A BIBLIOGRAPHIC STUDY OF BEAUVOIS' AGROSTOGRAPHIE

By Cornelia D. Niles

WITH INTRODUCTION AND BOTANICAL NOTES

By Agnes Chase

INTRODUCTION

The *Essai d'une Nouvelle Agrostographie; ou Nouveaux Genres des Graminées; avec figures représentant les Caractères de tous les Genres*, by A. M. F. J. Palisot de Beauvois, published in 1812, is, from the standpoint of the nomenclature of grasses, a very important work, its importance being due principally to its innumerable errors, less so because of its scientific value.

In this small volume 69 new genera are proposed and some 640 new species, new binomials, and new names are published. Of the 69 genera proposed 31 are to-day recognized as valid, and of the 640 names about 61 are commonly accepted. There is probably not a grass flora of any considerable region anywhere in the world that does not contain some of Beauvois' names.

Many of the new names are made in such haphazard fashion that they are incorrectly listed in the Index Kewensis. There are, besides, a number of misspelled names that have found their way into botanical literature. The inaccuracies are so numerous and the citations so incomplete that only a trained bibliographer could solve the many puzzles presented. Cornelia D. Niles in connection with her work on the bibliography of grasses, maintained in the form of a card catalogue in the Grass Herbarium, worked out the basis in literature of each of these new names.

The botanical problems involved, the interpretation of descriptions and figures, were worked out by Agnes Chase, who is also responsible for the translation and summaries from the Advertisement, Introduction, and Principles. The translation is a free one in that no attempt has been made to preserve the author's style. No pains

have been spared to convey the precise meaning, but it is given in as few words as possible. Beauvois' writing is exceedingly verbose, with numerous references to "the useful and amiable science of botany." These literary rococo decorations have been omitted.

SUMMARY OF BEAUVOIS' ESSAY.

Beauvois' Essay consists of two parts, preceded by an Advertisement, explaining the purpose of the work. Part one, pages i to lxxiv, is in French. It consists of an Introduction explaining Beauvois' New Principles of Agrostology, and describing and discussing the structure of grasses from root to grain, with a chapter on the classification [Méthode] of earlier authors and an explanation of his proposed new method. There follows a combined glossary, explanation of abbreviations and partial bibliography. A large Tabula Methodica (in Latin) showing the arrangement of genera in sections, these in cohorts, these in tribes, and the tribes in families, is inserted at the end of the introduction.

The second part of the work (pages 1 to 145) "Genera Novae Agrostographiae" is in Latin with observations in French. The genera are arranged in accordance with the classification shown in the Tabula Methodica. The "index" is a combination of an index and a list of identifications, many names of grasses not included in the text being listed and referred to particular genera, many followed by "?" This index is of importance because it is only by means of references there given that the basis of many of Beauvois' names can be ascertained.

The Essay, which is an octavo, is accompanied by a quarto of 25 plates of several figures each, with explanations. The validity of some of Beauvois' names is based on the names and brief descriptions given in these explanations.

The more important parts of the Advertisement and Introduction are here presented in translation. Other parts are summarized, the summaries being set in smaller type. The translations and summaries will give an idea of Beauvois' understanding of the morphology of grasses and of his proposed new system of classification. They also show the self-confidence and want of accuracy characteristic of the author, which resulted in the confusing complex of botanical and bibliographical problems we here attempt to solve.

"ADVERTISEMENT."

"This work is as yet only an attempt, subject to change and improvement. The confusion, I should even say disorder, found in this important branch of botany does not admit of the desired degree of perfection in a first tentative work. Such as it is, however, I venture

to flatter myself that it will lead to a more perfect knowledge of the grasses. The changes which may [hereafter] be made will be in certain details, in the uniting or segregating of genera; but I do not think it will be possible to attack at all the basis and principles of the classification [Méthode]. All the genera are there distinguished by characters certain, constant, and easy to comprehend.

"Some persons, perhaps too much attached to the old order, will protest against the great number of genera. But this protest will not be on the part of botanists devoted to the progress of the science; they will not be in haste to judge, and, before expressing their opinion, they will wish to examine the new classification, to study it, to catch the spirit of it as a whole, without devoting themselves minutely and separately to details which are an integral part of the whole.

"It may be that some of the new genera will have to be reduced, * * * such as *Sorghum* to *Andropogon*, *Aira* to *Avena*, *Dactylis* and *Koeleria* to *Bromus*, *Meoschium* to *Colladoa*, *Milium* and *Axonopus* to *Paspalum*, *Cinna* to *Apera*, *Chondrosium* to *Bouteloua*, etc.

"However, I present this essay to botanists. Their judgment and their counsel will enable me to carry the Agrostographie to the highest degree of perfection possible and desired. * * *"

Beauvois planned to follow the Essay with a larger work giving detailed descriptions of all the species. To this end he begs botanists to send him species not found in his collections. In this projected work he expected the cooperation of Desvaux. Their intention was to illustrate all the species not figured by well-known authors, such as Morison, Plukenet, Schreber, Host, Cavanilles, etc. Beauvois counted on this work to enable him to perfect his classification. The illustration of the species had been commenced and so far as completed the figures were published with the Essay. The plates were issued in quarto because it would increase the size and the price of the work if they were printed in octavo like the text, while to print the text in quarto would make an inconvenient volume. A limited edition in quarto was published.

"In many parts of this work I have made it a rule to cite the names of the botanists who have contributed [specimens] from their collections, with the amenity, zeal, and benevolence characteristic of every botanist zealous for the science * * *. I shall here present the list in order to pay publicly to these scholars the tribute of my thanks. They are MM. de Jussieu, Desfontaines, who not only placed their herbaria at my disposal, but contributed [specimens] from the beautiful and rich collections of the Natural History Museum; Bosc, known for his zeal for science * * *; Dupetit-Thouars, de Lessert, Desvaux, Persoon, Richard, Poiret, Delile, Thuillier, Gay, to whom I owe a large number of species described by Gaudin, Roemer, and Balbis. The last two have sent me all the exotic or indigenous grasses which they have at their disposal."

Owing to the difficulties of correspondence [during the Napoleonic wars] Beauvois had not been able to establish communication with Swartz, Thunberg, Afzelius, Robert Brown, and others. If his letters had reached them he is confident they would have been eager to send him what he asked, and his work would have been more complete, especially in regard to the great number of obscure genera which he could not place definitely in his classification. He hoped that his Essay would reach them and that their advice and interest would enable him to add two plates illustrating the characters of the genera as yet unknown to him.

There follows a request that botanists will note the Errata (given after the index).

"INTRODUCTION."

"The grasses, including wheat, maize, rye, barley, millet, sugar-cane, oats, and the innumerable genera and species which adorn and enliven the prairies, are, undeniably, the most generally useful of all plants known. These valuable plants supply the needs of man in all climates, whether for his own food or for that of the domestic animals which serve his need or his pleasure. 'The leaves of grass afford rich pasture to flocks and herds: the small seeds are food for the birds and the larger seeds are food for men' [Linnaeus] Philos. Bot. * * *

"In our climate the grasses are of especial interest; they are the basis of the comfort and wealth of the landowner. They yield a bountiful return for the care and labor of the farmer. Even the poor man, gleaning after the reapers, secures food for his numerous family for part of the winter; and the culms gathered with care serve to thatch his humble cabin. Finally the grasses are not less interesting to the botanist * * * the object of his researches and meditations.

"When one contemplates the value of the grasses one is astonished that this branch of botany has not, up to the present time, attracted the same attention, excited the same enthusiasm and interest, as have other plants, doubtless more beautiful in foliage and flower, but of less special utility; and that the study of these plants has not been undertaken and followed with a perseverance proportionate to their value and which their interest deserves.

"Nevertheless, since Micheli, Ray, Scheuchzer, Gahn, and Linné, who must be regarded as the founders and the foremost reformers of agrostology, many botanists have directed their attention to the grasses. Schreber studied them in their smallest details. Desfontaines, Swartz, Loureiro, Richard, Muhlenberg, Leers, Roth, Schrader, Persoon, Willdenow, Desvaux, Gaudin, etc., have published many new genera, and a large number of species, described with great exactness. In the enumeration of these scholars * * * I ought to include also Aubert du Petit-Thouars and Desmaziéres. The first has drawn from life nearly all the species of grasses which

he met in his travels; he has shown me his drawings, while communicating to me a great number of new species, and I can not but regret that this keen observer has not yet published his work. The second young botanist, pupil of Lestiboudois, learned professor of natural history at Lille, has recently published an agrostographie of the northern departments [of France]. Finally I will mention * * * the scholar, Robert Brown, who seems to have studied the grasses after new principles, often in accord with mine.

"But though these authors have advanced knowledge by the publication of many new genera and species, they have not contributed in the same proportion to the extension of science in respect to underlying principles. ["Mais, si les ouvrages de ces divers auteurs ont donné lieu à quelques changements heureux par la publication de plusieurs genres et de plusieurs espèces nouvelles, ils n'ont pas contribué, dans la même proportion, à étendre les limites de la science, sous le rapport de la partie Dogmatique et de ses bases fondamentales." Possibly Beauvois literally meant dogmatic. His own "Method" is largely dogmatic, with assumed principles, based on unverified statements.] The great number of genera earlier published and in need of revision remain in uncertainty and confusion. This want of order appears to be due to three principal causes: (1) The neglect or want of consideration given to certain characters of which the importance and real value had not, perhaps, been sufficiently appreciated or which had been artificially used. (2) The undue importance and value attributed to variable characters which do not hold for all the species of a single genus and are often found in the species of different genera. (3) The reluctance or the timidity of certain botanists, too timid to dare to leave the beaten path and to disregard criticism and conformity, prejudices, and restrictions.

"In the interest of science I have determined to follow a different course. My natural taste for observation, increased by habit and use during my extended travels, has fixed my attention on those parts of botany that appear to me the most neglected. After the mosses the grasses are, without doubt, the least well known. I believe that this order of plants demands great changes, I do not fear to say even an almost complete revision. With this idea in mind I worked on each species separately; then having compared the species and considered them as a whole, I am convinced that the characters [hitherto] adopted are, for the most part, vague, imperfect, negative, and that botanists have neglected other characters much more important, more constant and more natural. I noted that the foundation and principles hitherto adopted had not the advantage of these [more constant and natural] characters; I sought for other principles, based on constant and characteristic

organization of these plants. These researches suggested to me the idea of a new classification. I submit it to the discernment of botanists whose counsel, advice, and just criticism I shall always welcome with gratitude.

"Some persons will, perhaps, protest against the innovations introduced, the great number of new genera and the new terms; but I beseech the indulgence of botanists zealous for the progress of the science—of those who know how to grasp realities and facts, and not just the words; I charge them to lay aside all bias, to put aside for the moment the old principles and the old foundations which form agrostological precedents—to weigh, examine, consider the whole with the impartiality of true scholars; in so doing I believe they will feel the necessity of what at first might be taken for arbitrary and systematic innovations.

