American Journal of Agriculture and Forestry
2024, Vol. 12, No. 4, pp. 289-306
https://doi.org/10.11648/j.ajaf.20241204.17

Research Article

New Names and New Combinations of Some Genera of Aegilopaceae and Andropogonaceae (Scutellopsida)

Da-Li Fu[1, 2, *]

[1]Research Institute of Non-Timber Forestry, Chinese Academy of Forestry, Zhengzhou, China

[2]Key Laboratory of Non-Timber Forest Germplasm Enhancement and Utilization of National Forestry and Grassland Administration, Zhengzhou, China

Abstract

The plants of the families of Aegilopaceae Martinov and Andropogonaceae Martinov (Scutellopsida D.L.Fu) are closely related to human production and daily life, due to the important crops like wheat, maize, and sugarcane within the families. For familiar plants within the families, taxonomists tend to favor widely used names and more detailed classifications, which can result in taxonomic confusions of hierarchy. Using the minimum criterion PHS (phylogenetic similarity) ≤ 0.928 (inter genera) for genus classification by CPCG (chloroplast complete genomes) of Fructophyta D.L.Fu & H. Fu, total 14 current synonyms of seven genera of Andropogonaceae and 14 current synonyms of three genera of Aegilopaceae have been identified, 4 current synonyms of *Saccharum* L. including *Erianthus* Michaux., *Imperata* Cirillo, *Miscanthus* Andersson and *Tripidium* H. Schol, 1 synonym of *Iseilema* Andersson being *Eremopogon* Stapf, 5 synonyms of *Dichanthium* P. Willemet being *Agenium* Nees, *Bothriochloa* Kuntze, *Capillipedium* Stapf, *Euclasta* Franch. and *Pseudanthistiria* Hook. f., 1 synonym of *Anatherum* P. Beauv. being *Elymandra* Stapf, 1 synonym of *Hyparrhenia* Anderss. ex Fourn being *Hyperthelia* Clayton, 1 synonym of *Zea* L. being *Tripsacum* L., 1 synonym of *Arthraxon* P. Beauv. being *Microstegium* Nees, 10 synonyms of *Cinna* L. being *Anthosachne* Steud., *Australopyrum* (Tzvelev) Á. Löve, *Campeiostachys* Drobow, *Connorochloa* Barkworth, S. W. L. Jacobs & H. Q. Zhang, *Dasypyrum* (Coss. & Durieu) T. Durand, *Douglasdeweya* C. Yen, J. L. Yang & B. R. Baum, *Kengyilia* C. Yen & J. L. Yang, *Pascopyrum* Á. Löve, *Pseudoroegneria* (Nevski) Á. Löve and *Thinopyrum* Á. Löve, 1 synonym of *Agropyron* Gaertn. being *Eremopyrum* Jaub. & Spach, 3 synonyms of *Aegilops* L. being *Crithopsis* Jaub. & Spach, *Taeniatherum* Nevski and *Triticum* L. Additionally, 17 new specific names such as *Agropyron qinghaica* D.L.Fu, *Arthraxon yunnanensis* D.L.Fu, *Hyparrhenia steudelii* D.L.Fu, *Elymus brownei* Kunth ex D.L.Fu and *Saccharum liuanum* D.L.Fu, along with 221 new specific combinations like *Aegilops aestiva* (L.) D.L.Fu, *Anatherum bicorne* (L.) D.L.Fu, *Dichanthium alpinum* (H. Sun & Boufford) D.L.Fu, *Iseilema foveolata* (Delile) D.L.Fu and *Zea dactyloides* (L.) D.L.Fu have been validly and scientifically published. These publications will effectively resolve taxonomic nomenclature confusions in a scientific manner and establish a solid foundation for evolutionary system research within the new class Scutellopsida D.L.Fu.

Keywords

Aegilopaceae, Andropogonaceae, Scutellopsida, New Combination, CPCG (Chloroplast Complete Genome), Genus Minimum Criterion, Typical Algorithm

[*]Corresponding author: fu_dali@163.com (Da-Li Fu)

Received: 15 July 2024; **Accepted:** 14 August 2024; **Published:** 27 August 2024

Copyright: © The Author(s), 2024. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

1. Introduction

The families of Aegilopaceae Martinov and Andropogonaceae Martinov (Scutellopsida D.L.Fu) both were established in 1820, whose plants are closely related to human production and daily life, due to the important crops such as wheat, maize, and sugarcane within the families. Currently, both families have not been recognized by traditional taxonomy and modern phylogeny. The plants in the family Aegilopaceae are mainly classified into taxonomic rank supertribe Triticodae T. D. Macfarl. & L. Watson (1982) belonging to subfam. Pooideae Benth. (1861) of Poaceae Barnhart (1895) [1-5], and the plants in the family Andropogonaceae are mainly classified into taxonomic taxa such as Trib. Andropogoneae Dumort. (1824), Trib. Maydeae Dumort. (1823) and Trib. Arundinelleae Stapf (1898) belonging to Panicoideae A. Br. of Poaceae [2-10].

Already in ancient times, at the end of the second millennium BC, the domesticated wheats were divided into two major groups: free-threshing wheats and hulled wheats. This classification was also accepted by the early Greek taxonomists of the fourth century BC, Aristoteles, and Theophrastus, and by the first century Latin agronomist Columella, who classified the domesticated wheats in two sections, namely: Triticum — free-threshing wheats, and Zea — hulled wheats. This classification was more or less in use until the eighteenth century, when Linnaeus was the first to place all the domesticated wheats under a single genus, *Triticum* L. (1753) [11]. Thousands of years of cultivation and utilization have led to the identification of wheat as Triticum, deeply ingrained in human culture and favored by taxonomists for the establishment of the tribe Triticeae Dumort. (1824), subtribe Triticinae Fr. (1835) and supertribe Triticodae T. D. Macfarl. & L. Watson (1982). However, there is uncertainty and inconsistency in morphological circumscription between two genera of *Aegilops* L. (1753), nom. cons. and *Triticum* L. (1753) [1, 2], despite the distinctions such as the absence of well-developed keel on the glumes [1], or the glabrous rachis and a larger number of grains per spikelet in *Aegilops* L. to compare *Triticum* L. [11]. So, the genus *Triticum* L. may potentially be considered a synonym of the genus *Aegilops* L., yet no taxonomist has attempted to formally assign the widely used wheat genus to its correct name.

In another instance, phylogenetic analysis indicates a close relationship between the plants of the genus *Tripsacum* L. (1759) and maize plants of the genus *Zea* L. (1753) [8]. The genus *Tripsacum* L. may potentially be a synonym of *Zea* L.. However, no taxonomist has attempted to translate the genus into the well-known and widely used maize genus.

For familiar plants, taxonomists tend to favor widely used names and more detailed classifications, which can result in taxonomic confusions of hierarchy. Due to the lack of a scientific theory of hierarchy encompassing both traditional taxonomy and modern phylogeny, it is difficult to correct long-standing erroneous habits. To overcome these shortcomings, the new science evolutionomy has been developed with the publications of the evolutionary continuity principle, the evolutionary particularity principle, the theoretical monograph as *the Theory and Practice of Evolutionomy*, and so on [12-19]. The establishment, publication, and implementation of the minimum criterion PHS $\leq$ 0.928 (inter genera, CPCG) for the classification of genus of Fructophyta D.L.Fu & H. Fu has scientifically identified 79 current genus synonyms within the class Scutellopsida D.L.Fu of the phylum Fructophyta D.L.Fu & H. Fu., and the taxonomic confusions of the class has also been scientifically resolved to a certain extent [16-19].

Numerous specific combinations have been published within the Andropogonaceae [20-27] and Aegilopaceae [2, 28-35] families by various taxonomists, However, most of these combinations are deemed invalid in accordance with Article 37.1 of the International Code of Botanical Nomenclature (Melbourne Code, 2011), which states that a name published on or after 1 January 1953 without a clear indication of the rank of the taxon concerned is not validly published, along with other relevant articles. To scientifically resolve the evolutionary boundaries at the genus rank and clarify taxonomic names of certain species within the families, it is analyzed that the evolutionary relationships between the representative species from ten genera including *Saccharum* L. (1753), *Iseilema* Andersson (1856), *Dichanthium* P. Willemet (1796), *Anatherum* P. Beauv. (1812), *Hyparrhenia* Anderss. ex Fourn. (1886), *Zea* L. (1753), *Arthraxon* P. Beauv. (1812), *Elymus* L. (1753), *Agropyron* Gaertn. (1770) and *Aegilops* L. (1753), and their affinities and some relevant taxa respectively. Additionally, some relevant taxa of these ten genera are scientifically and validly emended in this paper.

2. Materials and Methods

2.1. CPCG of Aegilopaceae & Andropogonaceae

Total 51 CPCG of Andropogonaceae and 32 CPCG of Aegilopaceae were selected from the NCBI database. Their current names, scientific names and CPCG numbers of NCBI are listed in Table 1 to Table 10.

2.2. Evolutionary Analyses of CPCG

The evolutionary analyses of CPCG mainly use the typical algorithm [14-19] to determine the relative evolutionary relationships between different taxa by comparing the phylogenetic similarity (PHS) between the designated type and target taxa. The formula is as follows:

$$PHS = \frac{\text{SPHL}}{\text{APHL}}$$

PHS = phylogenetic similarity between the type and objective taxon; SPHL = the number of same phylogenetic loci between the type and objective taxon; APHL = the number of all phylogenetic loci of the type; statistics of phylogenetic loci using Nucleotide Barcodes (17bp).

3. Results

3.1. Synonyms of *Saccharum* Genus

The PHS of CPCG of 8 species of Andropogonaceae using the type: *Saccharum officinarum* L. are analyzed, and the results are presented in Table 1.

Table 1. *PHS of CPCG between Saccharum officinarum and some representative species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Saccharum officinarum*_NC035224.1	*Saccharum officinarum*	117787	1
2	*Saccharum ecklonii*_LS974682.1	*Miscanthus capensis*	114293	0.970
3	*Saccharum arundinaceum*_NC030777.1	*Erianthus arundinaceus*	111755	0.949
4	*Saccharum ravennae*_NC042735.1	*Tripidium ravennae*	111746	0.949
5	*Saccharum cylindrica*_NC030487.1	*Imperata cylindrica*	109580	0.930
6	*Sorghum bicolor*_NC008602.1	*Sorghum bicolor*	108682	0.923
7	*Jardinea congoensis*_MT610059.1	*Jardinea congoensis*	107801	0.915
8	*Sarga versicolor*_MT942630.1	*Sarga versicolor*	107203	0.910

From Table 1, it can be concluded that the four genera including *Miscanthus* Andersson, *Erianthus* Michaux., *Tripidium* H. Scholz and *Imperata* Cirillo are the synonyms of genus *Saccharum* L. using the type *Saccharum officinarum* L., owing to their evolutionary relationships with the type all not meeting the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine the genus *Saccharum* L. as follows.

Saccharum L., Sp. Pl. 1: 54. 1753. Type: *Saccharum officinarum* L. ─ *Erianthus* Michaux., Fl. Bor. Amer. 1: 54, 1803. Type: *Saccharum giganteum* (Walter) Pers. ─ *Imperata* Cirillo, Pl. Rar. Neapol. 2: XXVI. 1792. Type: *Saccharum cylindricum* (L.) Lam. ─ *Miscanthus* Andersson, Öfvers. Kongl. Vetensk.-Akad. Förh. 12: 165. 1855. Type: *Saccharum ecklonii* (Nees) Steud. ─ *Tripidium* H. Scholz, Willdenowia 36(2): 664. 2006, nom. inval. Type: *Saccharum ravennae* (L.) L..

About 57 species in America, Asia, Africa, and Europe, including 1 new specific name and 22 new specific combinations.

3.2. Synonyms of *Iseilema* Genus

The PHS of CPCG of 5 species of Andropogonaceae using the type: *Iseilema prostratum* (L.) Andersson are analyzed, and the results are presented in Table 2.

Table 2. *PHS of CPCG between Iseilema prostratum and some representative species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Iseilema prostratum*_ NC059835.1	*Iseilema prostratum*	116450	1
2	*Iseilema foveolatus*_ NC059826.1	*Eremopogon foveolatus*	108520	0.932
3	*Themeda anathera*_NC059838.1	*Themeda anathera*	105865	0.909
4	*Saccharum ravennae*_NC042735.1	*Tripidium ravennae*	105094	0.903
5	*Dichanthium bladhii*_MT610049.1	*Bothriochloa bladhii*	103865	0.892

Table 2 shows that *Eremopogon* is a synonym of the genus *Iseilema* Andersson using the type *Iseilema prostratum* (L.) Andersson, because of its evolutionary relationship with the type being 0.932, not meeting the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine the genus *Iseilema* Andersson as follows.

