambusa khasiana* (Munro) Nakai : *Drepanostachyum khasianum* (Munro) Keng f. (21) *Chimonobambusa intermedia* (Munro) Nakai : *Drepanostachyum intermedium* (Munro) Keng f. (22) *Chimonobambusa hookeriana* (Munro) Nakai : *Himalayacalamus hookerianus* (Munro) Stapleton. (23) *Sinobambusa elegans* (Kurz) Nakai : *Yushania elegans* (Kurz) R.B.Majumdar. (24) *Thamnocalamus aristatus* (Gamble) E.G.Camus : *Thamnocalamus spathiflorus* (Trin.) Munro. (25) *Thamnocalamus aristatus* (Gamble) E.G.Camus : *Thamnocalamus spathiflorus* (Trin.) Munro. (26) *Thamnocalamus falconeri* Hook.f. ex Munro : *Himalayacalamus falconeri* (Hook.f. ex Munro) Keng f.. (27) *Thamnocalamus prainii* (Gamble) E.G.Camus *Neomicrocalamus prainii* (Gamble) Keng f. (28) *Phyllostachys assamica* Gamble : *Phyllostachys mannii* Gamble. (29) *Poa flexuosa* Wahlenb. : *Poa granitica* Braun-Blanq. (30) *Bromus asper* Murray : *Bromus ramosus* Huds. (31) *Bromus unioloides* Kunth Synonym of *Bromus catharticus* Vahl (32) *Eragrostis tenella* Nees : *Eragrostis unioloides* (Retz.) Nees ex Steud. (33) *Eragrostis diarrhena* (Schult. & Schult.f.) Steud. : *Eragrostis japonica* (Thunb.) Trin. (34) *Eragrostis poaeoides* P. Beauv. : *Eragrostis minor* Host. (35) *Eleusine verticillata* Roxb. : *Acrachne racemosa* (Heyne ex Roth) Ohwi. (36) *Sporobolus diander* Beauve. : *Sporobolus diandrus* (Retz.) P. Beauve. (37) *Sporobolus poiretii* (Roem. Et Schult.) Hitch. : *Sporobolus juncus* (P. Beauve.) Kunth. (38) *Sporobolus tremulus* Kunth. : *Sporobolus virginicus*