* * * * * * *

"The genera are very numerous, undoubtedly, but it is not the number of them that ought to make one pause, but their characters only. If according to the characters which constitute them the genera are natural; if they are so distinct from each other that the differences prove their organization to be diverse; if, finally, they are so defined that they can not be confused, what matters their number, seeing that nature has produced them? I dare to assert with assurance, that there is not one of the new genera proposed which has not characters more prominent, more natural, and more easy to understand than the greater part of those previously established, and of which the characters are in large part negative. I shall mention but a single example (lest any take fright) of a genus, accepted as valid in this work, which ought to be amended, that is, *Sorghum*. It has no positive and constant character which separates it from certain species of *Andropogon*. Moreover, in order to leave the choice to botanists, as to whether or not they will accept the new genera I propose, I have not numbered them, and have placed them, so far as the classification permitted, immediately following the old genera from which they have been segregated.

"One will, perhaps, be surprised that I have not conserved certain names already in use. Such, among others, as *Leersia*, *Lappago*, *Sturmia*, which I name *Asprella*, *Tragus*, *Mibora*. But on reflection one will see that this is but justice to those concerned. Certainly it matters little to science that such genera should bear this or that name; but in failing to establish any rule in the matter it follows that nomenclature becomes arbitrary and synonymy becomes so confused as to obstruct and hinder the progress of science. Take, for example, *Mibora*. Adanson was the first to establish the genus which Linnaeus had included in *Agrostis;* long after this Smith named it

Knappia, and, quite recently, this name was adopted by Koeler and Gaudin. Recently Hope [error for Hoppe] changed the name, substituting *Sturmia*, and this is taken up by Willdenow, Persoon, etc. Finally Wiber [error for Wibel] rejected the existing names and renamed the plant *Chamagrostis*, which Decandolle prefers. I ask in all confidence what should one do with such confusion? Is it not better to give preference to the oldest name, chosen by the author who established the genus? But, in order to make this rule apply generally, and to avoid sundry inconveniences, I propose to fix a time beyond which the name should not again be taken up. For this date I take the works of Linnaeus, and I think that for all genera published since that celebrated botanist the names bestowed by those who first distinguished them should be conserved, when these names are not too barbarous to be admissible. Therefore *Leersia* should be discarded for *Asprella*, given by Schreber and already adopted by Delamarck, as should the still older *Homalocenchrus*, an inadmissible name, which Haller[1] had earlier chosen; and the same for all the others. If botanists will adopt this principle there will be in the future neither arbitrariness nor confusion in the nomenclature of the old genera which it may be desirable to restore. *Mibora* will no longer be called *Knappia* in England and part of Germany; it will not be *Sturmia* for one, *Chamagrostis* for the other; it will be *Mibora* throughout the world and botanists will understand one another much better."

"NEW PRINCIPLES OF AGROSTOLOGY."

"The grasses, like all other plants, are composed externally of root, stem, leaves, and flowers. Each of these parts presents differences and characters peculiar to the grasses, and makes them easy to distinguish from all other orders. Internally one recognizes the two tissues, cellular and tubular, as in other Phanerogams, but differently disposed, arranged, and modified.

"The cellular tissue composes most of the bulk and soft part of the plant. The tubular tissue is distributed regularly by longitudinal bundles and forms the fibers in most species; these bundles are arranged in concentric circles in the cellular tissue which surrounds them.

"Each of these rows of bundles of fibers is the origin of one of the leaves which the culm successively bears; this explains why the whole culm is much larger at the base and becomes smaller in diameter as it rises and bears leaves. The rows of bundles of fibers which remain at the center during the growth of the plant are des-

[1] The reference is to Hall. Nom. Hist. Pl. Helv. 128. 1769. The genus was published by Mieg in 1760.

tined to produce the flowers, and their number is found to be in proportion to the number of spikelets which the spike or panicle is to bear."

This idea, that the culm was made up of coalesced tubes, separating successively as leaves, is elaborated and illustrated. The cross sections shown are said to be from barley. One section (*plate 2, figure 6*) seems to have been drawn from the cross section of the culm with the surrounding sheath adhering to it. The others are obviously imaginary, drawn to illustrate the author's idea.

Five chapters are devoted to the structure of the grasses, chapter 1, the root; 2, the culm; 3, the leaves; 4, the axis of inflorescence; 5, the fructification. There are some misconceptions in morphology but nothing that appears to be imaginary, like the account already given of the formation of the leaves from concentric rows of fibro-vascular bundles separating successively from the culm. In chapter 4 Beauvois distinguishes two forms of axis: (A) "simple [in distinction from articulate, not from compound] and entire," [plate 1, figures 1, 2, 5, 6, 7, 11, cited as examples are respectively, inflorescences of *Alopecurus, Arrhenatherum, Spartina, Dactyloctenium, Cornucopiae, Andropogon*]; and (B) "articulated and dentate" [plate 1, figure 9, cited as example is *Secale cereale*]. These two forms had not been distinguished by botanists, he says, hence he calls special attention to them and then makes two generalizations (which do not hold): (1) "In all grasses with simple and entire floral axis the glumes are more or less unequal, sheathing, and inserted alternately." (2) "In all grasses with articulate or dentate floral axis the glumes are either opposite or paired, rarely sheathing, inserted parallel on the articulation or the tooth of the rachis." (See Tabula Methodica for genera included in the tribes based on the floral axis as distinguished. It will be seen that genera of *Andropogoneae* with thickened rachis joints as well as a few genera of *Festuceae* and *Chlorideae* are classed with genera of *Hordeae* as having dentate axis.)

In chapter 5 the grasses are divided into two families: 1, Monothalama, in which the spikelets are uniform; and 2, Polythalama in which the spikelets are of two kinds. These form the primary divisions of the classification. In Monothalama Beauvois distinguishes between hermaphrodite and polygamous spikelets, and restricts the term polygamous to those spikelets in which the lower florets are staminate or neuter (as in *Paniceae, Phalarideae,* and *Arrhenatherum*). He holds that the term is not accurately applied to spikelets of *Chloris* and *Dactyloctenium* in which the upper florets are aborted, since commonly the essential organs are present but rudimentary, as in *Poa, Festuca, Melica,* and others.

"The spikelets are pediceled or sessile, solitary, paired, or verticillate, naked or subtended by an involucre."

The involucre is treated as a definite organ. As examples of involucres are mentioned and figured the bell-shaped sheathing leaf in *Cornucopiae;* the "head" in *Coix;* the sterile spikelet below the little cluster of perfect ones in *Cynosurus;* the bractlets at the base of the panicle in *Sesleria,* and the entire silky pubescence in *Saccharum, Imperata, Erianthus,* and *Perotis.* In the latter it is the "long tomentum at the base of the spike" which he considers the involucre. [In immature panicles of *Perotis latifolia,* the species figured, the undeveloped spikelets at base present a mass of slender awns. In mature panicles there is no "tomentum."] Beauvois explains that in a true involucre, whatever its texture, membranaceous or silky, the parts are inserted

at the same point, like verticils. The silk in *Andropogon*, *Arundo* and other grasses is not so arranged and does not constitute an involucre. In the text *Cenchrus*, *Anthephora*, *Pennisetum*, and other genera are described as having involucres.

The discussion of the parts of the spikelet shows that Beauvois had a fairly accurate concept of their morphology. He follows Jussieu in the use of the term glumes (as applied to-day) for the "calix" of Linnaeus. The two glumes form the "tegmen" (covering) distinguished from the lower and upper paleae (lemma and palea), the "corolla" of Linnaeus, which form the "stragulum" (another word for covering) which incloses the true flower.

The bristle ("seta") is recognized as a prolongation of a nerve, "usually straight, rarely twisted, sometimes departing abruptly from the membranaceous part of the lemma, sometimes from the summit, or from the back or at the base; it may be elongate and bordered by the gradually disappearing membranaceous summit as in *Festuca*, *Triticum*, *Secale*, *Hordeum*, etc. * * * Botanists have confused the bristle with the true awn and have referred to both under the common name 'arista'." The following definition will differentiate the two.

"Awn, Arista * * * Hard, coriaceous, inserted abruptly and usually without an evident origin [not an evident continuation of a nerve], serving often as a sheath to the bristle which it embraces and to which it strongly adheres. The strongest lens does not reveal any indication of it below its insertion." The awn of *Avena* is figured as an example, "The awn differs from the bristle (1) by the texture hard or coriaceous; (2) by its base or insertion, which appears to arise abruptly; (3) usually by a bend near the middle, the lower part twisted in a spiral and commonly hygroscopic; (4) by its proportion compared with that of the bristle and its thickness due to the addition of the coriaceous substance." *Agrostis canina*, *A. rubra*, *Calamagrostis*, *Trisetum*, and *Andropogon*, all with twisted, geniculate awns, are figured as examples. In a further discussion Beauvois states that there are rare cases in which the awn, entirely herbaceous, does not differ from a bristle properly so-called. The awns of *Piptatherum paradoxum* (*Milium paradoxum*), *P. coerulescens* (*Milium caerulescens*), and *P. punctatum* (*Eriochloa punctata*) are figured as examples.

There is a long discussion maintaining the validity of this differentiation, which is so important a part of his classification. Beauvois says "Botanists have not distinguished the bristle from the awn, but the elders did not confound in a single genus species with bristles, others with awns, and still others muticous, as Linnaeus has done in such genera as *Agrostis*, *Aira*, *Ischaemum*, *Milium*, *Festuca*, *Saccharum*, etc."

The lodicules, stamens, and pistil, composed of ovary, style and stigmas, and the grain are discussed at length. Beauvois points out that in the Linnaean system, based on the number and position of stamens, natural relationships are disregarded, the grasses being distributed in classes remote from each other.

Chapter 6 is a discussion (1) of the classifications of earlier authors and (2) an explanation of the new classification, by which "once having grasped the principles, it will be easy to classify all the plants in their family, their tribe, their cohort, and their genus."

"This classification does not at present include all known genera of grasses; there are some that are distinguished by peculiar characters. These characters appear to exclude such plants from this

TABULA METHODICA.