Iseilema Andersson, Nova Acta Regiae Soc. Sci. Upsal. ser. 3, 2: 250. 1856. Type: *Iseilema prostratum* (L.) Andersson ─ *Eremopogon* Stapf, Fl. Trop. Afr. [Oliver et al.] 9(1): 182. 1917. Type: *Iseilema foveolata* (Delile) D.L.Fu.

About 28 species, in Asia & Oceania, including 3 new specific combinations.

3.3. Synonyms of *Dichanthium* Genus

The PHS of CPCG of 9 species of Andropogonaceae using the type *Dichanthium bladhii* (Retz.) D.L.Fu are analyzed, and the results are presented in Table 3.

Table 3. *PHS of CPCG between Dichanthium bladhii and some representative species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Dichanthium bladhiii*_MT610049.1	*Bothriochloa bladhii*	114778	1
2	*Dichanthium sericeum*_NC035018.1	*Dichanthium sericeum*	111091	0.968
3	*Dichanthium condylotrichum*_MT610043.1	*Euclasta condylotricha*	109437	0.954
4	*Dichanthium spicigerum*_MT610083.1	*Capillipedium spicigerum*	109390	0.953
5	*Dichanthium umbellatum*_NC059837.1	*Pseudanthistiria umbellata*	109169	0.951
6	*Dichanthium leptocladum*_MT504963.1	*Agenium leptocladum*	107582	0.937
7	*Iseilema tuberculata*_NC059827.1	*Eremopogon tuberculatus*	106161	0.925
8	*Themeda anathera*_NC059838.1	*Themeda anathera*	105552	0.920
9	*Saccharum ravennae*_NC042735.1	*Tripidium ravennae*	104417	0.910

From Table 3, it can be concluded that using the type of *Dichanthium bladhii* (Retz.) D.L.Fu, the five genera: *Agenium* Nees, *Bothriochloa* Kuntze, *Capillipedium* Stapf, *Euclasta* Franch., and *Pseudanthistiria* Hook. f. are synonyms of the genus *Dichanthium* P. Willemet, on account of their evolutionary relationships with the type all not meeting the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine the genus *Dichanthium* P. Willemet as follows.

Dichanthium P. Willemet, Ann. Bot. (Usteri) 18: 11 (-12). 1796. Type: *Dichanthium annulatum* (Forssk.) Stapf. ─ *Agenium* Nees, Intr. Nat. Syst. Bot., ed. 2. 447. 1836. Type: *Dichanthium villosum* (Nees) D.L.Fu. ─ *Bothriochloa* Kuntze, Revis. Gen. Pl. 2: 762. 1891. Type: *Dichanthium bladhii* (Retz.) D.L.Fu. ─ *Capillipedium* Stapf, Fl. Trop. Afr. [Oliver et al.] 9(1): 169. 1917. Type: *Dichanthium parviflorum* (R. Br.) D.L.Fu. ─ *Euclasta* Franch., Bull. Soc. Hist. Nat. Autun 8: 335. 1895. Type: *Dichanthium condylotrichum* (Hochst. ex Steud.) Roberty. ─ *Pseudanthistiria* Hook. f., Fl. Brit. India [J. D. Hooker] 7(21): 219. 1896. Type: *Dichanthium heteroclitum* (Roxb.) D.L.Fu.

About 81 species, in Africa, America, Asia, Europe, and Oceania, including 62 new specific combinations.

3.4. Synonyms of *Anatherum* Genus

The PHS of CPCG of 26 species of Andropogonaceae using the type *Anatherum thollonii* (Franch.) D.L.Fu are analyzed, and the results are presented in Table 4.

Table 4. *PHS of CPCG between Anatherum thollonii and relevant species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Anatherum thollonii*_MH181189.1	*Schizachyrium thollonii*	116995	1
2	*Anatherum ligulatum*_MH181204.1	*Andropogon ligulatus*	111743	0.955
3	*Anatherum jeffreysii*_MH181183.1	*Andropogon jeffreysii*	111468	0.953

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
4	*Anatherum insolitum*_MH181163.1	*Andropogon insolitus*	111385	0.952
5	*Anatherum glaucescens*_MH181185.1	*Andropogon glaucescens*	111362	0.952
6	*Anatherum aequatoriense*_MH181218.1	*Andropogon aequatoriensis*	111216	0.951
7	*Anatherum gyran*_MH181171.1	*Andropogon gyran*	111151	0.95
8	*Anatherum huillense*_MH181180.1	*Andropogon huillensis*	111065	0.949
9	*Anatherum mohrii*_MH181216.1	*Andropogon mohrii*	111024	0.949
10	*Anatherum liebmannii*_MH181232.1	*Andropogon liebmannii*	110978	0.949
11	*Anatherum selloanum*_MH181213.1	*Andropogon selloanus*	110903	0.948
12	*Anatherum urbanianum*_MH181230.1	*Andropogon urbanianus*	110851	0.948
13	*Anatherum floridanum*_MH181221.1	*Andropogon floridanus*	110845	0.947
14	*Anatherum cirratum*_NC040130.1	*Schizachyrium cirratum*	110317	0.943
15	*Anatherum reedii*_MH181217.1	*Schizachyrium reedii*	110269	0.943
16	*Anatherum imberbe*_NC035045.1	*Schizachyrium imberbe*	110212	0.942
17	*Anatherum gerardii*_NC040111.1	*Andropogon gerardii*	110148	0.942
18	*Anatherum eucomum*_MT610095.1	*Andropogon eucomus*	110099	0.941
19	*Anatherum virginicum*_LT996916.1	*Anatherum virginicum*	109708	0.938
20	*Anatherum androphil*_MH181166.1	*Elymandra androphil*	109477	0.936
21	*Anatherum tenerum*_NC035043.1	*Schizachyrium tenerum*	108742	0.930
22	*Diectomis fastigiata*_KY596180.1	*Diectomis fastigiata*	108041	0.924
23	*Monocymbium lanceolatum*_MH181170.1	*Monocymbium lanceolatum*	107862	0.922
24	*Schizachyrium claudopum*_MH181228.1	*Schizachyrium claudopum*	107488	0.919
25	*Iseilema tuberculata*_NC059827.1	*Eremopogon tuberculatus*	107341	0.918
26	*Andropogon distachyos*_NC035041.1	*Andropogon distachyos*	105884	0.905

From Table 4, it can be concluded that using the type of *Anatherum thollonii* (Franch.) D.L.Fu, the genus *Elymandra* Stapf (No. 20) is a synonym of the genus *Anatherum* P. Beauv., for its evolutionary relationship with the type being 0.936, not meeting the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. In addition, there are 14 species within the genus *Andropogon* L. and 5 species within the genus *Schizachyrium* Nees being the real species of *Anatherum* P. Beauv.. Therefore, the latest combination of the genus *Anatherum* P. Beauv. is as follows.

Anatherum P. Beauv., Ess. Agrostogr. 128, 150. 1812. Lectotype: *Anatherum bicorne* (L.) D.L.Fu. ─ *Elymandra* Stapf, Fl. Trop. Afr. [Oliver et al.] 9(3): 407. 1919. Type: *Anatherum androphilum* (Stapf) D.L.Fu.

About 38 species, in Asia, Africa, America, and Europe, including 27 new specific combinations.

3.5. Synonyms of *Hyparrhenia* Genus

The PHS of CPCG of 5 species of Andropogonaceae using the type *Hyparrhenia newtonii* (Hack.) Stapf are analyzed, and the results are presented in Table 5.

Table 5. *PHS of CPCG between Hyparrhenia newtonii and relevant species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Hyparrhenia newtonii*_MH181229.1	*Hyparrhenia newtonii*	115630	1

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
2	*Hyparrhenia steudelii*_MT610070.1	*Hyperthelia dissoluta*	109420	0.946
3	*Exotheca abyssinica*_MH181196.1	*Exotheca abyssinica*	107321	0.928
4	*Anatherum thollonii*_MH181189.1	*Anatherum thollonii*	106478	0.921
5	*Iseilema tuberculata*_NC059827.1	*Eremopogon tuberculatus*	104932	0.908

Table 5 indicates that the genus *Hyperthelia* Clayton is a synonym of the genus *Hyparrhenia* Anderss. ex Fourn., because its evolutionary relationship with the type is 0.946, far from reaching the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, the latest combination of the genus *Hyparrhenia* Anderss. ex Fourn. is as follows.

Hyparrhenia Anderss. ex Fourn., Mex. Pl. 2: 51. 1886. Type: *Hyparrhenia newtonii* (Willd.) Stapf. ─ *Hyperthelia* Clayton, Kew Bull. 20(3): 438. 1967. Type: *Hyparrhenia steudelii* D.L.Fu.

About 63 species, in Asia, Africa, America, Oceania & Europe, including 1 new specific name and 3 new specific combinations.

3.6. Synonyms of *Zea* Genus

The PHS of CPCG of 5 species of Andropogonaceae using the type *Zea mays* L. are analyzed, and the results are presented in Table 6.

Table 6. *PHS of CPCG between Zea mays L. and relevant species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Zea mays*_KP966117.1	*Zea mays*	117108	1
2	*Zea dactyloides*_NC037087.1	*Tripsacum dactyloides*	110109	0.940
3	*Saccharum ravennae*_NC042735.1	*Tripidium ravennae*	105731	0.903
4	*Jardinea congoensis*_MT610059.1	*Jardinea congoensis*	101963	0.871
5	*Sorghum mekongense*_NC035022.1	*Sorghum mekongense*	101347	0.865

From Table 6, it is evident that the genus *Tripsacum* L. is a synonym of the genus *Zea* L., owing to its evolutionary relationship with the type being 0.940, not meeting the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine the genus *Zea* L. as follows.

Zea L., Sp. Pl. 2: 971. 1753. Type: *Zea mays* L. ─ *Tripsacum* L., Syst. Nat., ed. 10. 2: 1261. 1759. Type: *Zea dactyloides* (L.) D.L.Fu.

About 21 species, in America, including 15 new specific combinations.

3.7. Synonyms of *Arthraxon* Genus

The PHS of CPCG of 5 species of Andropogonaceae using the type *Arthraxon hispidus* (Thunb.) Makino are analyzed, and the results are presented in Table 7.

Table 7. *PHS of CPCG between Arthraxon hispidus and relevant species of Andropogonaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Arthraxon hispidus*_NC035048.1	*Arthraxon hispidus*	117248	1
2	*Arthraxon vimineus*_MT083943.1	*Microstegium vimineum*	112969	0.964
3	*Saccharum ravennae*_NC042735.1	*Tripidium ravennae*	97761	0.834

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
4	*Jardinea congoensis*_MT610059.1	*Jardinea congoensis*	94803	0.809
5	*Sorghum mekongense*_NC035022.1	*Sorghum mekongense*	94168	0.803

From Table 7, it can be concluded that the genus *Microstegium* Nees is a synonym of the genus *Arthraxon* P. Beauv., because of its evolutionary relationship with the type being 0.964, far from reaching the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine the genus *Arthraxon* P. Beauv. as follows.

Arthraxon P. Beauv., Ess. Agrostogr. 111. 1812. Type: *Arthraxon hispidus* (Thunb.) Makino. ─ *Microstegium* Nees, Lindl. Nat. Syst. Bot. ed. 2: 447. 1836. Type: *Arthraxon vimineus* (Trin.) D.L.Fu.

About 47 species, in Asia, Africa, Europe & Oceania, including 2 new specific names and 20 new specific combinations.

3.8. Synonyms of *Elymus* Genus

The PHS of CPCG of 14 species of Aegilopaceae using the type *Elymus sibiricus* L. are analyzed, and the results are presented in Table 8.