- (L.) Kunth. (39) *Chloris incompleta* Roth. : *Interopogon dolichostachyus* (Lag.) Keng (40) *Helictotrichon asperum* (Munro) Bor : *Helictotrichon junghuhnii* (Buse) Henrard (41) *Agrostis alba* L. : *Poa nemoralis* L. (42) *Agrostis abnormis* Munro ex Hook f. : *Calamagrostis abnormis* (Hook. f.) U. Shukla (43) *Deyeuxia elatior* Hook f. : *Calamagrostis elatior* (Griseb.) A. Camus (44) *Deyeuxia pulchella* Hook f. : *Calamagrostis lahulensis* G.Singh (45) *Deyeuxia scabrescens* Munro ex Duthie : *Calamagrostis scabrescens* Griseb. (46) *Deyeuxia nagarum* Bor : *Calamagrostis nagarum* (Bor) G. Singh (47) *Aulacolepis treutleri* Hack. : *Aniselytron treutleri* (Kuntze) Soják. (48) *Calamagrostis griffithiana* Hook f. : *Agrostis griffithiana* (Hook. f.) Bor (49) *Garnotia emodi* (Arn. et Nees) Janowsky : *Garnotia polyopogonoides* Munro ex Oliv. (50) *Stipa roylei* (Nees) Mez : *Stipa roylei* (Nees) Duthie (51) *Tragus biflorus* Schult. : *Tragus racemosus* (L.) All. (52) *Hierochloe gracilima* Hook f. : *Anthoxanthum sikkimense* (Maxim.) Ohwi (53) *Hierochloe clarkei* Hook f. : *Anthoxanthum horsefieldii* (Benn.) Reeder (54) *Thysanolaena maxima* O. Ktze. : *Thysanolaena latifolia* (Roxb. ex Hornem.) Honda (55) *Arundinella mutica* Nees ex Steud. : *Arundinella setosa* Trin. (56) *Danthoniopsis griffithiana* Bor : *Jansenella griffithiana* (C. Muell.) Bor (57) *Isachne dispar* Trin. : *Isachne globosa* (Thunb.) Kuntze (58) *Acroceras crassipiculatum* (Merr.) Burkill : *Acroceras munroanum* (Balansa) Henrard (59) *Digitaria adscendens* (H.B.K.) Henr. : *Digitaria ciliaris* (Retz.) Koeler (60) *Digitaria pruriens* Buese : *Digitaria setigera* Roth (61) *Digitaria corymbosa* (Roxb.) Merr. : *Digitaria compacta* (Roth ex Roem. & Schult.) Veldkamp (62) *Digitaria bifasciculata* (Trin.) Henr. : *Digitaria compacta* (Roth ex Roem. & Schult.) Veldkamp (63) *Digitaria pedicellaris* Prain : *Digitaria abludens* (Roem. & Schult.) Veldkamp (64) *Digitaria royleana* Prain : *Digitaria stricta* Roth (65) *Ichnanthus vicinus* (F.M.Bail.) Merr. : *Ichnanthus pallens* var. *majus* (Nees) Steiber (66) *Ichnanthus foliolosus* Munroe ex Hook. f. : *Yakirra foliolosa* (Hook. f.) Clayton (67) *Panicum trypheron* Schult. : *Panicum curviflorum* Hornem. (68) *Panicum cruciabile* Chase : *Panicum luzonense* J. Presl. (69) *Panicum miliare* Lamk. : *Panicum antidotale* Retz. (70) *Panicum psilopodium* Trin. : *Panicum sumatrense* Roth (71) *Panicum montanum* Roxb. : *Panicum notatum* Retz. (72) *Panicum acroanthum* Steud. : *Panicum bisulcatum* Thunb. (73) *Cyrtococcum accrescens* Stapf : *Cyrtococcum patens* .var. *latifolium* (Honda) Ohwi (74) *Cyrtococcum radicans* Stapf : *Cyrtococcum patens* (L.) A. Camus (75) *Echinochloa colonum* Link. : *Echinochloa colona* (L.) Link (76) *Paspalum compactum* Roth. : *Digitaria compacta* (Roth ex Roem & Schult.) Veldkamp (77) *Paspalum orbiculare* Forst. : *Paspalum scrobiulatum* L. (78) *Brachiaria paspaloides* (Presl) C.E.Hubbard : *Urochloa glumaris* (Trin.) Veldkamp (79) *Brachiaria setigera* (Retz.) C.E.Hubbard : *Urochloa setigera* (Retz.) Stapf (80) *Brachiaria miliiformis* (Presl) A. Chase : *Brachiaria subquadripara* (Trin.) Hitchc. (81) *Setaria glauca* Beauv. : *Pannisetum glaucum* (L.) R.Br. (82) *Setaria pallide-fusca* Stapf et C.E.Hubbard : *Setaria pumila* (Poir.) Roem. & Schult. (83) *Pennisetum typhoides* Stapf & Hubbard : *Pennisetum glaucum* (L.) R.Br. (84) *Rhynchelytrum repens* (Willd.) C.E.Hubbard : *Melinis repens* (Willd.) Zizka (85) *Eccoilopus cotulifer* A. camus : *Spodiopogon cotulifer* (Thunb.) Hack. (86) *Imperata cylindrica* (L.) P. beauve : *Imperata cylindrica* (L.) Raeusch. (87) *Sclerostachya fusca* A.Camus : *Miscanthus fuscus* (Roxb.) Benth. (88) *Sclerostachya milroyi* Bor : *Miscanthus fuscus* (Roxb.) Benth. (89) *Narenga porphyrocoma* (Hance) Bor : *Saccharum narenga* (Nees ex Steud.) Hook. (90) *Erianthus elephantinus* Hook. f. : *Saccharum ravennae* (L.) L. (91) *Erianthus fulvus* Nees ex Steud. : *Saccharum rufipilum* Steud. (92) *Erianthus chrysothrix* Hack. : *Saccharum fallax* Ballansa (93) *Erianthus hookeri* Hack. : *Saccharum longisetosum* (Anderson) V. Naray. ex Bor (94) *Microstegium monanthum* A.Camus : *Microstegium fasciculatum* (L.) Henrard (95) *Microstegium gratum* A.Camus : *Microstegium fasciculatum* (L.) Henrard (96) *Eulalia tristachya* O.Kuntze : *Eulalia trispicata* (Schult.) Henrard (97) *Eulalia velutina* (Hack.) O.Kuntze : *Eulalia speciosa* (Debeaux) Kuntze (98) *Eulalia cummingii* A.Camus : *Eulalia leschenaultiana* (Decne.) Ohwi (99) *Pseudopogonatherum contortum* A.Camus : *Eulalia contorta* (Brogn.) Kuntze (100) *Vetiveria zizanoides* (L.) Nash : *Chrysopogon zizanoides* (L.) Roberty (101) *Bothriochloa intermedia* (R.Br.) A.Camus : *Bothriochloa bladhii* (Retz.) S.T.Blake (102) *Arthraxon rudis* Hochst. : *Arthraxon castratus* (Griff.) V. Naray. ex Bor (103) *Arthraxon breviaristatus* Hack. : *Arthraxon typicus* (Buse) Koord. (104) *Andropogon ascinodis* C.B.Clarke : *Andropogon chinensis* (Nees) Merr. (105) *Cymbopogon hookeri* Stapf ex Bor : *Andropogon munroi* C.B.Clarke (106) *Themeda strigosa* Haines : *Themeda strigosa* (Ham. ex Hook. f.) A. Camus (107) *Themeda subsericans* Ridley : *Themeda arundinacea* (Roxb.) A. Camus (108)