- Family I: Monothalama. Spikelets all alike
  - Tribe I: Axis continuous. Glumes alternate
    - Cohort I: Spikelets 1-flowered
      - Sect. 1. Spikelets without glumes — Zoysia. Asprella.
      - Sect. 2.—Spikelets with glumes. Floret of 1 bract.
        - Lemma awned — Cornucopiae, Alopecurus. Agraulus.
        - Lemma muticous — Trichodium. Perotis. Saccharum.
      - Sect. 3.—Floret of 2 bracts. Lower glume the larger
        - Lemma muticous — Imperata. Eriochrysis, Ceresia. Paspalum. Axonopus. Milium. Gen. obsc. Reimaria.
        - Lemma with bristle [3]
          - Bristle terminal — Erianthus. Calamagrostis. Chaeturus. Vilfa.
          - Bristle below apex — Polypogon.
        - Lemma awned
          - Awn terminal — Piptatherum. Stipa. Oryzopsis. Achnatherum. Gen. obsc. Streptachne.
          - Awn below apex — Gastridium.
          - Awn from base — Agrostis. Colobachne.
      - Sect. 4.—Lower glume the smaller
        - Lemma muticous — Crypsis. Tragus. Heleochloa. Phleum. Achnodonton. Spartina. Sporobolus. Gen. obsc. Trichoon.
        - Lemma with bristle
          - Bristle terminal — Oryza. Muhlenbergia. Clomena. Podosemum. Mibora. Chaetaria.
          - Bristle below apex — Apera. Cinna. Curtopogon.
        - Lemma awned
          - Awn terminal — Arthratherum. Aristida. Pentapogon.
          - Awn from back — Lagurus.
    - Cohort II: Spikelets semi-2-flowered [4]
      - Lemma muticous — Phalaris. Chilochloa. Cynodon. Gen. obsc. Coelachne.
      - Lemma with bristle
        - Bristle terminal — Brachyelytrum. Bouteloua. Chondrosium. Triathera.
        - Bristle below apex — Gymnopogon. Enneapogon.
      - Lemma awned — Anisopogon. Deyeuxia.
    - Cohort III: Spikelets many-flowered. Florets polygamous
      - Sect. 1.—Spikelets 2-flowered
        - Lemma muticous — Panicum. Paractaenum. Anthaenantia. Hymenachne. Monachne. Streptostachys. Digitaria. Gen. obsc. Neurachne. Isachne.
        - Lemma with bristle — Urochloa. Echinochloa. Oplismenus. Setaria. Melinis. Gen. obsc. Dimeria.
        - Lemma awned — Arrhenatherum. Pogonatherum.
      - Sect. 2.—Spikelets 3-many-flowered
        - Lemma muticous — Ichnanthus. Cenchrus. Anthephora. Penicillaria. Pennisetum. Gymnotrix. Arundo. Ehrartha. Gen. obsc. Tetrarrhena.
        - Lemma with bristle
          - Bristle terminal — Trochera. Hierchloa. Microlaena. Torezia. [Torresia.]
          - Bristle below apex — Campulosus.
        - Lemma awned — Anthoxanthum.
    - Cohort IV: Florets perfect
      - Lemma muticous — Cynosurus. Elytrophorus. Briza. Melica. Molinia. Centotheca. Orthoclada. Poa. Eragrostis. Airopsis. Leptochloa. Eleusine. Dactyloctenium. Gen. obsc. Achneria.
      - Lemma mucronate — Schismus. Megastachya. Uniola. Ceratochloa. Graphephorum. Triodia. Tricuspis.

- Family II: Polythalama. Spikelets of two kinds.
  - Tribe II: Axis articulate or dentate. Glumes parallel [opposite].
    - Cohort V: Spikelets many-flowered.
      - Sect. 1.—Florets perfect.
        - Lemma with bristle.
          - Bristle terminal: Donax. Sesleria. Chloris. Streptogyna. Diplachne. Triplasis. Enneapogon. Pappophorum. Echinaria. Gen. Obsc. Triraphis.
          - Bristle below apex: Rabdochloa. Koeleria. Dactylis. Calotheca. Trichaeta.
        - Lemma awned.
          - Awn dorsal: Bromus. Holcus. Trisetum. Avena.
          - Awn basal: Aira. Deschampsia. Corynephorus.
          - Awn terminal: Pommereula. Danthonia. Pentameris. Gen. Obsc. Eriachne. Ectrosia.
      - Sect. 2.—Florets polygamous.
        - Lemma awned: Gaudinia.
        - Lemma muticous: Beckmannia. Glyceria. Catabrosa. Sclerochloa.
        - Lemma with bristle.
          - Bristle below apex: Schenodorus. Dineba.
          - Bristle terminal: Festuca. Brachypodium. Lolium. Agropyron. Triticum. Aegylops. Secale. Elymus.
    - Cohort VI: Spikelets 1-flowered.
      - Lemma muticous: Ischaemum. Trachis. Lodicularia. Rottboella. Gen. obsc. Xerochloa. Lepturus. Zeugites.
      - Lemma with bristle: Meoschium. Arthraxon. Colladoa. Gen. obsc. Chamaeraphis.
      - Lemma awned.
        - Spikelets polygamous: Zeocriton.
        - Spikelets perfect: Hordeum.
  - Tribe III: Axis articulate or dentate. Glumes parallel.
    - Cohort VII.
      - Sect. 1.—Stamens 3: Microchloa. Ophiurus. Monerma. Nardus.
      - Sect. 2.—Stamens indefinite, numerous: Tripsacum. Manisuris. Peltophorus. Gen. obsc. Raphis. Elyonurus? Sehima? Themeda?
  - Tribe IV: Axis continuous. Glumes alternate.
    - Cohort VIII: Axes polygamous.
      - Sect. 1.—Spikelets 1-flowered.
        - Lemma with bristle: Pariana.
        - Lemma muticous: Ægopogon. Chrysurus. Zizania. Olyra. Gen. obsc. Dipogonia.
      - Sect. 2.—Spikelets many-flowered.
        - Lemma muticous: Pharus. Gen. obsc. Potamophila. Leptaspis.
        - Lemma awned: Thuarea. Anatherum. Calamina. Gen. obsc. Cymbachne?
    - Cohort IX: Axes unisexual.
      - Sect. 1. Monoecious: Andropogon. Sorghum. Diectomis. Apluda. Anthistiria. Heteropogon.
      - Sect. 2. Dioecious: Lithachne. Hydrochloa. Luziola. Zea. Coix.

Spinifex. Gynerium.

[1] See page 143 for differentiation between bristle (*seta*) and awn (*arista*).

[2] The same as sesquiflora (a flower and a half) of later authors.

GENERA OF UNCERTAIN POSITION.

- Style simple.
  - Stigma simple: Lygeum.
  - Stigma 2.
    - Lodicules 2: Nastus.
    - Lodicules 3: Bambusa.
- Style 2-parted. Stigmas 2. Lodicules 2: Psamma.
- Style 3-parted. Stigmas 3.
  - Lodicules 2: Diarrhena.
  - Lodicules 1: Remirea.
  - Lodicules 3: Arundinaria. Stemmatospermum.

Obscure genus: Diaphora.

order and to show an approach to *Cyperaceae*. The most striking genera are *Lygeum*, *Nastus*, *Bambusa*, *Stemmatospermum* * * *. For this reason I give a sort of appendix to my classification.[2] The researches of botanists will determine whether these plants should be included among the grasses (if they should it will not be difficult to arrange them in their respective places) or whether, as I surmise, they constitute a distinct order intermediate between *Gramineae* and *Cyperaceae*."

CLASSIFICATION OF THE GENERA IN BEAUVOIS' ESSAY.

Following is a list of the genera in Beauvois' table, with the names in present use, if different, indicated by = sign. Where a generic name is misapplied by Beauvois, as in *Arundo*, the genus to which he refers (but which is not a true synonym) is given in parenthesis. Where two or more genera are included under a single new name, as in *Piptatherum*, the synonym is indicated by = sign, the other name by parenthesis. Beauvois' application of generic names is determined by the species illustrated. Species which Beauvois evidently did not know and which are not congeneric with the species figured he also included in many cases. The list will enable the agrostologist to check up generic names as used in the Essay.

Beauvois' statement that the Gramineae were in disorder was true. The arrangement of genera was most artificial. Most pre-Linnaean authors recognized the Gramineae as a natural order including grasses, sedges, and rushes, and sometimes other plants with grass-like leaves. In Linnaeus' Species Plantarum the grasses fall under seven classes, Monandria Monogynia, Diandria Digynia, Triandria Monogynia, Triandria Digynia (with 47 of the 58 genera), Hexandria Digynia, Monoecia Triandria, Polygamia Monoecia. Authors using the Linnaean system reduced this distribution more or less. Swartz[5] so departed from the system as to place all the grasses together under Triandria. Jussieu[6] in his natural arrangement of genera places Gramineae under Plantae Monocotyledones with an excellent description of the family. The arrangement of genera is much less unnatural than under the Linnaean system and much more natural than Beauvois' arrangement.

Beauvois seems not to have seen Moench's Methodus,[7] in which a new classification, based on the position of the stamens, instead of their number, is proposed. The grasses are distributed under four widely separated divisions.

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[2] Gramina incerti ordinis, pages 140–145, of the Essai, and plate 25.

[5] Prodr. Veg. Ind. Occ. 1788; Fl. Ind. Occ. 1. 1797.

[6] Gen. Pl. 1789.

[7] Meth. Pl. 1794.

Of the works dealing only with grasses the arrangement is also artificial. In Schreber's work [8] the genera are not arranged in any order. In Koeler [9] there are keys to genera and species in the form of tables. The arrangement is, in many parts, a close approach to a natural one, though in some cases closely allied genera are widely separated.

The genera in the following list are arranged under the tribes and in the sequence used in the Gramineae in the United States National Herbarium. This, with relatively few exceptions, is that of Hackel's [10] arrangement in Engler and Prantl's Pflanzenfamilien.

TRIPSACEAE.

Zea.
Tripsacum.
Coix.
Dimeria.

ANDROPOGONEAE.

Imperata.
Saccharum.
Eriochrysis.
Erianthus.
Pogonatherum.
Apluda (Anadelphia).
Calamina=Apluda.
Diectomis (Apluda).
Ischaemum.
Colladoa=Ischaemum.
Meoschium=Ischaemum.
Sehima=Ischaemum.
Lodicularia=Manisuris.
Peltophorus=Manisuris.
Rottboëlla=Manisuris.
Manisuris (Rytilix).
Ophiurus.
Elyonurus.
Arthraxon.
Andropogon.
Cymbachne (?Andropogon).
Anatherum=Andropogon.
Sorghum=Holcus.
Raphis (error for Rhaphis).
Heteropogon.
Themeda.
Anthistiria=Themeda.

NAZIEAE.

Trachis (error for Trachys).
Anthephora.
Aegopogon.
Tragus=Nazia.
Neurachne.
Perotis.
Zoysia=Osterdamia.

MELINIDEAE.

Melinis.

PANICEAE.

Anthaenantia.
Digitaria (Syntherisma).
Monachne=?Eriochloa.
Axonopus.
Paspalum.
Reimaria=Paspalum (Reimarochloa).
Ceresia=Paspalum.
Panicum.
Streptostachys (=abnormal Panicum).
Urochloa=Panicum.
Ichnanthus.
Hymenachne.
Isachne.
Oplismenus.
Echinochloa.
Setaria=Chaetochloa.
Chamaeraphis.
Paractaenum.
Pennisetum.

[8] Beschr. Gräs. 1769.

[9] Descr. Gram. 1802.

[10] Professor Hackel, in conversation with the writer and in letters, explained that his arrangement was tentative only. He hoped further study would result in a more natural order. Oryzeae, particularly, he regarded as an artificial tribe.

Gymnotrix=Pennisetum.
Penicillaria=Pennisetum.
Cenchrus.
Xerochloa.
Thuarea.
Olyra.
Lithachne.
Spinifex.

Oryzeae.

Oryza.
Asprella=Homalocenchrus.
Pharus.
Leptaspis.
Lygeum.