Table 8. *PHS of CPCG between Elymus sibiricus and relevant species of Aegilopaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Elymus sibiricus*_NC058919.1	*Elymus sibiricus*	113756	1
2	*Elymus smithii*_MK775259.1	*Pascopyrum smithii*	113026	0.994
3	*Elymus brownei*_MW309815.1	*Australopyrum pectinatum*	112349	0.988
4	*Elymus friabilis*_MK775249.1	*Douglasdeweya deweyi*	112114	0.986
5	*Elymus laxiflorus*_MN703666.1	*Kengyilia laxiflora*	111999	0.985
6	*Elymus calcicola*_NC066044.1	*Campeiostachys calcicola*	111967	0.984
7	*Elymus bessarabicus*_NC043837.1	*Thinopyrum bessarabicum*	111395	0.979
8	*Elymus spicatus*_MH285855.1	*Pseudoroegneria spicata*	111284	0.978
9	*Elymus tenuis*_NC037165.1	*Connorochloa tenuis*	110931	0.975
10	*Elymus hordeaceus*_NC059958.1	*Dasypyrum hordeaceum*	110463	0.971
11	*Elymus rectisetus*_MK775260.1	*Anthosachne rectiseta*	110452	0.971
12	*Aegilops bicornis*_NC024831.1	*Aegilops bicornis*	103585	0.911
13	*Henrardia persica*_MH285853.1	*Henrardia persica*	102688	0.903
14	*Littledalea tibetica*_MW218960.1	*Littledalea tibetica*	100041	0.879

Table 8 indicates that using the type of *Elymus sibiricus* L., total 10 genera including *Anthosachne* Steud., *Australopyrum* (Tzvelev) Á. Löve, *Campeiostachys* Drobow, *Connorochloa* Barkworth [36], *Dasypyrum* (Coss. & Durieu) T. Durand, *Douglasdeweya* C. Yen, *Kengyilia* C. Yen & J. L. Yang [37], *Pascopyrum* Á. Löve, *Pseudoroegneria* (Nevski) Á. Löve [38] and *Thinopyrum* Á. Löve, they all are synonyms of the genus *Elymus* L., owing to their evolutionary relationships with the type all surpassing a threshold value of 0.971, far from reaching the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine genus *Elymus* L. as follows.

Elymus L., Sp. Pl. 1: 83. 1753. Type: *Elymus sibiricus* L. ─ *Anthosachne* Steud., Syn. Pl. Glumac. 1(3): 237. 1854. Type: *Elymus rectisetus* (Nees) D.L.Fu. ─ *Australopyrum* (Tzvelev) Á. Löve, Feddes Repert. 95(7-8): 442. 1984. Type: *Elymus brownei* Kunth ex D.L.Fu. ─ *Campeiostachys* Drobow, Fl. Uzbekist. i. 300, 540. 1941. Type: Elymus schrenkianus (Schrenk) Tzvelev. ─ *Connorochloa* Barkworth, S. W. L. Jacobs & H. Q. Zhang, Breed. Sci. 59: 685. 2009.

Type: *Elymus tenuis* (Buchanan) D.L.Fu. ─ *Dasypyrum* (Coss. & Durieu) T. Durand, Index Gen. Phan. 504. 1888. Type: *Elymus pseudovillosus* D.L.Fu. ─ *Douglasdeweya* C. Yen, J. L. Yang & B. R. Baum, Canad. J. Bot. 83(4): 416. 2005. Type: *Elymus linkii* D.L.Fu. ─ *Kengyilia* C. Yen & J. L. Yang, Canad. J. Bot. 68(9): 1897. 1990. Type: *Elymus gobicola* (C. Yen & J. L. Yang) D.L.Fu. ─ *Pascopyrum* Á. Löve, Taxon 29(1): 168. 1980. Type: *Elymus smithii* (Rydb.) Gould. ─ *Pseudoroegneria* (Nevski) Á. Löve, Taxon 29(1): 168. 1980. Type: *Elymus schultesii* D.L.Fu. ─ *Thinopyrum* Á. Löve, Taxon 29: 351. 1980. Type: *Elymus multinodus* Gould.

About 275 species in Africa, America, Asia, Europe, and Oceania, including 12 new specific names and 58 new specific combinations.

3.9. Synonyms of *Agropyron* Genus

The PHS of CPCG of 5 representative species of Aegilopaceae and 1 other species using the type *Agropyron cristatum* (L.) Gaertn. are analyzed, and the results are presented in Table 9.

Table 9. *PHS of CPCG between Agropyron cristatum and relevant species of Aegilopaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Agropyron cristatum*_KY126307.1	*Agropyron cristatum*	113655	1
2	*Agropyron qinghaica*_ MH285848.1	*Kengyilia melanthera*	111541	0.981
3	*Agropyron distans*_MH285851.1	*Eremopyrum distans*	108116	0.951
4	*Henrardia persica*_MH285853.1	*Henrardia persica*	103880	0.914
5	*Elymus nutans*_NC058918.1	*Elymus nutans*	102226	0.899
6	*Aegilops bicornis*_NC024831.1	*Aegilops bicornis*	99027	0.871

Table 9 reveals that the genus *Eremopyrum* Jaub. & Spach is a synonym of the genus *Agropyron* Gaertn., for its evolutionary relationship with the type being 0.951, far from reaching the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. In addition, the species *Kengyilia melanthera* (Keng) J. L. Yang et al. is real the species of *Agropyron* Gaertn. Therefore, the latest combination of the genus *Agropyron* Gaertn. is as follows.

Agropyron Gaertn., Novi Comment. Acad. Sci. Imp. Petrop. 14(1): 539. 1770. Type: *Agropyron cristatum* (L.) Gaertn. ─ *Eremopyrum* Jaub. & Spach, Ill. Pl. Orient. 4(32): 26. 1851. Type: *Agropyron orientale* (L.) Roem. & Schult.

About 17 species, in Africa, Asia, and Europe, including 1 new specific name.

3.10. Synonyms of *Aegilops* Genus

The PHS of CPCG of 20 samples of 13 species of Aegilopaceae using the type *Aegilops timopheevii* (Zhuk.) D.L.Fu are analyzed, and the results are presented in Table 10.

Table 10. *PHS of CPCG between Aegilops timopheevii and relevant species of Aegilopaceae.*

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
1	*Aegilops timopheevii*_NC024764.1	*Triticum timopheevii*	114028	1
2	*Aegilops aestiva*_KJ614403.1	*Triticum aestivum*	112412	0.986
3	*Aegilops aestiva*_LC377169.1	*Triticum aestivum*	112315	0.985
4	*Aegilops aestiva*_MW889057.1	*Triticum aestivum*	112310	0.985
5	*Aegilops turgida*_NC024814.1	*Triticum turgidum*	112229	0.984
6	*Aegilops aestiva*_KJ614396.1	*Triticum aestivum*	112229	0.984
7	*Aegilops aestiva*_KC912694.1	*Triticum aestivum*	111886	0.981
8	*Aegilops caput-medusae*_NC037160.1	*Taeniatherum caput-medusae*	108711	0.953
9	*Aegilops aestiva*_MN605257.1	*Triticum aestivum*	108454	0.951

No.	Scientific Names and Numbers of CPCG in NCBI	Current Names	PHL/17bp	PHS
10	*Aegilops bicornis*_NC024831.1	*Aegilops bicornis*	108417	0.951
11	*Aegilops monococca*_NC021760.1	*Triticum monococcum*	107983	0.947
12	*Aegilops urartu*_NC021762.1	*Triticum urartu*	107824	0.946
13	*Aegilops aestiva*_MK348611.1	*Triticum aestivum*	107580	0.944
14	*Aegilops delileana*_MH285849.1	*Crithopsis delileana*	107519	0.943
15	*Aegilops triuncialis*_KY636054.1	*Aegilops triuncialis*	107423	0.942
16	*Aegilops cylindrica*_NC023096.1	*Aegilops cylindrica*	107144	0.940
17	*Aegilops aestiva*_NC002762.1	*Triticum aestivum*	106258	0.932
18	*Secale cereale*_NC021761.1	*Secale cereale*	105136	0.922
19	*Elymus sibiricus*_NC058919.1	*Elymus sibiricus*	103253	0.906
20	*Leymus triticoides*_NC058745.1	*Leymus triticoides*	102057	0.895

From Table 10, it can be concluded that using the type of *Aegilops timopheevii* (Zhuk.) D.L.Fu, the three genera including *Crithopsis* Jaub. & Spach (No. 14), *Taeniatherum* Nevski (No. 9), and *Triticum* L., all are real synonyms of the genus *Aegilops* L., owing to their evolutionary relationships with the type, not meeting the minimum criterion PHS (17bp) ≤ 0.928 (inter genera) for genus classification. Therefore, it is scientific to combine the genus *Aegilops* L. as follows.

Aegilops L., Sp. Pl. 2: 1050. 1753, nom. cons. Type: *Aegilops triuncialis* L. (typ. cons.) ─ *Crithopsis* Jaub. & Spach, Ill. Pl. Orient. 4(32): 30, t. 321. 1851. Type: *Aegilops delileana* (Schult.) D.L.Fu. ─ *Taeniatherum* Nevski, Trudy Bot. Inst. Akad. Nauk S. S. S. R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 21, 27. 1933. Type: *Aegilops caput-medusae* (L.) D.L.Fu. ─ *Triticum* L., Sp. Pl. 1: 85. 1753. Lectotype: *Aegilops aestiva* (L.) D.L.Fu.

About 31 species, in Africa, Asia, and Europe, including 8 new specific combinations.

4. New Names and New Combinations

Aegilops aestiva (L.) D.L.Fu, sp. transl. nov. *Triticum aestivum* L., Sp. Pl. 1: 85. 1753, nom. cons.

Aegilops caput-medusae (L.) D.L.Fu, sp. transl. nov. *Elymus caput-medusae* L., Sp. Pl.: 84. 1753. ─ *Taeniatherum caput-medusae* (L.) Nevski.

Aegilops delileana (Schult.) D.L.Fu, sp. transl. nov. *Elymus delileanus* Schult., Mant. 2: 424. 1824. ─ *Crithopsis rhachitricha* Jaub. & Spach.

Aegilops monococca (L.) D.L.Fu, sp. transl. nov. *Triticum monococcum* L., Sp. Pl. 1: 86. 1753.

Aegilops timopheevii (Zhuk.) D.L.Fu, sp. comb. nov. *Triticum dicoccum* var. *timopheevii* Zhuk., Zap. Nauchno Prikl. Otd. Tiflissk. Bot. Sada 3: 1. 1924; *Triticum timopheevii* (Zhuk.) Zhuk., Trudy Prikl. Bot. 19(2): 64. 1928.

Aegilops turgida (L.) D.L.Fu, sp. transl. nov. *Triticum turgidum* L., Sp. Pl. 1: 86. 1753.

Aegilops urartu (Gandilyan) D.L.Fu, sp. transl. nov. *Triticum urartu* Thumanjan ex Gandilyan, Bot. Zhurn. (Moscow & Leningrad) 57: 176. 1972.

Aegilops vavilovii (Zhuk.) D.L.Fu, sp. comb. nov. *Aegilops crassa* subsp. *vavilovii* Zhuk., Trudy Prikl. Bot. 13: 554. 1928; *Aegilops vavilovii* (Zhuk.) Chennav., Acta Horti Gothob. 23: 167. 1960, nom. inval..

Agropyron qinghaica D.L.Fu, sp. nom. nov. *Roegneria melanthera* Keng & S. L. Chen, J. Nanjing Univ. (Biol.) 1963(1): 78. 1963, non *Agropyron melantherum* Keng.

Anatherum aequatoriense (Hitchc.) D.L.Fu, sp. transl. nov. *Andropogon aequatoriensis* Hitchc., Contr. U. S. Natl. Herb. 24: 499. 1927.

Anatherum androphilum (Stapf) D.L.Fu, sp. transl. nov. *Andropogon androphilus* Stapf, J. Bot. (Morot) 19: 103. 1905. ─ *Elymandra androphila* (Stapf) Stapf.

Anatherum archaelymandrum (Jacq.-Fél.) D.L.Fu, sp. transl. nov. *Hyparrhenia archaelymandra* Jacq.-Fél., J. Agric. Trop. Bot. Appl. 1: 48. 1954.

Anatherum bicorne (L.) D.L.Fu, sp. transl. nov. *Andropogon bicornis* L., Sp. Pl.: 1046 (1753), nom. cons. ─ *Anatherum bicorne* P. Beauv..

Anatherum cirratum (Hack.) D.L.Fu, sp. transl. nov. *Andropogon cirratus* Hack., Flora 68: 119. 1885.

Anatherum eucomum (Nees) D.L.Fu, sp. transl. nov. *Andropogon eucomus* Nees, Fl. Afr. Austral. Ill.: 104. 1841.

Anatherum floridanum (Scribn.) D.L.Fu, sp. transl. nov. *Andropogon floridanus* Scribn., Bull. Torrey Bot. Club 23(4): 145. 1896.

Anatherum gerardi (Vitman) D.L.Fu, sp. transl. nov. *Andropogon gerardi* Vitman, Summa Pl. 6: 16. 1792.

Anatherum glaucescens (Kunth) D.L.Fu, sp. transl. nov. *Andropogon glaucescens* Kunth, Nov. Gen. Sp. [H. B. K.] 1:

186. 1816.

Anatherum gossweileri (Stapf) D.L.Fu, sp. transl. nov. *Pleiadelphia gossweileri* Stapf in Hooker's Icon. Pl. 32: t. 3121. 1927.

Anatherum grallatum (Stapf) D.L.Fu, sp. transl. nov. *Hyparrhenia grallata* Stapf in D. Oliver (eds.), Fl. Trop. Afr. 9: 320. 1919.