*Dimeria tenera* Trin. : *Dimeria ornithopoda* Trin. (109) *Ischaemum imbricatum* Stapf ex Ridley : *Ischaemum barbatum* Retz. (110) *Ischaemum hirtum* Hack. : *Ischaemum polystachyum* J.Presl. (111) *Apluda aristata* Linn. : *Apluda mutica* Linn. (112) *Thyrsia zea* (Clarke) Stapf : *Phacelurus zea* (C.B.Clarke) Clayton (113) *Rottboellia exaltata* L. : *Ophiuros exaltatus* (L.) Kuntze (114) *Coix gigantea* Roxb. : *Coix aquatica* Roxb. (115) *Chionachne koenigii* (Spreng.) Thw. : *Chionachne gigantea* (J.koenig) Veldkamp (116) *Saccharum elephantinum* (H.f.) Narayanaswamy : *Saccharum ravennae* (L.) L. (117) *Saccharum fastigiatum* Steud. : *Eulalia fastigiata* (Nees ex Steud.) Haines (118) *Saccharum hookeri* (Hack.) Narayanaswamy : *Saccharum longisetosum* (Anderson) V. Naray. ex Bor (119) *Saccharum versicolor* Steud. : *Saccharum filifolium* Steud.

### Discussion

In this compilation, updated account of name changes of total 119 (One hundred and nineteen) plant species included in the concerned flora are listed with their current names. It becomes apparent from this account that sometimes the same plant is mentioned by different old names while the new name removes this error. Sometimes there is change in only in the author citation. But, it must be admitted that the name change account presented here is not a conclusive one. Due to more & more modern taxonomic researches, many of the newly accepted names may also change from time to time. Evolutionary relationships amongst plants will continue to be the subject of scrutiny and reinterpretation. Plant names as we know them now, and the names we will use in the future, are the achievements of hard-working taxonomists. Feeble as the act may seem, taxonomists are working to make sense of the bewildering world of plant diversity. But these are done only to make nomenclature more manageable for everyone else. However, as mentioned in the introduction, there are total five volumes of the concerned flora, of which the last one is touched in this work after the account of name changes of first four volumes are already published.

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