Zizanieae.

Hydrochloa.
Luziola.
Zizania.
Potamophila.

Phalarideae.

Ehrartha (error for Ehrharta).
Trochera=Ehrharta.
Microlaena.
Tetrarrhena.
Phalaris.
Anthoxanthum.
Hierochloa=Torresia.
Torezia (error for Torresia).

Agrostideae.

Aristida.
Arthratherum=Aristida.
Chaetaria=Aristida.
Curtopogon=Aristida.
Streptachne.
Stipa.
Achnatherum=Stipa.
Oryzopsis.
Milium.
Piptatherum=Oryzopsis (Eriochloa).
Muhlenbergia.
Clomena=Muhlenbergia.
Podosemum=Muhlenbergia.
Brachyelytrum.
Cornucopiae.
Crypsis.
Heleochloa.
Phleum.
Achnodonton=Phleum.
Chilochloa=Phleum.
Alopecurus.
Colobachne=Alopecurus.
Mibora.
Sporobolus.
Vilfa=Agrostis (Sporobolus, Muhlenbergia, and others).
Chaeturus.
Polypogon.
Cinna.
Agrostis.
Agraulus=Agrostis.
Apera=Agrostis.
Trichodium=Agrostis.
Gastridium.
Calamagrostis.
Deyeuxia=Calamagrostis.
Psamma=Ammophila.
Dipogonia=Diplopogon.
Pentapogon.
Lagurus.

Aveneae.

Holcus (Notholcus).
Eriachne.
Achneria=Eriachne.
Coelachne.
Airopsis.
Aira (Aspris).
Corynephorus=Weingartneria.
Deschampsia=Aira.
Trisetum.
Graphephorum=Trisetum.
Trichaeta=Trisetum.
Koeleria.
Avena.
Arrhenatherum.
Gaudinia.
Anisopogon.
Danthonia.
Pentameris.

Chlorideae.

Microchloa.
Cynodon=Capriola.
Spartina.
Campulosus.
Chloris.
Gymnopogon.
Bouteloua.
Chondrosium=Bouteloua.
Triathera=Bouteloua.
Dineba=Dinebra (Bouteloua).
Beckmannia.
Eleusine.
Dactyloctenium.

Leptochloa.
Diplachne=Leptochloa.
Rabdochloa=Leptochloa.

FESTUCEAE.

Pappophorum.
Enneapogon.
Pommereulla.
Triraphis.
Echinaria.
Sesleria.
Elytrophorus.
Gynerium.
Donax=Arundo.
Arundo (Phragmites).
Trichoon=Phragmites.
Triodia.
Tricuspis=Triodia.
Triplasis.
Molinia.
Eragrostis.
Megastachya=Centotheca (Eragrostis).
Catabrosa.
Ectrosia.
Melica.
Diarrhena=Diarina.
Centotheca.
Zeugites=Senites.
Orthoclada.
Streptogyne.
Uniola.
Briza.
Calotheca=Briza.
Dactylis.
Cynosurus.
Chrysurus=Achyrodes.
Sclerochloa.
Schismus.
Poa.
Glyceria=Panicularia.
Festuca.
Schenodorus=Festuca.
Bromus.
Ceratochloa=Bromus.
Brachypodium.

HORDEAE.

Nardus.
Lolium.
Lepturus.
Monerma=Pholiurus.
Agropyron.
Secale.
Aegylops=Triticum.
Triticum.
Hordeum.
Zeocriton=Hordeum.
Elymus.
Pariana.

BAMBOSEAE.

Arundinaria.
Nastus.
Stemmatospermum=Nastus.

Bambusa=Bambos.
Diaphora (a sedge).
Remirea (a sedge).

METHODS OF WORK.

In the present study the authors have had two main objects in view. (1) To typify the new genera proposed by Beauvois and to identify them. The descriptions of the new genera are translated, details of the lodicules, stamens, ovary, etc., being omitted. The selection of the type species is explained in each case. (2) To find the basis of the new combinations, which are mostly made in the index, and so far as possible to identify the species. The basis name has been ascertained in various ways: (a) The name with its author may be cited under the genus or referred in the index to the genus in question. (Example: *Diplachne fascicularis* (Lam.) Beauv., based on "*Festuca fascicularis* Lam.," cited under the genus.) (b) The name may be cited without its author, but the genus from which the species are transferred is cited with its author under the genus. (Example: *Asprella hexandra* (Swartz) Beauv., based on

Leersia hexandrus Swartz, "*Leersia* Sw., Wild., Pers., etc.," being cited under *Asprella*, and *L. hexandra* being one of Swartz's species.) The statement "based on" indicates one of these two cases. Besides these we have ascertained the basis-name (c) when an incorrect authority is given, but when reference to the work of the author cited shows the original author. (Example: *Deyeuxia acutiflora* Beauv. Beauvois cites "*Arundo acutiflora* Wild.," but in one of Willdenow's works we find *Arundo acutiflora* Schrad. This name is, therefore, taken as the basis of *Deyeuxia acutiflora* (Schrad.) Beauv.) More complicated cases are explained individually.

Since most of these transfers were made without knowledge of the plants, many of the new binomials do not belong in the genus to which they were transferred. The queries in the index are found to have little significance. They are placed not only after new combinations, but after old species names. They probably indicate that Beauvois did not know the species so marked. In a few cases a name is transferred to two genera, as *Leersia lenticularis* Michx. transferred to *Asprella* and to *Zizania*. The identification of these older names, upon which Beauvois' names are based, has been arrived at as follows: (a) By reference to records in the Grass Herbarium of type specimens examined (this includes a large part of the American species); (b) by referring the species in question to its typonym under the genus in which we place it, for example, *Saccharum japonicum* Thunb.=*Miscanthus japonicus* (Thunb.) Anderss.; (*c*) by study of the original description compared with the material in the Grass Herbarium. The names to which Beauvois' species are referred are not necessarily valid; they are the names that in our present state of knowledge appear to be the correct ones, and that are in current use in the Grass Herbarium.

The statement "genus valid," or "valid" after a species name means only that these genera and names are accepted as valid at present in the Grass Herbarium. Some names we are not able to place precisely, or we find that the name has not been transferred to the accepted genus. This is true of several species of *Calamagrostis*. In so perplexing a group we do not wish to make new combinations that later may prove to be invalidated by older names.

In May, 1923, Mrs. Chase visited the Delessert Herbarium in Geneva, where Beauvois' herbarium is now preserved. The specimens mostly consist of fragments evidently obtained from various herbaria. Most of them are without data or with but a word or two, as "humb" [Humboldt], "de Jussieu," or "ex Gay." Many of the sheets contain names and diagnosis in Beauvois' script, but relatively few of them agree with the Essay. A specimen of

Axonopus compressus (Swartz) Beauv., for example, is marked "Paspalum–humb[oldt]" only. There is little that aids in the interpretation of the names in the Essay. There are several good specimens collected by Beauvois in Africa, the types of his Flore d' Oware et Benin, but the rest of the herbarium must be the material Beauvois was bringing together for use in preparing the larger work planned (see page 137).

The Essay seems to be based on but a small number of actual plants. In many cases, probably, Beauvois had only the specimen or fragment he secured for illustrating the genus. In some cases, as in *Ichnanthus* and *Diectomis*, he obviously described the illustration, the description containing inaccuracies found in the illustration.

GENERA OF THE NEW AGROSTOLOGY.

[The genera are here given in the order used by Beauvois. Only genera in which there are new combinations are included. The other genera included by Beauvois may be found by reference to the Tabula Methodica and the rearrangement of genera following. All the pages containing names or references which aid in fixing the basis of his names are cited in each case.]

GEN. II. ASPRELLA Schreb.

Asprella hexandra Beauv. 2, 153, 166. Based on *Leersia hexandra* Swartz=*Homalocenchrus hexandrus* (Swartz) Kuntze.

Asprella lenticularis Beauv. 2, 153, *pl. 3. f. 1.* Based on *Leersia lenticularis* "Wild. Pers." Persoon[11] gives Michaux as author.=*Homalocenchrus lenticularis* (Michx.) Kuntze.

Asprella monandra Beauv. 2, 153, 166. Based on *Leersia monandra* Swartz=*Homalocenchrus monandrus* (Swartz) Kuntze.

Asprella oryzoides Beauv. 2, 153, 172. *pl. 4. f. 2.* Based on *Phalaris oryzoides* L.=*Homalocenchrus oryzoides* (L.) Poll.

Asprella virginica Beauv. 2, 153. Based on *Leersia virginica* Willd.=*Homalocenchrus virginicus* (Willd.) Britton.

The earlier name *Homalocenchrus* is rejected by Beauvois as less apt than *Asprella* Schreb.

GEN. IV. ALOPECURUS L.

Alopecurus alpestris Beauv. Atlas *pl. 1. f. 1; pl. 3. f. 19.* This name is not given in the text. It may be an error for "*agrestis*" which is there listed. The figure on plate 1 represents a loosely flowered panicle of *A. agrestis* L. Figure 19, plate 3, shows the glumes of a different species, with long-ciliate keels, probably *A. pratensis* L. In the explanation the figure is called *Alopecurus alpestris.* Plate 1, figure 1 is taken as the type=*A. agrestis* L.

Alopecurus granulatus Beauv. 4, 149. Name only.

Alopecurus pedalis "Bosc mss."; Beauv. 4. Name only.

Alopecurus phleiformis Beauv. 4. Name only.

Alopecurus sericeus Beauv. 4, 150. "New species communicated by Jussieu." In the index "Lam." is given as author. Lamarck[12] gives Gaertner

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[11] Syn. Pl. 1: 73. 1805.

[12] Tabl. Encycl. 1: 168. 1791; Encycl. 8: 772. 1808.

as author. Gaertner's description and illustration[13] identify the species as *A. pratensis* L.

AGRAULUS Beauv.[14]

"Inflorescence[15] paniculate; panicle compound, more or less effuse; glumes longer than the floret; lemma emarginate at apex, awned from below the middle; awn plicate, twisted."

Agraulus caninus, the species figured, is taken as the type=*Agrostis* L.

Agraulus alpinus Beauv. 5, 146. "*Agrostis alpina Lin.*" is referred to *Agraulus*. Probably *Agrostis alpina* Scop. given by Willdenow[16] was intended. That is valid in *Agrostis*.

Agraulus caninus Beauv. 5, 146, 147. *pl. 3. f. 2; pl. 4. f. 7.* Based on *Agrostis canina* L. The figure on plate 3 represents a spikelet, and that on plate 4, a panicle and a dissected spikelet. Valid in *Agrostis*.

GEN. V. TRICHODIUM [Michx.].

Trichodium elegans Leers; Beauv. 5, 147, 179. "*Agrostis elegans* Leers. Poir." The name is not found in Leers' work. Poiret[17] gives Thore as author. That is invalidated by *A. elegans* Salisb., 1796. It appears to be the same as *Agrostis tenerrima* Trin.