Anatherum gyrans (Ashe) D.L.Fu, sp. transl. nov. *Andropogon gyrans* Ashe, J. Elisha Mitchell Sci. Soc. 15: 113. 1898.

Anatherum huillense (Rendle) D.L.Fu, sp. transl. nov. *Andropogon huillensis* Rendle in W. P. Hiern, Cat. Afr. Pl. 2: 146. 1899.

Anatherum insolitum (Sohns) D.L.Fu, sp. transl. nov. *Andropogon insolitus* Sohns, Mem. New York Bot. Gard. 9: 271. 1957.

Anatherum jeffreysii (Hack.) D.L.Fu, sp. transl. nov. *Andropogon jeffreysii* Hack., Proc. Rhodesia Sci. Assoc. 7(2): 70. 1908.

Anatherum liebmannii (Hack.) D.L.Fu, sp. transl. nov. *Andropogon liebmannii* Hack., Flora 68: 132. 1885.

Anatherum ligulatum (Stapf) D.L.Fu, sp. comb. nov. *Andropogon laxatus* var. *ligulatus* Stapf in D. Oliver (eds.), Fl. Trop. Afr. 9: 238. 1919; *Andropogon ligulatus* (Stapf) Clayton, Kew Bull. 32(1): 2. 1977.

Anatherum lithophilum (Trin.) D.L.Fu, sp. transl. nov. *Andropogon lithophilus* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 277. 1832.

Anatherum mohrii (Hack.) D.L.Fu, sp. comb. nov. *Andropogon liebmannii* subvar. *mohrii* Hack. in A. L. P. P. de Candolle & A. C. P. de Candolle, Monogr. Phan. 6: 413. 1889; *Andropogon mohrii* (Hack.) Vasey, Contr. U. S. Natl. Herb. 3: 11. 1892.

Anatherum reedii (Hitchc. & Ekman) D.L.Fu, sp. transl. nov. *Andropogon reedii* Hitchc. & Ekman, Misc. Publ. U. S. D. A. 243: 390. 1936.

Anatherum salzmannii (Steud.) D.L.Fu, sp. transl. nov. *Rottboellia salzmannii* Trin. ex Steud., Syn. Pl. Glumac. 1: 361. 1854. ─ *Schizachyrium imberbe* A. Camus.

Anatherum selloanum (Hack.) D.L.Fu, sp. comb. nov. *Andropogon leucostachyus* subsp. *selloanus* Hack. in A. L. P. P. de Candolle & A. C. P. de Candolle, Monogr. Phan. 6: 420. 1889; *Andropogon selloanus* (Hack.) Hack., Bull. Herb. Boissier, sér. 2, 4: 266. 1904.

Anatherum subulatum (Jacq.-Fél.) D.L.Fu, sp. transl. nov. *Elymandra subulata* Jacq.-Fél., Rev. Int. Bot. Appl. Agric. Trop. xxx. 170. 1950.

Anatherum tenerum (Nees) D.L.Fu, sp. transl. nov. *Schizachyrium tenerum* Nees, Fl. Bras. Enum. Pl. 2(1): 336. 1829.

Anatherum thollonii (Franch.) D.L.Fu, sp. transl. nov. *Andropogon thollonii* Franch., Bull. Soc. Hist. Nat. Autun 8: 324. 1895. ─ *Schizachyrium thollonii* (Franch.) Stapf.

Anatherum urbanianum (Hitchc.) D.L.Fu, sp. transl. nov. *Andropogon urbanianus* Hitchc., Bot. Gaz. 54: 424. 1912.

Anatherum virginicum (L.) D.L.Fu, sp. transl. nov. *Andropogon virginicus* L., Sp. Pl.: 1046. 1753. ─ *Anatherum virginicum* Spreng.

Arthraxon biaristatus (Steud.) D.L.Fu, sp. transl. nov. *Andropogon biaristatus* Steud., Syn. Pl. Glumac. 1: 379. 1854.

Arthraxon borianus (Sur) D.L.Fu, sp. transl. nov. *Microstegium borianum* Sur, J. Bombay Nat. Hist. Soc. 79(3): 652. 1983.

Arthraxon brandisii (Hook. f.) D.L.Fu, sp. transl. nov. *Coelarthron brandisii* Hook. f., Fl. Brit. India 7: 164. 1896.

Arthraxon butuoensis (Y. C. Liu & H. Peng) D.L.Fu, sp. transl. nov. *Microstegium butuoense* Y. C. Liu & H. Peng, Ann. Bot. Fenn. 48(2): 182 (-184). 2011.

Arthraxon delicatulus (Hook. f.) D.L.Fu, sp. transl. nov. *Pollinia delicatula* Hook. f., Fl. Brit. India 7: 117. 1896.

Arthraxon dispar (Steud.) D.L.Fu, sp. transl. nov. *Pollinia dispar* Nees ex Steud., Syn. Pl. Glumac. 1: 410. 1854.

Arthraxon eucnemis (Steud.) D.L.Fu, sp. transl. nov. *Pollinia eucnemis* Nees ex Steud., Syn. Pl. Glumac. 1: 409. 1854.

Arthraxon falconeri (Hook. f.) D.L.Fu, sp. transl. nov. *Ischnochloa falconeri* Hook. f. in Hooker's Icon. Pl. 25: t. 2466. 1896.

Arthraxon fasciculatus (L.) D.L.Fu, sp. transl. nov. *Andropogon fasciculatus* L. in Sp. Pl.: 1047. 1753.

Arthraxon fauriei (Hayata) D.L.Fu, sp. transl. nov. *Pollinia fauriei* Hayata, Icon. Pl. Formosan. 7: 73. 1918.

Arthraxon geniculatus (Hayata) D.L.Fu, sp. transl. nov. *Pollinia geniculata* Hayata, Icon. Pl. Formosan. 7: 73. 1918.

Arthraxon glabratus (Brongn.) D.L.Fu, sp. transl. nov. *Eulalia glabrata* Brongn. in L. I. Duperrey, Voy. Monde, Phan.: 93. 1831.

Arthraxon monoracemus (W. C. Wu) D.L.Fu, sp. transl. nov. *Microstegium monoracemum* W. C. Wu, J. S. China Agric. Univ. 6(2): 35. 1885.

Arthraxon petiolaris (Trin.) D.L.Fu, sp. transl. nov. *Spodiopogon petiolaris* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 301. 1832.

Arthraxon rufispicus (Steud.) D.L.Fu, sp. transl. nov. *Andropogon rufispicus* Steud., Syn. Pl. Glumac. 1: 379. 1854.

Arthraxon spectabilis (Trin.) D.L.Fu, sp. transl. nov. *Pollinia spectabilis* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 305. 1832.

Arthraxon stapfii (Hook. f.) D.L.Fu, sp. transl. nov. *Pollinia stapfii* Hook. f., Fl. Brit. India 7: 115. 1896.

Arthraxon steenisii (Jansen) D.L.Fu, sp. transl. nov. *Microstegium steenisii* Jansen, Reinwardtia 2: 306. 1953.

Arthraxon tenuis (Trin.) D.L.Fu, sp. transl. nov. *Pollinia tenuis* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 306. 1832.

Arthraxon vimineus (Trin.) D.L.Fu, sp. transl. nov. *Andropogon vimineus* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 268. 1832. ─ *Microstegium vimineum* (Trin.) A. Camus.

Arthraxon yunnanensis D.L.Fu, sp. nom. nov. *Ischaemum lanceolatum* Keng, J. Washington Acad. Sci. 21: 155. 1931, non *Arthraxon lanceolatus* (Roxb.) Hochst.

Arthraxon zhuyemao D.L.Fu, sp. nom. nov. *Pollinia nuda*

Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 307. 1832, non *Arthraxon nudus* (Steud.) Hochst.

Dichanthium alpinum (H. Sun & Boufford) D.L.Fu, sp. transl. nov. *Capillipedium alpinum* H. Sun & Boufford, Phytotaxa 252(3): 218. 2016.

Dichanthium altum (Hitchc.) D.L.Fu, sp. transl. nov. *Andropogon altus* Hitchc., Contr. U. S. Natl. Herb. 17: 208. 1913.

Dichanthium annamense (A. Camus) D.L.Fu, sp. transl. nov. *Capillipedium annamense* A. Camus, Bull. Mus. Natl. Hist. Nat. 21: 206. 1925.

Dichanthium assimile (Steud.) D.L.Fu, sp. transl. nov. *Andropogon assimilis* Steud., Syn. Pl. Glumac. 1: 397. 1854. ─ *Dichanthium assimile* (Steud.) Deshp., nom. inval..

Dichanthium barbinode (Lag.) D.L.Fu, sp. transl. nov. *Andropogon barbinodis* Lag., Gen. Sp. Pl.: 3. 1816.

Dichanthium bilobum (S. T. Blake) D.L.Fu, sp. transl. nov. *Bothriochloa biloba* S. T. Blake, Pap. Dept. Biol. Univ. Queensland. ii No. 3, 27. 1944.

Dichanthium bladhii (Retz.) D.L.Fu, sp. transl. nov. *Andropogon bladhii* Retz., Observ. Bot. 2: 27. 1781. ─ *Dichanthium bladhii* (Retz.) Clayton, nom. inval. ─ *Bothriochloa bladhii* (Retz.) S. T. Blake.

Dichanthium bunyense (B. K. Simon) D.L.Fu, sp. transl. nov. *Bothriochloa bunyensis* B. K. Simon, Austrobaileya 1(5): 455. 1983.

Dichanthium campii (Swallen) D.L.Fu, sp. transl. nov. *Andropogon campii* Swallen, Mem. New York Bot. Gard. 9: 143. 1955.

Dichanthium catharinense (Dalmolim & A. Zanin) D.L.Fu, sp. transl. nov. *Bothriochloa catharinensis* Dalmolim & A. Zanin, Phytotaxa 183(1): 45. 2014.

Dichanthium compressum (Hook. f.) D.L.Fu, sp. transl. nov. *Andropogon compressus* Hook. f., Fl. Brit. India 7: 172. 1896. ─ *Dichanthium compressum* (Hook. f.) S. K. Jain & Deshp., nom. inval..

Dichanthium concanense (Hook. f.) D.L.Fu, sp. transl. nov. *Andropogon concanensis* Hook. f., Fl. Brit. India 7: 174. 1896. ─ *Dichanthium concanense* (Hook. f.) S. K. Jain & Deshp., nom. inval.

Dichanthium decipiens (Hack.) D.L.Fu, sp. comb. nov. *Andropogon pertusus* var. *decipiens* Hack., Monogr. Phan. [A. DC. & C. DC.]. 1889; *Andropogon decipiens* (Hack.) Domin, Biblioth. Bot. 20(85): 266. 1915.

Dichanthium duongii (T. Q. Nguyen) D.L.Fu, sp. transl. nov. *Capillipedium duongii* T. Q. Nguyen, Novosti Sist. Vyssh. Rast. 6: 6. 1970.

Dichanthium edwardsianum (Gould) D.L.Fu, sp. transl. nov. *Andropogon edwardsianus* Gould, Field & Lab. 19: 184. 1951.

Dichanthium eptocladum (Hack.) D.L.Fu, sp. transl. nov. *Andropogon leptocladus* Hack., Flora 68: 122. 1885.

Dichanthium erianthoides (F. Muell.) D.L.Fu, sp. transl. nov. *Andropogon erianthoides* F. Muell., Fragm. 10: 75. 1876.

Dichanthium eurylemma (M. Marchi & Longhi-Wagner) D.L.Fu, sp. transl. nov. *Bothriochloa eurylemma* M. Marchi & Longhi-Wagner, Candollea 50: 432. 1995.

Dichanthium exaristatum (Nash) D.L.Fu, sp. transl. nov. *Amphilophis exaristata* Nash in J. K. Small, Fl. S. E. U. S.: 65. 1903.

Dichanthium filiculme (Hook. f.) D.L.Fu, sp. transl. nov. *Andropogon filiculmis* Hook. f., Fl. Brit. India 7: 181. 1896. ─ *Dichanthium filiculme* (Hook. f.) S. K. Jain & Deshp., nom. inval..

Dichanthium foulkesii (Hook. f.) D.L.Fu, sp. transl. nov. *Andropogon foulkesii* Hook. f., Fl. Brit. India 7: 174. 1896. ─ *Dichanthium foulkesii* (Hook. f.) S. K. Jain & Deshp., nom. inval..

Dichanthium glabrum (Roxb.) D.L.Fu, sp. transl. nov. *Andropogon glaber* Roxb., Fl. Ind. 1: 271. 1820. ─ *Dichanthium glabrum* (Roxb.) S. K. Jain & Deshp., nom. inval..

Dichanthium grahamii (Haines) D.L.Fu, sp. transl. nov. *Andropogon grahamii* Haines, Bull. Misc. Inform. Kew 1914: 189. 1914. ─ *Dichanthium grahamii* (Haines) Deshp., nom. inval..

Dichanthium heteroclitum (Roxb.) D.L.Fu, sp. transl. nov. *Anthistiria heteroclita* Roxb., Fl. Ind. 1: 253. 1820. ─ *Pseudanthistiria heteroclita* (Roxb.) Hook. f..

Dichanthium hirtifolium (J. Presl) D.L.Fu, sp. transl. nov. *Andropogon hirtifolius* J. Presl in C. B. Presl, Reliq. Haenk. 1: 338. 1830.

Dichanthium huegelii (Hack.) D.L.Fu, sp. transl. nov. *Andropogon huegelii* Hack. in A. L. P. P. Candolle & A. C. P. Candolle, Monogr. Phan. 6: 492. 1889. ─ *Dichanthium huegelii* (Hack.) S. K. Jain & Deshp., nom. inval..

Dichanthium hybridum (Gould) D.L.Fu, sp. transl. nov. *Andropogon hybridus* Gould, Madroño 14: 21. 1957.

Dichanthium imperatoides (Hack.) D.L.Fu, sp. comb. nov. *Andropogon saccharoides* var. *imperatoides* Hack., Fl. Bras. (Martius) 2(3): 293. 1883; *Andropogon imperatoides* (Hack.) Lillo, Fl. Prov. Tucuman, Gram.: 20. 1916.

Dichanthium insculptum (A. Rich.) D.L.Fu, sp. transl. nov. *Andropogon insculptus* Hochst. ex A. Rich., Tent. Fl. Abyss. 2: 458. 1850. ─ *Dichanthium insculptum* (Hochst. ex A. Rich.) Clayton, nom. inval..

Dichanthium jainii (Deshp. & Hemadri) D.L.Fu, sp. transl. nov. *Bothriochloa jainii* Deshp. & Hemadri, Indian Forester 97: 593. 1971. ─ *Dichanthium jainii* (Deshp. & Hemadri) Deshp., nom. inval.; *Dichanthium jainii* (Deshp. & Hemadri) R. Kr. Singh & Arigela, nom. inval..

Dichanthium kuntzeanum (Hack.) D.L.Fu, sp. transl. nov. *Andropogon kuntzeanus* Hack. in A. L. P. P. Candolle & A. C. P. Candolle, Monogr. Phan. 6: 478. 1889. ─ *Dichanthium kuntzeanum* (Hack.) S. K. Jain & Deshp., nom. inval..

Dichanthium kuoi (L. B. Cai) D.L.Fu, sp. transl. nov. *Capillipedium kuoi* L. B. Cai, Acta Biol. Plateau Sin. 12: 34 (-36). 1994.

Dichanthium kwashotense (Hayata) D.L.Fu, sp. transl. nov. *Andropogon kwashotensis* Hayata, Icon. Pl. Formosan. 8: 80. 1918.

Dichanthium laguroides (DC.) D.L.Fu, sp. transl. nov. *Andropogon laguroides* DC., Cat. Pl. Horti Monsp.: 78. 1813.

Dichanthium laoticum (A. Camus) D.L.Fu, sp. transl. nov. *Capillipedium laoticum* A. Camus, Bull. Mus. Natl. Hist. Nat. 31: 207. 1925.

Dichanthium leucotrichum (A. Camus) D.L.Fu, sp. transl. nov. *Chrysopogon leucotrichus* A. Camus, J. Agric. Trop. Bot. Appl. 2: 200. 1955.

Dichanthium longifolium (Hack.) D.L.Fu, sp. comb. nov. *Andropogon pertusus* var. *longifolius* Hack. in A. L. P. P. Candolle & A. C. P. Candolle, Monogr. Phan. 6: 482. 1889; *Bothriochloa longifolia* (Hack.) Bor, Grasses Burma, Ceylon, India & Pakistan 108. 1960.

Dichanthium longipaniculatum (Gould) D.L.Fu, sp. comb. nov. *Andropogon saccharoides* var. *longipaniculatus* Gould, Field & Lab. 23: 18. 1955; *Bothriochloa longipaniculata* (Gould) Allred & Gould, Syst. Bot. 8: 180. 1983.

Dichanthium longisetosum (Bor) D.L.Fu, sp. transl. nov. *Capillipedium longisetosum* Bor, Brittonia 16: 227. 1964.

Dichanthium macrum (Steud.) D.L.Fu, sp. transl. nov. *Andropogon macer* Steud., Syn. Pl. Glumac. 1: 371. 1854.

Dichanthium magdalenae (M. R. Almeida) D.L.Fu, sp. transl. nov. *Capillipedium magdalenae* M. R. Almeida, J. Bombay Nat. Hist. Soc. 72(3): 813. 1976. ─ *Dichanthium magdalenae* (M. R. Almeida) S. K. Jain & Deshp., nom. inval..

Dichanthium majus (Pilg.) D.L.Fu, sp. transl. nov. *Agenium majus* Pilg., Repert. Spec. Nov. Regni Veg. 43: 82. 1938.

Dichanthium meridionale (M. Marchi & Longhi-Wagner) D.L.Fu, sp. transl. nov. *Bothriochloa meridionalis* M. Marchi & Longhi-Wagner, Candollea 50: 433. 1995.

Dichanthium mistryi (A. P. Tiwari & Landge) D.L.Fu, sp. transl. nov. *Capillipedium mistryi* A. P. Tiwari & Landge, Phytotaxa 498(1): 52. 2021.

Dichanthium modestum (Backer) D.L.Fu, sp. transl. nov. *Andropogon modestus* Backer in K. Heyne, Nutt. Pl. Ned.-Ind. 1 (compl. ed.): 132. 1922.

Dichanthium nagense (Bor) D.L.Fu, sp. transl. nov. *Capillipedium nagense* Bor, Brittonia 16: 228. 1964. ─ *Dichanthium nagense* (Bor) Deshp., nom. inval..

Dichanthium oliganthum (Steud.) D.L.Fu, sp. transl. nov. *Andropogon oliganthus* Hochst. ex Steud., Syn. Pl. Glumac. 1: 368. 1854. ─ *Dichanthium oliganthum* (Hochst. ex Steud.) Cope, nom. inval..

Dichanthium parviflorum (R. Br.) D.L.Fu, sp. transl. nov. *Holcus parviflorus* R. Br., Prodr. Fl. Nov. Holland.: 199. 1810. ─ *Dichanthium parviflorum* (R. Br.) de Wet & Harlan, nom. inval. ─ *Capillipedium parviflorum* (R. Br.) Stapf.

Dichanthium pertusum (L.) D.L.Fu, sp. transl. nov. *Holcus pertusus* L., Mant. Pl. 2: 301. 1771. ─ *Dichanthium pertusum* (L.) Clayton, nom. inval..

Dichanthium planipedicellatum (Bor) D.L.Fu, sp. transl. nov. *Capillipedium planipedicellatum* Bor, Kew Bull. 4(2): 222. 1949. ─ *Dichanthium planipedicellatum* (Bor) S. K. Jain & Deshp., nom. inval..

Dichanthium pseudoischaemum (Steud.) D.L.Fu, sp. transl. nov. *Andropogon pseudoischaemum* Nees ex Steud., Syn. Pl. Glumac. 1: 380. 1854. ─ *Dichanthium pseudoischaemum* (Nees ex Steud.) S. K. Jain & Deshp., nom. inval..

Dichanthium pteropechys (C. B. Clarke) D.L.Fu, sp. transl. nov. *Andropogon pteropechys* C. B. Clarke, J. Linn. Soc., Bot. 25: 88. 1889. ─ *Dichanthium pteropechys* (C. B. Clarke) S. K. Jain & Deshp., nom. inval..

Dichanthium radicans (Lehm.) D.L.Fu, sp. transl. nov. *Andropogon radicans* Lehm., Index Seminum (HBG, Hamburgensis) 1828: 31. 1828. ─ *Dichanthium radicans* (Lehm.) Clayton, nom. inval..

Dichanthium spicigerum (S. T. Blake) D.L.Fu, sp. transl. nov. *Capillipedium spicigerum* S. T. Blake, Pap. Dept. Biol. Univ. Queensland. ii. No. 3, 43. 1944.

Dichanthium springfieldii (Gould) D.L.Fu, sp. transl. nov. *Andropogon springfieldii* Gould, Madroño 14: 19. 1957.

Dichanthium sulcatum (Bor) D.L.Fu, sp. transl. nov. *Capillipedium sulcatum* Bor, Bot. Tidsskr. 67(4): 324. 1973.

Dichanthium torreyanum (Steud.) D.L.Fu, sp. transl. nov. *Andropogon torreyanus* Steud., Nomencl. Bot., ed. 2, 1: 93. 1840.

Dichanthium umbellatum (Hack.) D.L.Fu, sp. transl. nov. *Andropogon umbellatus* Hack. in A. L. P. P. Candolle & A. C. P. Candolle, Monogr. Phan. 6: 401. 1889.

Dichanthium velutinum (M. Marchi & Longhi-Wagner) D.L.Fu, sp. transl. nov. *Bothriochloa velutina* M. Marchi & Longhi-Wagner, Candollea 50: 435. 1995.

Dichanthium villosum (Nees) D.L.Fu, sp. transl. nov. *Heteropogon villosus* Nees in C. F. P. Martius, Fl. Bras. Enum. Pl. 2: 362. 1829. ─ *Agenium villosum* (Nees) Pilg..

Dichanthium woodrovii (Hook. f.) D.L.Fu, sp. transl. nov. *Andropogon woodrovii* Hook. f., Fl. Brit. India 7: 173. 1896. ─ *Dichanthium woodrovii* (Hook. f.) S. K. Jain & Deshp., nom. inval..

Dichanthium wrightii (Hack.) D.L.Fu, sp. transl. nov. *Andropogon wrightii* Hack., Flora 68: 139. 1885.

Elymus acutus (DC.) D.L.Fu, sp. transl. nov. *Triticum acutum* DC., Cat. Pl. Horti Monsp.: 153. 1813. ─ *Elymus acutus* (DC.) M.-A. Thiébaud, nom. inval..

Elymus alatavicus (Drobow) D.L.Fu, sp. transl. nov. *Agropyron alatavicum* Drobow, Repert. Spec. Nov. Regni Veg. 21: 43. 1925. ─ *Elymus alatavicus* (Drobow) Á. Löve, nom. inval..

Elymus arthroides D.L.Fu, sp. nom. nov. *Triticum geniculatum* Trin. in C. F. Ledebour, Fl. Altaic. 1: 117. 1829, non *Elymus geniculatus* Curtis. ─ *Agropyron geniculatum* (Trin.) K. Koch.

Elymus batalinii (Krasn.) D.L.Fu, sp. transl. nov. *Triticum batalinii* Krasn., Bot. Zap. 2(1): 21. 1887 publ. 1888. ─ *Elymus batalinii* (Krasn.) Á. Löve, nom. inval..

Elymus bessarabicus (Săvul. & Rayss) D.L.Fu, sp. transl. nov. *Agropyron bessarabicum* Săvul. & Rayss, Bull. Sect. Sci. Acad. Roumaine 10: 282. 1923.

Elymus boreoatlanticus (Simonet & Guin.) D.L.Fu, sp.

comb. nov. *Agropyron junceum* subsp. *boreoatlanticum* Simonet & Guin., Bull. Soc. Bot. France 85: 176. 1938; *Agropyron junceiforme* Á. Löve & D. Löve, Rep. Univ. Inst. Appl. Sci., Reykjavik, Dept. Agric. Ser. B 3: 106. 1948. ─ *Elymus junceiformis* (Á. Löve & D. Löve) Hand & Buttler, nom. illeg..

Elymus brownei Kunth ex D.L.Fu, sp. nom. nov. *Festuca pectinata* Labill., Nov. Holl. Pl. 1: 21. 1805, non *Elymus pectinatus* (M. Bieb.) M. Laínz.; *Triticum brownei* Kunth, Révis. Gramin. 1: 145. 1829, nom. nov. ─ *Australopyrum pectinatum* (Labill.) Á. Löve.

Elymus calcicola (Keng) D.L.Fu, sp. transl. nov. *Roegneria calcicola* Keng, J. Nanjing Univ. (Biol.) 1963(1): 21. 1963. ─ *Elymus calcicola* (Keng) S. L. Chen, nom. inval..

Elymus calcis (Connor & Molloy) D.L.Fu, sp. transl. nov. *Australopyrum calcis* Connor & Molloy, New Zealand J. Bot. 31(1): 2. 1993.