Perotis is misspelled *Perostis* (p. 5). This is corrected in Errata, but the misspelled name has crept into synonymy. *Perotis latifolia* Ait. is misspelled "*laxifolia*" (p. 6). This is also corrected in Errata.

GEN. VII. SACCHARUM L.

Saccharum bifarium Forsk.; Beauv. 177. Referred to *Imperata*. Error for *S. biflorum* Forsk. That is referred by Hackel[18] to *S. spontaneum* γ *aegyptiacum* (Willd.) Hack.

Saccharum brevibarbe "Michx."; Beauv. 177. Referred to *Erianthus*. Error for *S. brevibarbe* Pers. (based on *Erianthus brevibarbis* Michx.). Valid in *Erianthus*.

GEN. VIII. IMPERATA Cyrill.

Imperata cylindrica Beauv. 8, 165, 166, 177. *pl. 5. f. 1.* Based on *Lagurus cylindricus* L. In the Beauvois Herbarium is a specimen of this species labeled in Beauvois' script "*Saccharum cylindricum*, de Jaum. St. Hilare." Valid.

Imperata kaenigii [koenigii] Pers.; Beauv. 165, 177. Based on *Saccharum koenigii* Retz. In Persoon's Synopsis[19] *Saccharum koenigii* Retz. is placed under Section *Imperata*=a form of *Imperata cylindrica* (L.) Beauv.

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[13] Fruct. Sem. 1: 2. *pl. l. f. 2.* 1788.

[14] See Beauvois' statement that his proposed genera are left without number (page 40).

[15] The term used by Beauvois is axis, but as explained in the glossary (page lxiv) this refers to what we term inflorescence.

[16] Sp. Pl. 1: 368. 1797.

[17] Lam. Encycl. Suppl. 1: 255. 1810.

[18] DC. Monogr. Phan. 6: 115. 1889.

[19] Syn. Pl. 1: 103. 1805.

Imperata spontanea Beauv. 8, 165. Based on *Saccharum spontaneum* L. Valid in *Saccharum.*

Imperata thunbergii Beauv. 165. Name only. (*Saccharum thunbergii* Retz. is referred, page 177, to *Imperata cylindrica.*)

ERIOCHRYSIS Beauv.

"Inflorescence paniculate; panicle contracted, somewhat spikelike; spikelets in pairs or in threes; glumes villous, subobtuse, coriaceous-indurate, longer than the membranaceous lemma and palea."

Eriochrysis cayanensis, illustrated, is the type.

Eriochrysis cayanensis Beauv. 8, *pl. 4. f. 11.* "I have found this beautiful plant in nearly all the herbaria I have examined. I have a specimen from M. de Lessert." No locality is mentioned. In the Beauvois Herbarium is a fragmentary specimen named "*Eriochrysis*" in Beauvois' script. There is a diagnosis and an envelope marked "porto rico." The name suggests that Beauvois had seen a specimen from French Guiana. The figure shows a panicle, branch, and spikelet.

Eriochrysis pulchra Beauv. 162. Name only.

GEN. IX. CERESIA Pers.

Ceresia membranacea Beauv. 9. 171. *pl. 5. f. 4.* "*Paspalum membranaceum* Lin." is referred to *Ceresia.* "Lin." is probably an error for Lam. The figure referred to shows a raceme with broad-winged rachis and a spikelet with long pubescence. It was probably drawn from *Paspalum membranaceum* Lam.,[20] not Walt. In Beauvois' herbarium there is a specimen of this species marked "Ceresia" in Beauvois' script. Lamarck's specimen, from Peru, was examined in the Paris Herbarium. *Ceresia elegans* Pers.,[21] *Paspalum elegans* Roem. & Schult.,[22] not Flügge, and *Panicum ceresia* Kuntze[23] are all based on *Paspalum membranaceum* Lam., which has heretofore lacked a tenable name=**Paspalum ceresia** (Kuntze) Chase.

GEN. X. PASPALUM L.

Paspalum brevisetum Flügge; Beauv. 10, 171. Name only. Possibly *Paspalum brevifolium* Flügge (=*Syntherisma longiflora* (Retz.) Skeels) was intended.

Paspalum frumentaceum Rottb.; Beauv. 10, 171. A name only, probably found in herbaria, for Roemer and Schultes[24] cite it as a synonym of *Paspalum scrobiculatum* L., and Hooker[25] refers to it as a cultivated form. Stapf[26] publishes *P. scrobiculatum* var. *frumentaceum* and explains that this is the original *P. frumentaceum* of Linnaeus=*Paspalum frumentaceum* L.

Paspalum lanuginosum "Bosc mss."; Beauv. 12. Name only.

Paspalum subarticulatum Beauv. 11. Name only.

Paspalum venustum Swartz; Beauv. 11, 172. Name only.

AXONOPUS Beauv. 12.

"Axis digitate; racemes simple, the spikelets on one side, etc., the other characters as in the preceding [*Paspalum* and *Ceresia*]." There is no illustration.

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[20] Tabl. Encycl. 1: 177. 1791.
[21] Syn. Pl. 1: 85. 1805.
[22] Syst. Veg. 2: 290. 1817.
[23] Rev. Gen. Pl. 3²: 360. 1898.
[24] Syst. Veg. 2: 296. 1817.
[25] Fl. Brit. Ind. 7: 11. 1896.
[26] Prain, Fl. Trop. Afr. 9: 575. 1919.

Axonopus compressus is selected as the type of the genus because the spikelets being solitary and sessile the racemes are more truly simple than in the species of *Syntherisma* included. The floret of *Milium cimicinum* is awned, hence that species can be excluded, since it does not agree with the key characters given in the Tabula Methodica. *Axonopus aureus*, having been received after the work was finished, was not considered in establishing the genus. Genus valid.

Axonopus aureus Beauv. 12, 154. "After this work was finished, I owe to the generosity of M. de Lessert a plant in which the spikelets are provided at the base with golden hairs in the form of an involucre." This is all there is by way of description of this species. This "points conclusively to one of the species with a cluster of golden hairs subtending the spikelets, these having a narrow rachis, not a broad one in which the spikelets are sunken as in *A. chrysoblepharis*. Following Trinius (Gram. Icon. 1: *pl. 97.* 1828) we take the common species with the smaller and glabrous spikelets to be the true *A. aureus*."[27] Valid.

Axonopus compressus Beauv. 12, 154, 167. Based on *Milium compressum* Swartz. Valid.

Axonopus digitatus Beauv. 12, 154, 167. Based on *Milium digitatum* Swartz=*Syntherisma digitata* (Swartz) Hitchc.

Axonopus cimicinus Beauv. 12, 154, 167. Based on *Milium cimicinum* L.=*Coridochloa cimicina* (L.) Nees.[28]

Axonopus paniceus Beauv. 12, 154, 168. Based on *Milium paniceum* Swartz=*Syntherisma panicea* (Swartz) Nash.

Beauvois observes "This genus differs from the two preceding and the following [*Milium*] only in the aspect and form of the axis of inflorescence. If *Milium* can be separated from *Paspalum*, because the inflorescence of the latter is a spike, composed of spikelets alternate or paired, the same characters should distinguish *Axonopus* in which the inflorescence is digitate; at least if one does not care to reunite the three genera, each forming a division of the single genus, which would, perhaps, be the most natural. It is for botanists to decide: it suffices for me to present my doubts." The character of reversed spikelets in *A. compressus* and *A. aureus* was not noted.

GEN. XI. MILIUM L.

Milium elegans Beauv. 18, 168. Name only, cited (as "sp. nov.") under *Piptatherum.*

Milium hirsutum Beauv. 13. *pl 5. f. 5.* The illustration is recognizable as *Valota insularis* (L.) Chase. Beauvois observes that this species might constitute another genus.

GEN. XII. ERIANTHUS Michx.

Erianthus aureus Beauv. 14, 150, 162. Based on *Andropogon aureus* Bory. Beauvois gives Willdenow as the authority on page 14, but "Bor. St.-Vin." on page 150=*Eulalia aurea* (Bory) Kunth.

Erianthus japonicus Beauv. 14, 162, 177. Based on *Saccharum japonicum* Thunb.=*Miscanthus japonicus* (Thunb.) Anderss.

Erianthus ravennae Beauv. 14, 151, 162. Based on *Andropogon ravennae* L. Valid.

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[27] Chase, Proc. Biol. Soc. Washington **24**: 135. 1911.

[28] See Chase, Proc. Biol. Soc. Washington **24**: 157. 1911.

Erianthus repens Beauv. 14, 162, 177. Based on *Saccharum repens* Willd. A species of *Tricholaena*.

Gen. XIII. CALAMAGROSTIS Adans.

Calamagrostis canadensis Beauv. 15, 152, 157. This is presumably based on *Arundo canadensis* Michx.; no authority is given for this name, which is referred to *Calamagrostis*. Valid.

Calamagrostis confinis Beauv. 15, 152, 157. Based on *Arundo confinis* Willd. The name was again transferred to *Calamagrostis* by Nuttall.[29] This species, described from "America boreali," has not yet been identified.

Calamagrostis halleriana Beauv. 15, 152, 157. *Arundo halleriana* without author is referred to *Calamagrostis*. *Arundo halleriana* Gaudin, based on *A. calamagrostis* Hall., not L., is doubtless intended.=*Calamagrostis villosa* (Chaix) Mutel.

Calamagrostis littorea Beauv. 15, 152, 157. "*Arundo littorea* Wild." is referred to *Calamagrostis*. Willdenow[30] gives Schrader as author. This is referred by Ascherson and Graebner[31] to *Calamagrostis pseudophragmites* (Hall.) Baumg.

Gen. XV. VILFA Adans.

The type of *Vilfa* Adans. is *Agrostis stolonifera* L., the only species referred to[32] by Adanson.

Vilfa aemula Beauv. 16, 146, 181. Based on *Agrostis aemula* R. Br.=*Agrostis retrofracta* Willd.

Vilfa africana Beauv. 16, 146, 181. Based on *Agrostis africana*, no authority given, presumably Poiret. Probably *Sporobolus elongatus* R. Br.

Vilfa alba Beauv. 16, 146, 181. Based on *Agrostis alba* L.[33]

Vilfa alopecuroides Beauv. 16, 146, 181. Based on *Agrostis alopecuroides* Lam.=*Polypogon monspeliensis* (L.) Desf.

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[29] Gen. Pl. 1: 47. 1818.

[30] Enum. Pl. 127. 1809.

[31] Syn. Mitteleur. Fl. 2: 216. 1899.

[32] See Hitchcock, Genera of Grasses of the United States, U. S. Dept. Agr. Bull. 772: 127. 1920, for discussion of type.