Elymus cognatus (Hack.) D.L.Fu, sp. transl. nov. *Agropyron cognatum* Hack., Allg. Bot. Z. Syst. 10: 22. 1905. ─ *Elymus cognatus* (Hack.) Cope, nom. inval..

Elymus corsicus (Hack.) D.L.Fu, sp. comb. nov. *Agropyron caespitosum* var. *corsicum* Hack. in J. I. Briquet, Prodr. Fl. Corse 1: 187. 1910; *Agropyron corsicum* (Hack.) Rouy in G. Rouy & J. Foucaud, Fl. France 14: 316. 1913. ─ *Elymus corsicus* (Hack.) Kerguélen, nom. inval..

Elymus curvifolius (Lange) D.L.Fu, sp. transl. nov. *Agropyron curvifolium* Lange, Vidensk. Meddel. Naturhist. Foren. Kjøbenhavn 1860: 55. 1860. ─ *Elymus curvifolius* (Lange) Melderis, nom. inval..

Elymus distichus (Thunb.) D.L.Fu, sp. transl. nov. *Triticum distichum* Thunb., Prodr. Pl. Cap.: 23. 1794. ─ *Elymus distichus* (Thunb.) Melderis, nom. inval..

Elymus dshinalicus (Sablina) D.L.Fu, sp. transl. nov. *Elytrigia dshinalica* Sablina, Novosti Sist. Vyssh. Rast. 12: 44. 1975.

Elymus elongatus (Host) D.L.Fu, sp. transl. nov. *Triticum elongatum* Host, Icon. Descr. Gram. Austriac. 2: 18. 1802. ─ *Elymus elongatus* (Host) Runemark, nom. inval.; *Elymus elongatus* (Host) Greuter, nom. inval..

Elymus eremopyroides (C. Yen et al.) D.L.Fu, sp. transl. nov. *Kengyilia eremopyroides* Nevski ex C. Yen, J. L. Yang & B. R. Baum, Novon 8(1): 96. 1998.

Elymus flaccidifolius (Boiss. & Heldr.) D.L.Fu, sp. comb. nov. *Agropyron scirpeum* var. *flaccidifolium* Boiss. & Heldr. in P. E. Boissier, Diagn. Pl. Orient., ser. 2, 4: 142. 1859; *Elymus flaccidifolius* (Boiss. & Heldr.) Melderis, Bot. J. Linn. Soc. 76: 377. 1978, nom. inval..

Elymus friabilis D.L.Fu, sp. nom. nov. *Triticum fragile* Roth, Catal. Bot. 2: 7. 1800, non *Elymus fragilis* (Boiss.) Griseb.

Elymus geminatus (Keng & S. L. Chen) D.L.Fu, sp. transl. nov. *Roegneria geminata* Keng & S. L. Chen, J. Nanjing Univ. (Biol.) 1963(1): 80. 1963. ─ *Elymus geminatus* (Keng & S. L. Chen) S. L. Chen, nom. inval.; *Elymus geminata* (Keng & S. L. Chen) L. Liu, nom. inval..

Elymus gentryi (Melderis) D.L.Fu, sp. transl. nov. *Agropyron gentryi* Melderis, Fl. Iranica 70: 165. 1970. ─ *Elymus gentryi* (Melderis) Melderis, nom. inval..

Elymus gobicola (C. Yen & J. L. Yang) D.L.Fu, sp. transl. nov. *Kengyilia gobicola* C. Yen & J. L. Yang, Canad. J. Bot. 68(9): 1897. 1990.

Elymus gracillimus (Nevski) D.L.Fu, sp. transl. nov. *Agropyron gracillimum* Nevski in V. L. Komarov (ed.), Fl. URSS 2: 638. 1934.

Elymus grandiglumis (Keng & S. L. Chen) D.L.Fu, sp. transl. nov. *Roegneria grandiglumis* Keng & S. L. Chen, J. Nanjing Univ. (Biol.) 1963(1): 82. 1963. ─ *Elymus grandiglumis* (Keng & S. L. Chen) Á. Löve, nom. inval..

Elymus guidenensis (C. Yen et al.) D.L.Fu, sp. transl. nov. *Kengyilia guidenensis* C. Yen, J. L. Yang & B. R. Baum, Novon 5(4): 395. 1995.

Elymus habahenensis (B. R. Baum et al.) D.L.Fu, sp. transl. nov. *Kengyilia habahenensis* B. R. Baum, C. Yen & J. L. Yang, Pl. Syst. Evol. 174(1-2): 103, 106. 1991.

Elymus heidemaniae (Tzvelev) D.L.Fu, sp. transl. nov. *Elytrigia heidemaniae* Tzvelev, Novosti Sist. Vyssh. Rast. 9: 60. 1972.

Elymus hejingensis (L. B. Cai & D. F. Cui) D.L.Fu, sp. transl. nov. *Kengyilia hejingensis* L. B. Cai & D. F. Cui, Bull. Bot. Res., Harbin 15(4): 426. 1995.

Elymus hordeaceus (Hack.) D.L.Fu, sp. transl. nov. *Haynaldia hordeacea* Hack. in H. G. A. Engler & K. A. E. Prantl, Nat. Pflanzenfam. 2(2): 80. 1887.

Elymus hostii D.L.Fu, sp. nom. nov. *Triticum intermedium* Host, Icon. Descr. Gram. Austriac. 3: 23. 1805, non *Elymus intermedius* M. Bieb.

Elymus kengii Tzvelev ex D.L.Fu, sp. nom. nov. *Roegneria hirsuta* Keng, J. Nanjing Univ. (Biol.) 1963(1): 84. 1963, non *Elymus hirsutus* Schreb. ex Roem. & Schult.; *Agropyron kengii* Tzvelev, Trudy Bot. Inst. Komarova Akad. Nauk SSSR, Rast. Tsentral. Azii 4: 188. 1968. ─ *Elymus kengii* (Tzvelev) D. F. Cui, nom. illeg..

Elymus kingianus (Endl.) D.L.Fu, sp. transl. nov. *Triticum kingianum* Endl., Prodr. Fl. Norfolk.: 21. 1833. ─ *Elymus kingianus* (Endl.) Á. Löve, nom. inval..

Elymus kokonoricus (Keng) D.L.Fu, sp. transl. nov. *Roegneria kokonorica* Keng, J. Nanjing Univ. (Biol.) 1963(1): 88. 1963. ─ *Elymus kokonoricus* (Keng) Á. Löve, nom. inval..

Elymus kosaninii (Náběl ek) D.L.Fu, sp. transl. nov. *Agropyron kosaninii* Nábelek, Spisy Přír. Fak. Masarykovy Univ. 111: 25. 1929. ─ *Elymus kosaninii* (Nábelek) Melderis, nom. inval..

Elymus krylovianus (Schischk.) D.L.Fu, sp. transl. nov. *Agropyron krylovianum* Schischk., Sist. Zametki Mater. Gerb. Tomsk. Univ. 1928(2): 2. 1928.

Elymus laxiflorus (Keng) D.L.Fu, sp. transl. nov. *Roegneria laxiflora* Keng, J. Nanjing Univ. (Biol.) (1): 75. 1963. ─ *Elymus laxiflorus* (Keng) Á. Löve, nom. inval..

Elymus laxistachyus (L. B. Cai & D. F. Cui) D.L.Fu, sp. transl. nov. *Kengyilia laxistachya* L. B. Cai & D. F. Cui, Bull.

Bot. Res., Harbin 15(4): 424. 1995.

Elymus libanoticus (Hack.) D.L.Fu, sp. transl. nov. *Agropyron libanoticum* Hack., Allg. Bot. Z. Syst. 10: 21. 1904. ─ *Elymus libanoticus* (Hack.) Melderis, nom. inval..

Elymus linkii D.L.Fu, sp. nom. nov. *Triticum desertorum* Fisch. ex Link, Enum. Hort. Berol. Alt. 1: 97. 1821, non *Elymus desertorum* Kar. & Kir. ─ *Douglasdeweya wangii* C. Yen, J. L. Yang & B. R. Baum.

Elymus longisetus (Hitchc.) D.L.Fu, sp. transl. nov. *Brachypodium longisetum* Hitchc., Brittonia 2: 107. 1936. ─ *Elymus longisetus* (Hitchc.) Veldkamp, nom. inval..

Elymus marginatus (H. Lindb.) D.L.Fu, sp. transl. nov. *Agropyron marginatum* H. Lindb., Acta Soc. Sci. Fenn., Ser. B, Opera Biol. 1(2): 9. 1932. ─ *Elymus marginatus* (H. Lindb.) Á. Löve, nom. inval..

Elymus neesii D.L.Fu, sp. nom. nov. *Agropyron velutinum* Nees, London J. Bot. 2: 417. 1843, non *Elymus velutinus* Scribn. & Merr..

Elymus obtusiflorus (DC.) D.L.Fu, sp. transl. nov. *Triticum obtusiflorum* DC., Cat. Pl. Horti Monsp.: 153. 1813. ─ *Elymus obtusiflorus* (DC.) Conert, nom. inval..

Elymus pendulus (L. B. Cai) D.L.Fu, sp. transl. nov. *Kengyilia pendula* L. B. Cai, Acta Phytotax. Sin. 37(5): 460. 1999.

Elymus plurinervis (Vickery) D.L.Fu, sp. comb. nov. *Agropyron scabrum* var. *plurinerve* Vickery, Contr. New South Wales Natl. Herb. 1: 342. 1950; *Elymus plurinervis* (Vickery) Connor, New Zealand J. Bot. 43: 500. 2005, nom. inval..

Elymus podperae (Nábělek) D.L.Fu, sp. transl. nov. *Agropyron podperae* Nábelek, Spisy Přír. Fak. Masarykovy Univ. 111: 24. 1929.

Elymus pseudovillosus D.L.Fu, sp. nom. nov. *Secale villosum* L., Sp. Pl.: 84. 1753, non *Elymus villosus* Muhl. ex Willd.. ─ *Dasypyrum villosum* (L.) Borbás.

Elymus pulcherrimus (Grossh.) D.L.Fu, sp. transl. nov. *Agropyron pulcherrimum* Grossh., Věstn. Tiflissk. Bot. Sada 13-14: 42. 1919.

Elymus qinghaica D.L.Fu, sp. nom. nov. *Kengyilia zadoiensis* S. L. Lu & Y. H. Wu, Novon 19(2): 263 (-265). 2009, non *Elymus zadoiensis* S. L. Lu & Y. H. Wu.

Elymus rectisetus (Nees) D.L.Fu, sp. transl. nov. *Vulpia rectiseta* Nees in J. G. C. Lehmann, Pl. Preiss. 2: 107. 1846. ─ *Elymus rectisetus* (Nees) Á. Löve & Connor, nom. inval. ─ *Anthosachne australasica* Steud..

Elymus reflexiaristatus (Nevski) D.L.Fu, sp. transl. nov. *Agropyron reflexiaristatum* Nevski, Izv. Bot. Sada Akad. Nauk S. S. S. R. 30: 495. 1931 publ. 1932. ─ *Elymus reflexiaristatus* (Nevski) Melderis, nom. inval..

Elymus retusus Á. Löve ex D.L.Fu, sp. nom. nov. *Roegneria mutica* Keng & S. L. Chen, J. Nanjing Univ. (Biol.) 1963(1): 87. 1963, non *Elymus muticus* Phil. ─ *Elymus retusus* Á. Löve, nom. inval..

Elymus rigidulus (Keng) D.L.Fu, sp. transl. nov. *Roegneria rigidula* Keng, J. Nanjing Univ. (Biol.) 1963(1): 77. 1963. ─ *Elymus rigidulus* (Keng) Á. Löve, nom. inval..

Elymus scaber (R. Br.) D.L.Fu, sp. transl. nov. *Triticum scabrum* R. Br., Prodr. Fl. Nov. Holland.: 178. 1810. ─ *Elymus scaber* (R. Br.) Á. Löve, nom. inval..

Elymus schultesii D.L.Fu, sp. nom. nov. *Brachypodium strigosum* Schult., Mant. 2: 404. 1824, non *Elymus strigosus* Rydb. ─ *Pseudoroegneria strigosa* (Schult.) Á. Löve.

Elymus setuliferus (Nevski) D.L.Fu, sp. transl. nov. *Elytrigia setulifera* Nevski, Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 17: 61. 1934.

Elymus shawanensis (L. B. Cai) D.L.Fu, sp. transl. nov. *Kengyilia shawanensis* L. B. Cai, Guihaia 16(3): 202. 1996.

Elymus solandri (Steud.) D.L.Fu, sp. transl. nov. *Triticum solandri* Steud., Syn. Pl. Glumac. 1(4-5): 347. 1854. ─ *Elymus solandri* (Steud.) Connor, nom. inval..

Elymus sosnowskyi (Hack.) D.L.Fu, sp. transl. nov. *Agropyron sosnowskyi* Hack., Věstn. Tiflissk. Bot. Sada 29: 26. 1913. ─ *Elymus sosnowskyi* (Hack.) Melderis, nom. inval..

Elymus stenachyrus (Keng) D.L.Fu, sp. transl. nov. *Roegneria stenachyra* Keng, J. Nanjing Univ. (Biol.) 1963(1): 79. 1963. ─ *Elymus stenachyrus* (Keng) Á. Löve, nom. inval..

Elymus stewartii (Melderis) D.L.Fu, sp. transl. nov. *Agropyron stewartii* Melderis in N. L. Bor, Grass. Burma, Ceylon, India & Pakistan: 695. 1960. ─ *Elymus stewartii* (Melderis) Cope, nom. inval..

Elymus stipifolius (Trautv.) D.L.Fu, sp. comb. nov. *Triticum rigidum* var. *stipifolium* Trautv., Trudy Imp. S.-Peterburgsk. Bot. Sada 4: 189. 1875; *Agropyron stipifolium* (Trautv.) Czern. ex Nevski in V. L. Komarov (ed.), Fl. URSS 2: 637. 1934. ─ *Elymus stipifolius* (Trautv.) Melderis, nom. inval..

Elymus tahelacana (J. L. Yang et al.) D.L.Fu, sp. transl. nov. *Kengyilia tahelacana* J. L. Yang, C. Yen & B. R. Baum, Canad. J. Bot. 71(2): 339. 1993.

Elymus tauri (Boiss. & Balansa) D.L.Fu, sp. transl. nov. *Agropyron tauri* Boiss. & Balansa, Bull. Soc. Bot. France 4: 307. 1857. ─ *Elymus tauri* (Boiss. & Balansa) Melderis, nom. inval..

Elymus tenuis (Buchanan) D.L.Fu, sp. comb. nov. *Agropyron scabrum* var. *tenue* Buchanan, Indig. Grass. N. Zeal.: t. 57b, Add.: 11. 1880; *Elymus tenuis* (Buchanan) Á. Löve & Connor, New Zealand J. Bot. 20: 183. 1982, nom. inval. ─ *Connorochloa tenuis* (Buchanan) Barkworth.

Elymus thoroldianus (Oliv.) D.L.Fu, sp. transl. nov. *Agropyron thoroldianum* Oliv. in Hooker's Icon. Pl. 23: t. 2262. 1893. ─ *Elymus thoroldianus* (Oliv.) G. Singh, nom. inval..

Elymus turcicus (P. E. McGuire) D.L.Fu, sp. transl. nov. *Elytrigia turcica* P. E. McGuire, Folia Geobot. Phytotax. 18: 108. 1983.

Elymus uncinatus (Veldkamp) D.L.Fu, sp. transl. nov. *Australopyrum uncinatum* Veldkamp, Blumea 34(1): 67. 1989.

Elymus varnensis (Velen.) D.L.Fu, sp. transl. nov. *Triticum varnense* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss., Math.-Naturwiss. Cl. 39: 28. 1894. ─ *Elymus varnensis* (Velen.) Runemark, nom. inval.; *Elymus varnensis* (Velen.) Kožuharov, nom. inval..

Elymus xinjiangensis D.L.Fu, sp. nom. nov. *Kengyilia pa-*

mirica J. L. Yang & C. Yen, J. Sichuan Agric. Univ. 10: 566. 1992, non *Elymus pamiricus* Tzvelev.

Elymus zhaosuensis (J. L. Yang) D.L.Fu, sp. transl. nov. *Kengyilia zhaosuensis* J. L. Yang, C. Yen & B. R. Baum, Canad. J. Bot. 71(2): 341. 1993.

Exotheca mobukensis (Chiov.) D.L.Fu, sp. transl. nov. *Andropogon mobukensis* Chiov. in Ann. Bot. (Rome) 6: 147. 1907.

Exotheca rudis (Stapf) D.L.Fu, sp. transl. nov. *Hyparrhenia rudis* Stapf, Fl. Trop. Afr. [Oliver et al.] 9(2): 344. 1919.

Exotheca umbrosa (Hochst.) D.L.Fu, sp. transl. nov. *Andropogon umbrosus* Hochst. in Exsicc. (Pl. Schimp.) 2: n. ° 1116. 1842.

Hyparrhenia colobantha (Clayton) D.L.Fu, sp. transl. nov. *Hyperthelia colobantha* Clayton, Kew Bull. 20(3): 439. 1967.

Hyparrhenia kottoensis (Desc. & M. Mazade) D.L.Fu, sp. transl. nov. *Hyperthelia kottoensis* Desc. & M. Mazade, Bull. Soc. Bot. France, Lett. Bot. 134(2): 203. 1987.

Hyparrhenia polychaeta (Clayton) D.L.Fu, sp. transl. nov. *Hyperthelia polychaeta* Clayton, Kew Bull. 20(3): 441. 1967.

Hyparrhenia steudelii D.L.Fu, sp. nom. nov. *Anthistiria dissoluta* Nees ex Steud., Syn. Pl. Glumac. 1: 400. 1854, non *Hyparrhenia dissoluta* Andersson. ─ *Hyparrhenia dissoluta* (Nees ex Steud.) C. E. Hubb, nom. illeg. ─ *Hyperthelia dissoluta* (Nees ex Steud.) Clayton.

Iseilema foveolata (Delile) D.L.Fu, sp. transl. nov. *Andropogon foveolatus* Delile, Descr. Egypte, Hist. Nat. 2(Mém.): 160. 1813. ─ *Eremopogon foveolatus* (Delile) Stapf.

Iseilema paranjpyeana (Bhide) D.L.Fu, sp. transl. nov. *Andropogon paranjpyeanus* Bhide, J. Proc. Asiat. Soc. Bengal 7: 514. 1911.

Iseilema tuberculata (Hack.) D.L.Fu, sp. transl. nov. *Andropogon tuberculatus* Hack. in A. L. P. P. Candolle & A. C. P. Candolle, Monogr. Phan. 6: 404. 1889.

Saccharum beccarii (Stapf) D.L.Fu, sp. transl. nov. *Spodiopogon beccarii* Stapf, Bull. Misc. Inform. Kew 1898: 228. 1898. ─ *Saccharum beccarii* (Stapf) Cope, nom. inval..

Saccharum brasiliense (Trin.) D.L.Fu, sp. transl. nov. *Imperata brasiliensis* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 331. 1833.

Saccharum cheesemanii (Hack.) D.L.Fu, sp. transl. nov. *Imperata cheesemanii* Hack., Trans. & Proc. New Zealand Inst. 35: 378. 1903.

Saccharum condensatum (Steud.) D.L.Fu, sp. transl. nov. *Imperata condensata* Steud., Syn. Pl. Glumac. 1(6): 431. 1854.

Saccharum depauperatum (Merr.) D.L.Fu, sp. transl. nov. *Miscanthus depauperatus* Merr., Philipp. J. Sci., C 5: 170. 1910.

Saccharum flavidum (S. M. Phillips & S. L. Chen) D.L.Fu, sp. transl. nov. *Imperata flavida* S. M. Phillips & S. L. Chen, Novon 15(3): 469. 2005.

Saccharum kajkaiense (Melderis) D.L.Fu, sp. transl. nov. *Erianthus kajkaiensis* Melderis, Biol. Skr. 14(4): 39. 1965. ─ *Saccharum kajkaiense* (Melderis) Melderis, nom. inval..

Saccharum liuanum D.L.Fu, sp. nom. nov. *Miscanthus villosus* Y. C. Liu & H. Peng, Nordic J. Bot. 28(6): 671 (-672). 2010, non *Saccharum villosum* Steud..

Saccharum lutarioriparium (S. L. Chen & Renvoize) D.L.Fu, sp. transl. nov. *Miscanthus lutarioriparius* L. Liu ex S. L. Chen & Renvoize, Kew Bull. 60(4): 605 (-607). 2006.

Saccharum minutiflorum (Hack.) D.L.Fu, sp. transl. nov. *Imperata minutiflora* Hack., Monogr. Phan. [A. DC. & C. DC.] 6: 100. 1889.

Saccharum nepalense (Trin.) D.L.Fu, sp. transl. nov. *Eulalia nepalensis* Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 333. 1832.

Saccharum nudipes (Griseb.) D.L.Fu, sp. transl. nov. *Erianthus nudipes* Griseb., Nachr. Königl. Ges. Wiss. Georg-Augusts-Univ. 3: 92. 1868.

Saccharum oligostachyum (Stapf.) D.L.Fu, sp. transl. nov. *Miscanthus oligostachyus* Stapf., Bull. Misc. Inform. Kew 1898(141): 227. 1898.

Saccharum paniculatum (B. S. Sun) D.L.Fu, sp. transl. nov. *Rubimons paniculatus* B. S. Sun, Acta Bot. Yunnan. 19: 239. 1997.

Saccharum parodii (Acev.-Rodr.) D.L.Fu, sp. transl. nov. *Imperata parodii* Acev.-Rodr., Bol. Soc. Argent. Bot. 12: 358. 1968.

Saccharum sacchariflorum (Maxim.) D.L.Fu, sp. transl. nov. *Imperata sacchariflora* Maxim., Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans 9: 331. 1859.

Saccharum sinense (Andersson) D.L.Fu, sp. transl. nov. *Miscanthus sinensis* Andersson, Öfvers. Kongl. Vetensk.-Akad. Förh. 12: 166. 1855.

Saccharum tenue (Hack.) D.L.Fu, sp. transl. nov. *Imperata tenuis* Hack., Monogr. Phan. [A. DC. & C. DC.] 6: 689. 1889.

Saccharum trinii (Hack.) D.L.Fu, sp. transl. nov. *Erianthus trinii* Hack., Monogr. Phan. [A. DC. & C. DC.] 6: 135. 1889. ─ *Saccharum trinii* (Hack.) Renvoize, nom. inval..

Saccharum velutinum (Holttum) D.L.Fu, sp. transl. nov. *Spodiopogon velutinus* Holttum, Gard. Bull. Singapore 11: 297. 1947. ─ *Saccharum velutinum* (Holttum) Cope, nom. inval..

Saccharum wangpicheonense (T. I. Heo & J. S. Kim) D.L.Fu, sp. transl. nov. *Miscanthus wangpicheonensis* T. I. Heo & J. S. Kim, J. Sp. Res. 10(1): 57. 2021.

Saccharum wardii (Bor) D.L.Fu, sp. transl. nov. *Erianthus wardii* Bor, Kew Bull. 9: 498. 1954. ─ *Saccharum wardii* (Bor) Bor ex Cope, nom. inval..

Saccharum williamsii (Bor) D.L.Fu, sp. transl. nov. *Erianthus williamsii* Bor, Kew Bull. 12: 413. 1957 publ. 1958. ─ *Saccharum williamsii* (Bor) Bor ex Cope, nom. inval..

Zea andersonii (J. R. Gray) D.L.Fu, sp. transl. nov. *Tripsacum andersonii* J. R. Gray, Phytologia 33: 204 (-205). 1976.

Zea australis (H. C. Cutler & E. S. Anderson) D.L.Fu, sp. transl. nov. *Tripsacum australe* H. C. Cutler & E. S. Anderson, Ann. Missouri Bot. Gard. 28: 259. 1941.

Zea cundinamarcis (Wet & Timothy) D.L.Fu, sp. transl.

nov. *Tripsacum cundinamarce* de Wet & Timothy, Amer. J. Bot. 68: 274. 1981.

Zea dactyloides (L.) D.L.Fu, sp. transl. nov. *Coix dactyloides* L., Sp. Pl.: 972. 1753. ─ *Tripsacum dactyloides* (L.) L..

Zea intermedia (Wet & J. R. Harlan) D.L.Fu, sp. transl. nov. *Tripsacum intermedium* de Wet & J. R. Harlan, Amer. J. Bot. 69: 1255. 1982.

Zea jalapensis (Wet & Brink) D.L.Fu, sp. transl. nov. *Tripsacum jalapense* de Wet & Brink, Amer. J. Bot. 70: 1141. 1983.

Zea lanceolata (Benth.) D.L.Fu, sp. transl. nov. *Tripsacum lanceolatum* Rupr. ex Benth., Pl. Hartw. [Bentham] 347. 1857.

Zea latifolia (Hitchc.) D.L.Fu, sp. transl. nov. *Tripsacum latifolium* Hitchc., Bot. Gaz. 41: 294. 1906.

Zea laxa (Nash) D.L.Fu, sp. transl. nov. *Tripsacum laxum* Nash, N. Amer. Fl. 17(1): 81. 1909.