[33] The name *Agrostis alba* L. (Sp. Pl. 63. 1753) is of doubtful application. In the original publication the name is founded solely on the citation "Roy. lugdb. 59" (Royen, Flora Leydensis). The Royen citation refers to *Poa* (apparently *P. nemoralis*). There are several sheets in Linnaeus' herbarium, one of which bears the name *Agrostis alba*, in Linnaeus' script. These specimens belong to the species generally called *Agrostis alba*, but, according to Jackson (Index to the Linnaean Herbarium, Proc. Linn. Soc. London, 124th Sess. Suppl. 1912), these specimens were added to the herbarium after 1753 and can not, therefore, have weight in determining the original application of the name. Linnaeus did not refer, under *Agrostis alba*, to his flora of Sweden. It would appear that he did not intend to apply the name originally to a Swedish plant. The species usually known as *Agrostis alba* is common in Sweden, but apparently was included by Linnaeus under *A. stolonifera*, to which it is closely allied. It was not until later that he applied the name to the species as now represented in his herbarium. Under these circumstances it seems best to drop the name *Agrostis alba*, as has been done by Piper (U. S. Dept. Agr. Bull. 692, 1918) and by Stapf, as indicated in a letter to Piper.—Hitchcock, U. S. Dept. Agr. Bull. 772: 128. 1920.

Vilfa arachnoïdea Beauv. 147, 181. Based on *Agrostis arachnoidea* Poir.= *Muhlenbergia capillaris* (Lam.) Trin.

Vilfa articulata Beauv. 16, 147, 181. Based on *Agrostis articulata* Poir. (Published as new by Poiret, but probably the same as *A. articulata* Brot., which is *Chaeturus fasciculata* Link.)

Vilfa aspera Beauv. 16, 147, 181. Based on *Agrostis aspera* Michx.= *Sporobolus asper* (Michx.) Kunth.

Vilfa australis Beauv. 16, 147, 181. Based on *Agrostis australis* [L. misapplied by] Lam. Lamarck gives Linnaeus as author and quotes his diagnosis, but adds a description which seems to apply to some species of *Calamagrostis*. Beauvois distinguishes the species to which Lamarck applied the name from the Linnaean species, which he refers to *Gastridium*.

Vilfa barbata Beauv. 16, 147, 181. Based on *Agrostis barbata* Pers. Persoon [34] cites *A. littoralis* Lam. and quotes Lamarck's diagnosis=*Sporobolus littoralis* (Lam.) Kunth.

Vilfa billardierii Beauv. 16, 147, 181. Based on *Agrostis billardieri* R. Br.= *Calamagrostis billardieri* (R. Br.) Steud.

Vilfa capensis Beauv. 16, 147, 181. Based on "*Agrostis capensis* Thunb." Presumably an error for *A. capensis* Willd. Under that species Willdenow cites "*Agrostis spicata* Thunb." and explains that the name must be changed because there is already a species of that name=*Sporobolus capensis* (Willd.) Kunth, which is probably the same as *S. elongatus* R. Br.

Vilfa ciliata Beauv. 16, 147, 181. "*Agrostis ciliata* Lin." is referred to *Vilfa*. The only publication of *A. ciliata* previous to Beauvois is by Thunberg. *Festuca thunbergii* Kunth and *Agrostis thunbergii* Steud. are based on this name. This Japanese species has not been identified. From the description it appears to be a species of *Agrostis*.

Vilfa coarctata Beauv. 16, 147, 181. Based on *Agrostis coarctata* Ehrh. Beauvois gives Koeler as authority for this, but Koeler [35] cites Ehrhart as author. A form of *Agrostis stolonifera* L.

Vilfa composita Beauv. 16, 147, 181. Based on *Agrostis composita* Poir. This is the basis of *Sporobolus compositus* (Poir.) Merr. Probably=*Sporobolus asper* (Michx.) Kunth.

Vilfa compressa Beauv. 16, 147, 181. Based on *Agrostis compressa* Willd. A form of *Agrostis stolonifera* L.

Vilfa coromandelina Beauv. 16, 147, 181. Based on *Agrostis coromandelina* Retz. [error for *coromandeliana* Retz.]=*Sporobolus coromandelianus* (Retz.) Kunth.

Vilfa crinita Beauv. 16, 147, 181. Name only. "*Agrostis crinita* Lam." is referred to *Vilfa*. There is no species of this name in Lamarck's works. *Agrostis crinita* Moench is referred to *Polypogon*, and *A. crinita* R. Br. to *Apera*.

Vilfa cruciata Beauv. 16, 181. Name only. *Agrostis cruciata*, without authority, is listed under *Vilfa*, but on page 147 *Agrostis cruciata* L. (the only "*cruciata*" in the list, is referred to *Chloris*.

Vilfa cylindrica Beauv. 16, 147, 181. Based on *Agrostis cylindrica* R. Br.= *Deyeuxia cylindrica* (R. Br.) Benth., a species of *Calamagrostis*.

Vilfa debilis Beauv. 16, 147, 181. Based on *Agrostis debilis* Poir. Referred by Bentham [36] to *Deyeuxia forsteri* (Roem. & Schult.) Kunth, which is the same as *Agrostis retrofracta* Willd.

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[34] Syn. Pl. 1: 75. 1805.

[35] Descr. Gram. 99, 1802.

[36] Fl. Austral. 7: 579. 1878.

Vilfa decipiens Beauv. 16, 147, 181. Based on *Agrostis decipiens* R. Br. A species of *Calamagrostis.*

Vilfa decumbens Beauv. 16, 147, 181. Based on *Agrostis decumbens* Gaudin. A form allied to *A. stolonifera* L.

Vilfa densa Beauv. 16, 147, 181. "*Agrostis densa* Poir." is referred to *Vilfa.* Beauvois gives Poiret as authority for this but Poiret[37] credits the species to Marschall von Bieberstein=*A. verticillata* Vill.

Vilfa dispar Beauv. 16, 147, 181. Based on *Agrostis dispar* Michx.= *Agrostis palustris* Huds.

Vilfa dulcis Beauv. 16, 147, 181. Based on *Agrostis dulcis* Poir. Probably a form of *A. stolonifera* L.

Vilfa elongata Beauv. 16, 147, 181. Based on *Agrostis elongata* Lam. Probably *Sporobolus berteroanus* (Trin.) Hitchc. & Chase.

Vilfa frondosa Beauv. 16, 147, 181. "Agrostis frondosa Lin." is referred to *Vilfa.* This is evidently a mistake for *A. frondosa* Poir. This species, described from Germany, has not been identified. The description suggests *Muhlenbergia mexicana* (L.) Trin. If that, the specimen must have been from a botanic garden.

Vilfa gigantea Beauv. 16, 147, 181. Based on *Agrostis gigantea* Roth. A form of *A. stolonifera* L.

Vilfa hispida Beauv. 16, 147, 181. "*Agrostis hispida*" without author [presumably Willdenow] is referred to *Vilfa.* A form of *A. capillaris* L.

Vilfa hybrida Beauv. 16, 147, 181. Based on *Agrostis hybrida* Gaudin. A form of *A. canina* L.

Vilfa involuta Beauv. 16, 147, 181. Based on *Agrostis involuta* Poir. Valid in *Agrostis.*

Vilfa lateriflora Beauv. 16, 147, 181. Based on "*Agrostis laterifolia* Mich." [error for *lateriflora* Michx.]=*Muhlenbergia mexicana* (L.) Trin.

Vilfa lenta Beauv. 16, 147, 181. Based on *Agrostis lenta* Ait. Probably *Syntherisma longiflora* (Retz.) Skeels.

Vilfa linearis Beauv. 16, 147, 181. Based on *Agrostis linearis* Retz.= *Capriola dactylon* (L.) Kuntze.

Vilfa littoralis Beauv. 16, 147, 181. Based on *Agrostis littoralis* Lam.= *Sporobolus littoralis* (Lam.) Kunth.

Vilfa lobata Beauv. 16, 147, 181. Based on *Agrostis lobata* R. Br. A species of *Calamagrostis.*

Vilfa lutosa Beauv. 16, 148, 181. Based on *Agrostis lutosa* Poir.=*Polypogon lutosus* (Poir.) Hitchc.

Vilfa magellanica Beauv. 16, 148, 181. Based on *Agrostis magellanica* Lam. Valid in *Agrostis.*

Vilfa maritima Beauv. 16, 148, 181. Based on *Agrostis maritima* Lam. Valid in *Agrostis.*

Vilfa mexicana Beauv. 16, 148, 181. Based on *Agrostis mexicana* L.=*Muhlenbergia mexicana* (L.) Trin.

Vilfa montana Beauv. 16, 148, 181. Based on *Agrostis montana* R. Br.= *Deyeuxia montana* (R. Br.) Benth., a species of *Calamagrostis*, not *C. montana* Host (1809) nor DC. (1815).

Vilfa novae-hollandiae Beauv. 181. Name only.

Vilfa nutans Beauv. 16, 148, 181. Based on *Agrostis nutans* Poir. Described from South Carolina. The type has not been examined. The

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[37] Lam. Encycl. Suppl. 1: 256. 1810.

description applies well to *Panicum anceps* Michx. to which Poiret later[38] suggests it belongs.

Vilfa panicea Beauv. 16, 148, 182. Based on *Agrostis panicea* Lam.= *Gastridium ventricosum* (Gouan) Schinz & Thell.

Vilfa parviflora Beauv. 16, 148, 182. Based on *Agrostis parviflora* R. Br. Valid in *Agrostis*.

Vilfa patula Beauv. 16, 148, 182. Based on *Agrostis patula* Gaudin. A species allied to *A. stolonifera* L.

Vilfa pilosa Beauv. 16, 148, 182. "*Agrostis pilosa* Gaud." is referred to *Vilfa*. Gaudin[39] gives Schleicher as author. Referred by Ascherson and Graebner[40] to *Calamagrostis tenella* var. *mutica* Koch.

Vilfa plebeia Beauv. 16, 148, 182. Based on *Agrostis plebeia* R. Br.= *Calamagrostis plebeia* (R. Br.) Kuntze.

Vilfa procera Beauv. 16, 148, 182. Based on *Agrostis procera* Retz. "*Agrostis procera* R. Brow" and "*A. procera* Retz" are both referred to *Vilfa*. This name is not found in Robert Brown's work. *Thysanolaena procera* Jan. is based on *Agrostis procera* Retz.

Vilfa pumila Beauv. 16, 148, 182. Based on *Agrostis pumila* L. A species of *Agrostis*.

Vilfa pungens Beauv. 16, 148, 182. "*Agrostis pungens* Vahl" is referred to *Vilfa*. Vahl[41] gives Schreber as the authority=*Sporobolus pungens* (Schreb.) Kunth.

Vilfa purpurascens Beauv. 16, 182. Name only. *Agrostis purpurascens* without author is listed under *Vilfa* (page 16) but "*A. purpurascens* Sw." is referred (page 148) to *Sporobolus*.

Vilfa racemosa Beauv. 16, 148, 182. Based on *Agrostis racemosa* Michx.= *Muhlenbergia racemosa* (Michx.) B. S. P.

Vilfa rara Beauv. 16, 148, 182. Based on *Agrostis rara* R. Br.=*Dichelachne micrantha rara* (R. Br.) Domin.

Vilfa retrofracta (Willd.) Beauv. 16, 148, 182. Based on *Agrostis retrofracta* Willd. Valid in *Agrostis*.

Vilfa scabra Beauv. 16, 148, 182. "*Agrostis scabra* R. Brow." and "*A. scabra* Wild." are referred to *Vilfa*. Doubtless neither species was known to Beauvois. Willdenow's name, being the earlier, is taken as the basis of *Vilfa scabra* Beauv.=*Agrostis hiemalis* (Walt.) B. S. P. Robert Brown's species belongs in *Calamagrostis*.

Vilfa sciurea Beauv. 16, 148, 182. Based on *Agrostis sciurea* R. Br.= *Dichelachne sciurea* (R. Br.) Hook. f.

Vilfa setacea Beauv. 16, 148, 182. *Agrostis setacea* Poir. is referred to *Vilfa*. Poiret[42] gives this name, with Villars as author, as a doubtful variety under *A. rupestris* All. Referred by Ascherson and Graebner[43] to *A. rupestris* All.

Vilfa spicata Beauv. 16, 182. Name only. *Agrostis spicata* without author is listed under *Vilfa* on page 16. On page 148 "*Agrostis spicata* Vahl" is referred to "*Vilfa virginica* var." and "*Agrostis spicata* Thunb." to "*Vilfa capensis*." Neither of these species can therefore be taken as the basis of *Vilfa spicata*, which is best regarded as a name only.

Vilfa stellata Beauv. 16, 148, 182. Based on *Agrostis stellata* Willd.= *Capriola dactylon* (L.) Kuntze.

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[38] Lam. Encycl. Suppl. 4: 282. 1816.
[39] Agrost. Helv. 1: 75. 1811.
[40] Syn. Mitteleur. Fl. 2: 199. 1899.
[41] Symb. Bot. 1: 9. 1790.
[42] Lam. Encycl. Suppl. 1: 247. 1810.
[43] Syn. Mitteleur. Fl. 2: 189. 1899.

Vilfa stolonifera Beauv. 16, 148, 182. Based on *Agrostis stolonifera* L. Valid in *Agrostis.*

Vilfa sylvatica Beauv. 148, 182. "*Agrostis sylvatica* Lin." is referred to *Vilfa.* Linnaeus[44] cites Hudson as author.

Vilfa verticillata Beauv. 16, 148, 182. Based on *Agrostis verticillata* Vill. Valid in *Agrostis.*

Vilfa villarsii Beauv. 16, 148, 182. Based on *Agrostis villarsii* Poir.=*A. verticillata* Vill.

Vilfa vinealis Beauv. 148, 182. Name only. "*Agrostis vinealis* Lin." is referred to *Vilfa.* Linnaeus did not publish this name. *A. vinealis* Schreb. may have been intended. That is probably a form of *A. stolonifera* L.

Vilfa virginica Beauv. 16, 149, 182. Based on *Agrostis virginica* L.=*Sporobolus virginicus* (L.) Kunth.

Vilfa vulgaris Beauv. 16, *pl. 5. f. 8.* *Agrostis vulgaris* without author is listed under *Vilfa* and given in the Atlas. The illustration represents a panicle and spikelet which resemble those of *A. vulgaris* With. (=*A. capillaris* L.), except that the apex of the lemma shown is strongly 3-toothed.

Gen. XVI. POLYPOGON Desf.

Polypogon crinitus Willd.; Beauv. 17, 176. Name only, referred to *Polypogon monspeliensis.*

PIPTATHERUM Beauv. 17.

"Inflorescence paniculate; panicle open (fig. 10) or simple with alternate branches (fig. 11); glumes herbaceous, longer than the coriaceous-indurate lemma and palea; lemma awned from near the margin of the apex, the awn herbaceous, three-sided, readily falling; palea entire or obscurely 3-lobed."

Figure 10 represents *Oryzopsis coerulescens;* figure 11, *Eriochloa punctata.* A third species figured (see below) is *Oryzopsis paradoxa.* Since two of the three species figured belong in *Oryzopsis, Piptatherum* is referred to that genus, *Milium coerulescens* Desf., being taken as the type.

Piptatherum caerulescens Beauv. 18, 167, 173, *pl. 5, f. 10.* Based on *Milium coerulescens* Desf.=*Oryzopsis coerulescens* (Desf.) Hack.

Piptatherum elegans Beauv. 173. Name only.

Piptatherum multiflorum Beauv. 18, 168, 173. *Milium multiflorum* without author is referred to *Piptatherum.* Probably *M. multiflorum* Cav. was meant. That is *Oryzopsis miliacea* (L.) Benth. & Hook.

Piptatherum paradoxum Beauv. 18, 168, 173. *pl. 3. f. 34.* "*Milium paradoxum Schreb.*" is referred to *Piptatherum.* Schreber[45] cites Linnaeus as author. The figure is obviously intended for the Linnaean species=*Oryzopsis paradoxa* (L.) Nutt.

Piptatherum punctatum Beauv. 18, 168, 173. *pl. 5. f. 11.* Based on *Milium punctatum* L.=*Eriochloa punctata* (L.) Hamilt.

Gen. XVII. STIPA L.

Stipa jarava Beauv. 18, 19, 179. *pl. 6. f. 3.* "*Jarava,* Fl. Peruv." is cited under *Stipa.* The species published in Flora Peruviana is *Jarava ichu* Ruiz & Pav.=*Stipa ichu* (Ruiz & Pav.) Kunth.

Oryzopsis aspera Beauv. 19. Error for *O. asperifolia* Michx., correctly given in the index and in explanation of plate 6, figure 5.

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[44] Sp. Pl. ed. 2. 2: 1665. 1763.

[45] Beschr. Grās. 2: 50. 1769.

ACHNATHERUM Beauv. 19.

"Inflorescence paniculate; panicle compound, lax; glumes longer than the membranaceous lemma and palea; lemma awned from near the margin at the apex, the awn not articulate, twisted, bent; palea entire, acute."

The only species figured is *A. calamagrostis*, which is therefore taken as the type. This is *Stipa calamagrostis* (L.) Wahlenb. (based on *Agrostis calamagrostis* L.), a species in which the articulation between the awn and the body of the lemma is obscure. The genus *Lasiagrostis* Link is based on the same species=*Stipa* L.

Achnatherum argenteum Beauv. 19, 146, 157. *Calamagrostis argentea*, without author, is referred to *Achnatherum*. "*Calamagrostidis* spec. Adans. Roth, Decand." is cited under *Achnatherum*. *Calamagrostis argentea* DC. is presumably the species intended. Ascherson and Graebner[46] refer this species to *Stipa calamagrostis* (L.) Wahl.

Achnatherum bromoides Beauv. 20, 146, 147. Based on *Agrostis bromoides* L.=*Stipa bromoides* (L.) Beck. The genus *Aristella* Bertol. is based on the same species.

Achnatherum calamagrostis Beauv. 20, 146. *pl. 6. f. 7.* Based on *Agrostis calamagrostis* L.=*Stipa calamagrostis* (L.) Wahl.

Achnatherum capense Beauv. 146, 167. Based on *Milium capense* L. *Agrostis capensis* Lam. is based on this. Munro[47] states that the specimen in the Linnaean Herbarium "is *Danthonia* (*Pentaschistis*) *papillosa* Nees or an allied species."

Achnatherum conspicuum Beauv. 20, 146, 152. Based on *Arundo conspicua* Forst. Valid in *Arundo* according to Cheeseman.[48]

Achnatherum hallerii Beauv. 146, 152. Based on *Arundo hallerî* Willd. Referred by Ascherson and Graebner[49] to *Calamagrostis calamagrostis* (L.) Karst.

Achnatherum lanceolatum Beauv. 20, 146, 157. "*Arundo lanceolata* Koel." and "*Calamagrostis lanceolata* Décand." are referred to *Achnatherum*. There is no *Arundo lanceolata* published. In Koeler's work[50] *Calamagrostis lanceolata* Roth is given, with *Arundo calamagrostis* L. as a synonym. DeCandolle[51] gives Roth as author. *C. lanceolata* Roth is based on *Arundo calamagrostis* L.=*Calamagrostis calamagrostis* (L.) Karst.

Achnatherum miliaceum Beauv. 20, 146, 148. "*Agrostis miliacea* Gou." is referred to *Achnatherum*. Gouan[52] gives Linnaeus as author=*Oryzopsis miliacea* (L.) Benth. & Hook.

Achnatherum soboliferum Beauv. 20, 146, 148. "*Agrostis sobolifera* Wild." is referred to *Achnatherum*. Willdenow[53] gives Muhlenberg as author=*Muhlenbergia sobolifera* (Muhl.) Trin.

Achnatherum tenuifolium Beauv. 20, 146. Name only.

GASTRIDIUM Beauv. 21.

"Inflorescence paniculate; panicle compound, contracted, subspiciform; glumes ventricose at base, thrice as long as the subcoriaceous-indurate lemma and palea; lemma 3 or 4-toothed, bearing a bristle below the apex; palea 2-toothed."

Milium lendigerum L., the only species here cited, is the type.

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[46] Syn. Mitteleur. Fl. 2: 115. 1899.
[47] Proc. Linn. Soc. Bot. 6: 40. 1862.
[48] Man. New Zeal. Fl. 893. 1906.
[49] Syn. Mitteleur. Fl. 2: 200. 1899.
[50] Descr. Gram. 103. 1802.
[51] Lam. & DC. Fl. Franç. 3: 26. 1805.
[52] Illust. Obs. Bot. 3. 1773.
[53] Enum. Pl. 1: 95. 1809.

Gastridium australe Beauv. 164. Atlas 6. *pl. 6. f. 6.* Presumably a change of name for *Milium lendigerum=Gastridium ventricosum* (Gouan) Schinz & Thell. In the index *Agrostis ventricosa* Gouan is doubtfully referred to *Gastridium.*

GEN. XIX. AGROSTIS L.

Agrostis acutiflora Beauv. 22, 146. Name only.

Agrostis myuros Lam.; Beauv. 49. Given as a synonym under *Hymenachne.* This must be an error for *Panicum myuros* Lam., which is *Sacciolepis myuros* (Lam.) Chase.

Agrostis Novae Hollandiae Beauv. 148. Name only.

Agrostis ravennae Beauv. 148. Name only, referred to *Erianthus,* probably an error for *Saccharum ravennae.*

COLOBACHNE Beauv. 22.

"Inflorescence spicate; spike compound, capitate; glumes unequal, subulate, a little longer than the floret; lemma 3-toothed and truncate at the apex, awned from near the base, the awn coriaceous, twisted and bent; palea entire, acute."

Polypogon vaginatum Willd., the only species cited, is the type.

Colobachne vaginata Beauv. 22, 158. *pl. 6. f. 9.* Based on *Polypogon vaginatum* Willd.=*Alopecurus vaginatus* (Willd.) Boiss. (Type of Section *Colobachne* including species of *Alopecurus* having a distinct palea).

GEN. XXII. HELEOCHLOA Host.

Heleochloa juncea Beauv. 24, 147. Based on *Agrostis juncea* Michx.=*Sporobolus junceus* (Michx.) Kunth.