Zea luxurians (Durieu & Asch.) D.L.Fu, sp. transl. nov. *Euchlaena luxurians* Durieu & Asch., Bull. Mens. Soc. Linn. Paris 1: 107. 1877. ─ *Zea luxurians* (Durieu) R. M. Bird, nom. inval..

Zea maizar (Hern.-Xol. & Randolph) D.L.Fu, sp. transl. nov. *Tripsacum maizar* Hern.-Xol. & Randolph, Folleto Techn. Of. Estud. Especiales 4: 7. 1950.

Zea manisuroides (Wet & J. R. Harlan) D.L.Fu, sp. transl. nov. *Tripsacum manisuroides* de Wet & J. R. Harlan, Amer. J. Bot. 69: 1255. 1982.

Zea peruviana (Wet & Timothy) D.L.Fu, sp. transl. nov. *Tripsacum peruvianum* de Wet & Timothy, Amer. J. Bot. 68: 275. 1981.

Zea pilosa (Scribn. & Merr.) D.L.Fu, sp. transl. nov. *Tripsacum pilosum* Scribn. & Merr., Bull. Div. Agrostol. U. S. D. A. 24: 6. 1900.

Zea zopilotensis (Hern.-Xol. & Randolph) D.L.Fu, sp. transl. nov. *Tripsacum zopilotense* Hern.-Xol. & Randolph, Folleto Techn. Of. Estud. Especiales 4: 22. 1950.

5. Conclusion

The reliance of humans on cultivated plants can result in cultural influences, leading to variations in classification and nomenclature practices that subsequently impact the scientific hierarchy. The minimum criterion for genus classification by CPCG of Fructophyta D.L.Fu & H. Fu, a crucial and rigorously scientific tool, can effectively mitigate the subjectivity and partiality of traditional taxonomy and modern phylogeny, scientifically identify genus synonyms, and resolve taxonomic nomenclature confusions within the new phylum. Utilizing this minimum criterion has led to the identification of 14 current synonyms such as *Imperata* Cirillo and *Tripsacum* L. across seven genera of Andropogonaceae and 14 current synonyms like *Triticum* L. across three genera of Aegilopaceae. Additionally, 17 new specific names and 221 new specific combinations have been scientifically and validly published in the paper, including *Aegilops aestiva* (L.) D.L.Fu, *Saccharum liuanum* D.L.Fu, and *Zea dactyloides* (L.) D.L.Fu. These publications will effectively establish a solid foundation for accurate application of plant taxonomic names — especially in agriculture and forestry — address taxonomic nomenclature confusions in a scientific manner and provide a scientific basis for evolutionary system research within the new class Scutellopsida D.L.Fu of the new phylum Fructophyta D.L.Fu & H. Fu.

Abbreviations

CPCG	Chloroplast Complete Genomes
PHL	Phylogenetic Loci
PHS	Phylogenetic Similarity

Author Contributions

Da-Li Fu is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest.

References

[1] AASE (Agendae Academiae Sinicae Edita). Flora Reipublicae Popularis Sinicae. Beijing: Science Press; 1987, vol. 9(3), pp. 1-329.

[2] Li, D. Z., Wang, Z. P., Zhu, Z. D., Xia, N. H., Jia, L. Z., Guo, Z. H., Yang, G. Y., Stapleton, C. Bambuseae. In: Wu Z-Y, Raven PH, Hong D-Y eds. Flora of China. Beijing: Science Press; St. Louis: Missouri Botanical Garden Press. 2006, vol. 22, pp. 400–651.

[3] Soreng, R. J., Peterson, P. M., Romaschenko, K., Davidse, G., Zuloaga, F. O., Judziewicz, E. J., Filgueiras, T. S., Davis, J. I., Morrone, O. A worldwide phylogenetic classification of the Poaceae (Gramineae). *J. Syst. Evol.* 2015, 53, 117-137. https://doi.org/10.1111/jse.12150

[4] Soreng, R. J., Peterson, P. M., Romaschenko, K., Davidse, G., Teisher, J. K., Clark, L. G., Barbera, P., Gillespie, L. J., Zuloaga, F. O. A worldwide phylogenetic classification of the Poaceae (Gramineae) II: an update and comparison of two 2015 classifications. *J. Syst. Evol.* 2017, 55, 259-290. https://doi.org/10.1111/jse.12262

[5] Soreng, R. J., Peterson, P. M., Zuloaga, F. O., Ramoschenko K, Clark, L. G., Teisher, J. K., Gillespie, L. J., Barbera, P., Welker, C. A. D., Kellogg, E. A., Li, D. Z., Davidse, G. A worldwide phylogenetic classification of the Poaceae (Gramineae) III: An update. *J. Syst. Evol.* 2022, 60(3), 476–521. https://doi.org/10.1111/jse.12847

[6] AASE (Agendae Academiae Sinicae Edita). Flora Reipublicae Popularis Sinicae. Beijing: Science Press; 1997, vol. 10(2), pp. 1-294.

[7] AASE (Agendae Academiae Sinicae Edita). Flora Reipublicae Popularis Sinicae. Beijing: Science Press; 1997, vol. 10(1), pp. 135-168.

[8] Welker, C. A. D., McKain, M. R., Estep, M. C., Pasquet, R. S., Chipabika, G., Pallangyo, B., Kellogg, E. A. Phylogenomics enables biogeographic analysis and a new subtribal classification of the Andropogoneae (Poaceae – Panicoideae). *J. Syst. Evol.* 2020, 58(6): 1003–1030. https://doi.org/10.1111/jse.12691

[9] Madhav, N. A., Gosavi, K. V. C. Ethnobotany and pharmacognosy of tribe maydeae (poaceae). *J. Med. Pharm. Allied. Sci.*, 2021, 37-39. https://doi.org/10.22270/jmpas.VIC1I1.1911

[10] Vigosa-Mercado, J. L. Arundinelleae, Tristachyideae y Zeugiteae (Poaceae, Panicoideae). *Flora de Guerrero* 94, 2023.

[11] Feldman, M., Levy, A. A. Wheat Evolution and Domestication. Cham: Springer Nature Switzerland AG; 2023, pp. 1-673. https://doi.org/10.1007/978-3-031-30175-9

[12] Fu, D. L., Fu, H. An evolutionary continuity principle for evolutionary system of organism divisions. *Amer. J. Agric. Forest.* 2018, 6(3), 25-29. https://doi.org/10.11648/j.ajaf.20180603.14

[13] Fu, D. L. An evolutionary particularity principle for evolutionary system of classes of Fructophyta. *Amer. J. Agric. Forest.* 2019, 7(5): 191-199. https://doi.org/10.11648/j.ajaf.20190705.15

[14] Fu, D. L. The theory and practice of evolutionomy. Beijing: China Forestry Publishing House; 2020, pp. 1-158.

[15] Fu, D. L., Fu, H., Qin, Y., Zhou, D. S., Duan, R. M. Analyses of chloroplast genomic and morphological evolutionomy of *Yulania* subsect. *Cylindricae* (Magnoliaceae). *Amer. J. Agric. Forest.* 2019, 7(5), 200-211. https://doi.org/10.11648/j.ajaf.20190705.16

[16] Fu, D. L., Fu, H., Duan, R. M., Qin, Y. Evolutionary System of Magnoliaceae Based on Chloroplast Genomic and Morphological Evolutionomy. *Amer. J. Agric. Forest.* 2024, 12(1), 22-50. https://doi.org/10.11648/j.ajaf.20241201.14

[17] Fu, D. L., Fu, H. New Names and New Combinations of *Phyllostachys* Sieb. & Zucc. (Bambusaceae) *Amer. J. Agric. Forest.* 2024, 12(2), 87-106. https://doi.org/10.11648/j.ajaf.20241202.14

[18] Fu, D. L. New Names and New Combinations of the Genera of *Bambusa*, *Dinochloa* and *Guadua* (Bambusaceae). *Amer. J. Agric. Forest.* 2024, 12(3), 174-184. https://doi.org/10.11648/j.ajaf.20241203.14

[19] Fu, D. L. New Names and New Combinations of *Jarava*, *Cinna*, *Coleanthus*, *Sclerochloa* and *Graphephorum* (Poales). *Amer. J. Agric. Forest.* 2024, 12(4), 242-259. https://doi.org/10.11648/j.ajaf.20241204.13

[20] Bird, R. M. A Name Change for Central American Teosinte. *Taxon*, 1978, 27(4), 361-363. https://doi.org/10.2307/1220377

[21] Cope, T. A. New Combinations in Asiatic Grasses. *Kew Bull.* 1980. 35(3), 701-704. https://doi.org/10.2307/4110025

[22] Clayton, W. D. New Species and Combinations in African and Indian Grasses: Studies in the Gramineae: XLIII. *Kew Bull.* 1978, 32(3), 579-581. https://doi.org/10.2307/4109662

[23] Singh, R. K., Arigela, R. K. A new combination in *Dichanthium* and second-step lectotypification of *Andropogon armatus* (Poaceae: Andropogoneae). *J. Biodivers. Conserv.* 2003, 7(4): 8-15.

[24] Vald és, B., Scholz, H. The Euro+Med treatment of Gramineae ─ a generic synopsis and some new names. *Willdenowia* 2006, 36(2): 657-669. https://doi.org/10.3372/wi.36.36202

[25] Deshpande, U. R. Fascicles of Flora of India ─ Fascicle 15 ─ Tribe Andropogoneae Poaceae. Kolkata: Botanical Survey of India; 1984, pp. 1-30.

[26] Jain, S. K., Deshpande, U. R. Transfer of some Indian species of *Bothriochloa* and *Capillipedium* to *Dichanthium*. *Bull. Bot. Surv. India* 1979, 20 (1-4): 133-135. https://doi.org/10.20324/nelumbo/v20/1978/75639

[27] Kellogg, E. A., Abbott, J. R., Bawa, K. S., Gandhi, K. N., Kailash, B. R., Ganeshaiah, K. N., Shrestha, U. B., Raven, P. Checklist of the grasses of India. *PhytoKeys* 2020, 163, 1–560. https://doi.org/10.3897/phytokeys.163.38393

[28] L öve, Á. Conspectus of the Triticeae. *Feddes Repertorium* 1984, 95(7-8), 425-521. https://doi.org/10.1002/fedr.4910950702

[29] Heywood, V. H. Flora Europaea Notulae Systematicae ad Floram Europaeam spectantes. *Bot. J. Linn. Soc.* 1978, 76: 297-384. https://doi.org/10.2307/2996477

[30] Singh, G. New Combinations in Asiatic *Elymus* (Poaceae). *Taxon* 1983, 32: 639-640. https://doi.org/10.2307/1221746

[31] L öve, Á., Connor, H. E. Relationships and taxonomy of New Zealand wheatgrasses. *New Zealand J. Bot.*, 1982, 20(2), 169-186. https://doi.org/10.1080/0028825X.1982.10428838

[32] Connor, H. E. Flora of New Zealand ─ Gramineae Supplement II: Pooideae (Poeae, Triticeae), *New Zealand J. Bot.*, 2005, 43(2), 493-507. https://doi.org/10.1080/0028825X.2005.9512970

[33] Yang, J. L., Yen, C., Baum, B. R. *Kengyilia*: synopsis and key to species. *Hereditas* 1992, 116: 25-28. https://doi.org/10.1111/j.1601-5223.1992.tb00200.x

[34] Yen, C., Yang, J. L., Baum, B. R. *Douglasdeweya*: A new genus, with a new species and a new combination (Triticeae: Poaceae). *Canad. J. Bot.* 2005, 83(4), 413–419. https://doi.org/ 10.1139/b05-018

[35] Yang, J. L., Yen, C., Baum, B. R. Three new species of the genus *Kengyilia* (Poaceae: Triticeae) from West China and new combinations of related species. *Canad. J. Bot.* 1993, 71(2), 339–345. https://doi.org/10.1139/b93-036

[36] Barkworth, M. E., Jacobs, S. W. L., Zhang, H. Q. *Connorochloa*: a new genus in Triticeae. *Breed. Sci.* 2009, 59: 685–686. https://doi.org/10.1270/jsbbs.59.685

[37] Yen, C., Yang, J. L. *Kengyilia gobicola*, a new taxon from west China. *Canad. J. Bot.* 1990, 68(9), 1894–1897. https://doi.org/10.1139/b90-248

[38] Jensen, K. B., Hatch, S. L., Wipff, J. K. Cytology and morphology of *Pseudoroegneria deweyi* (Poaceae: Triticeae): a new species from the foot hills of the Caucasus Mountains (Russia). *Canad. J. Bot.* 1992, 70(5), 900–909. https://doi.org/10.1139/b92-114