Heleochloa phalaroides Beauv. 24, 173. *pl. 7. f. 2.* (Erroneously cited as *f. 3*). Based on *Phleum phalaroides* Koel.=*Phleum phleoides* (L.) Karst. (typonym).

GEN. XXIII. PHLEUM L.

Phleum asperum "Lin." [error for Jacq.] Beauv. 173. Referred to *Chilochloa.* Beauvois probably took the name from Willdenow[64] who cites "Schrad. germ. 1. p. 182." Schrader gives Jacquin as author.

Phleum thyphinum Lob.; Beauv. 173. Name only, referred to *Phleum nodosum* L. The pre-Linnaean name "Gramen typhinum Lobel" is doubtless what Beauvois had in mind.

Phleum velutinum Forsk.; Beauv. 173. Name only, referred to *Digitaria.*

ACHNODONTON Beauv. 24.

"Inflorescence paniculate; panicle simple, spikelike; glumes subequal, keeled, subobtuse, twice as long as the floret; lemma truncate, many-toothed, infolding the 2-toothed emarginate palea . . . OBS. The species of this genus approach those of *Phalaris* in their glumes and those of *Phleum* in their lemma and palea."

Achnodonton tenuis, the species figured, is taken as the type. This is *Phleum subulatum* (Savi) Aschers. & Graebn. (*P. tenue* (Host) Schrad.), a species in which the glumes are acute, not abruptly awned as in most species=*Phleum* L.

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[64] Enum. Pl. 1: 84. 1809.

Achnodonton bellardi Beauv. 25, 146, 173. "*Phleum bellardi* Lin." is cited under *Achnodonton*. This name was published first by Gmelin[55] for a species with ciliate glumes and subovate spike; and second by Willdenow[56] (based on *Phalaris bellardii* Willd. 1801), for a plant with cylindrical subspicate panicle and glumes with glabrous keels, characters belonging to *Phleum subulatum*. Willdenow cites *Phleum tenue* Schrad. and *Phalaris subulata* Savi as synonyms. Since Willdenow's species agrees with Beauvois' generic diagnosis and Gmelin's does not, it is probable that "Lin." is an error for Willd.=*Phleum subulatum* (Savi) Aschers. & Graebn.

Achnodonton tenuis Beauv. 25, 146, 173. *pl. 7. f. 5.* Based on *Phalaris tenuis* Host=*Phleum subulatum* (Savi) Aschers. & Graebn.

GEN. XXIV. SPARTINA Schreb.

Spartina fasciculata Beauv. 25, 159. "*Dactylis fasciculata* Willd." is referred to *Spartina*. Lamarck, not Willdenow, published the name. The species, described from tropical America, has not yet been identified. The description suggests *Spartina brasiliensis* Raddi.

Spartina geniculata Beauv. 25, 159, 178. Based on *Dactylis geniculata* Burm. We are unable to identify this species, but Burmann's plate shows that it does not belong in *Spartina*.

Spartina polystachya Beauv. 25, 178, 179. Presumably based on *Trachynotia polystachya* Michx., "*Trachynotia* Mich." without specific name being referred to *Spartina*=*Spartina cynosuroides* (L.) Roth.[57]

Spartina pungens Beauv. 25, 166. "*Limnetis* Pers." without specific name is referred to *Spartina*. Persoon states that Richard contributed the work on this genus. *Limnetis pungens* Rich.,[58] which must be taken as the basis of *S. pungens* Beauv., is based on *Spartina stricta* Roth.[59] Roth's name is based on *Dactylis stricta* Ait. *Spartina stricta* (Ait.) Roth was found by Fernald to be the same as *Dactylis maritima* Curtis, which was published two years earlier=*Spartina maritima* (Curt.) Fernald.

GEN. XXV. SPOROBOLUS R. Br.

Sporobolus diandrus Beauv. 26, 147. Based on *Agrostis diandra* Retz. Valid.

Sporobolus tenacissimus Beauv. 26, 148. Based on *Agrostis tenacissima* L. A species of *Sporobolus*.

GEN. XXVI. ORYZA L.

Oryza latifolia Beauv. 27, 168. Name only.
Oryza parviflora Beauv. 27, 168. Name only.

Muhlenbergia multiflora Pers.; Beauv. 168. Name only.

CLOMENA Beauv. 28.

"Inflorescence paniculate; panicle small, nearly simple; glumes nearly the length of the lemma and palea, the lower 3-toothed, the upper entire; lemma 2-toothed, with a bristle between the teeth."

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[55] Syst. Veg. ed. 13. 1: 166. 1791.
[56] Enum. Pl. 1: 85. 1809.
[57] See Hitchcock, Types of American Grasses, Contr. U. S. Nat. Herb. 12: 153. 1908.
[58] Pers. Syn. Pl. 1: 72. 1805.
[59] Neue Beytr. 1: 101. 1802.

Clomena peruviana Beauv., is the only species. (See below.)=*Muhlenbergia* Schreb.

Clomena peruviana Beauv. 28. *pl. 3. f. 20; pl. 7. f. 10.* "Pl. nouv. communiquée par M. Thibaut."=*Muhlenbergia peruviana* (Beauv.) Steud.

Gen. XXVIII. PODOSEMUM Desv.

Podosemum agrostideum Beauv. 176, 179. *pl. 8. f. 3.* Based on *Tosagris agrostidea* Beauv. (See below.)

Podosemum purpureum Beauv. 176, 179. *pl. 8. f. 2.* Based on *Trichochloa purpurea* Beauv. (See below.)

Beauvois appends to his description of *Podosemum* Desv., of which he figures the type species, *P. capillare* Desv. (*Muhlenbergia capillaris* (Lam.) Trin.), observations on two species which in the index he places under *Podosemum* (see the two species above). These plants, which he received from the United States of America, he says are closely related to *Podosemum*, but each has notable differences. "Provisionally and in order not to increase the number of new genera, which some, perhaps, find already too many," he includes the two in *Podosemum*. "However, on account of the principles I believe should be adopted for the Agrostographie, I can not avoid noting the distinguishing characters of these two plants, which seem to me sufficient to establish two distinct genera." Enough description is given of each, together with the figures, to constitute publication.

Trichochloa purpurea Beauv. 29. *pl. 8. f. 2.* "Differs essentially in the glumes without bristles but villous." (*Podosemum capillare* is shown in Plate 8, Figure 1, as having awned glumes. The figure was probably drawn from a specimen of *Muhlenbergia capillaris filipes* Chapm., which has minute glumes with delicate awns. The glumes in *M. capillaris* are exceedingly variable, ranging from one-third as long as the lemma and awnless or awn-tipped, to minute and short or long-awned.) Beauvois' specimen of *Trichochloa purpurea* has not been found. From Figure 2 it appears to be the same as *Muhlenbergia expansa* (DC.) Trin. DeCandolle[60] describes *Trichochloa* as a new genus, without reference to Beauvois, including *M. capillaris* and other awned species of *Muhlenbergia*.

Tosagris agrostidea Beauv. 29, *pl. 8. f. 3.* "Resembles *Podosemum* in the glumes and lemma, but the palea is entire.—It has the aspect of *Agrostis*, of which *Tosagris* is an anagram." Figure 3 shows a spikelet with short-awned glumes, a lemma hairy at base and with a 2-toothed long-awned apex, and a sharp-pointed palea. This appears to be an exaggeration of the minutely hairy base and obscurely 2-toothed apex of the lemma of *Muhlenbergia capillaris* (Lam.) Trin.

Gen. XXIX MIBORA Adans.

Mibora verna Beauv. 29, 167, 179. *pl. 8. f. 4.* Based on *Sturmia verna* Pers. "*Sturmia* Smith," [error for Hoppe] is referred to *Mibora*. "*Sturmia* Hop., Pers., Wild. etc.", is cited under Mibora=*Mibora minima* (L.) Desv.

CHAETARIA Beauv. 30.

"Inflorescence paniculate; panicle simple, lax; glumes membranaceous, often mucronate, longer than the floret; lemma convolute, the apex (sometimes elongate) bearing a bristle; bristle 3-parted; palea entire, acute."

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[60] Cat. Hort. Monsp. 151. 1813.

Two species are figured, *C. stricta*, based on *Aristida stricta* Michx., and *C. capillacea* (based on *Aristida capillacea* Lam.). Of these the first is taken as the type=*Aristida* L.

Chaetaria a[d]scensionis Beauv. 30, 151, 158. Based on *Aristida adscensionis* L. Valid in *Aristida*.

Chaetaria caerulescens Beauv. 30, 151, 158. Based on *Aristida caerulescens* Desf. Valid in *Aristida*.

Chaetaria calicina Beauv. 30, 151, 158. Based on *Aristida calycina* R. Br. Valid in *Aristida*.

Chaetaria canariensis Beauv. 30, 151, 158. Based on *Aristida canariensis* Willd. Referred by Boissier [61] to *A. caerulescens* Desf.

Chaetaria capensis Beauv. 30, 151, 158. Based on *Aristida capensis* Thunb. Valid in *Aristida*.

Chaetaria capillacea Beauv. 30, 158. On page 151 *Aristida capillacea* without author is referred to *Chaetaria*. Presumably Lamarck's species is intended. In the Atlas, Plate 8, Figure 6, is named *C. capillaris*, obviously an error for *capillacea*. Valid in *Aristida*.

Chaetaria capillaris Beauv. Atlas. 7. *pl. 8. f. 6.* Error for *capillacea*.

Chaetaria depressa Beauv. 30, 151, 158. Based on *Aristida depressa* Retz. A form of *A. adscensionis* L.

Chaetaria divaricata Beauv. 30, 151, 158. *Aristida divaricata* without author is referred to *Chaetaria*. *Aristida divaricata* Humb. & Bonpl. is doubtless intended. Valid in *Aristida*.

Chaetaria elatior Beauv. 30, 151, 158. Based on *Aristida elatior* Cav. A form of *A. adscensionis* L.

Chaetaria festucoides Beauv. 30, 152, 158. Based on *Aristida festucoides* Poir. Probably a form of *A. adscensionis* L.

Chaetaria furcata Beauv. 30, 158. Name only.

Chaetaria gigantea Beauv. 30, 152, 158. Based on *Aristida gigantea* L. Referred by Boissier [62] to *A. caerulescens* Desf.; basis of *A. adscensionis gigantea* (L.) Kuntze.

Chaetaria gossypina Beauv. 30, 152, 158. Name only. "*Aristida gossypina* Bosc mss." is referred to *Chaetaria*. This name was later published [63] credited to Beauvois, based on *Aristida lanata* Poir.=*A. lanosa* Muhl.

Chaetaria hystrix Beauv. 30, 152, 158. Based on *Aristida hystrix* L. Valid in *Aristida*.

Chaetaria interrupta Beauv. 30, 152, 158. Based on *Aristida interrupta* Cav. This Mexican species has not been identified.[64]

Chaetaria luzonensis Beauv. 30, 152, 158. Based on *Aristida luzon[i]ensis* Cav. (Merrill [65] says "Certainly not a Philippine species, but American or Australian.")

Chaetaria olygantha Beauv. 30, 152, 158. Based on *Aristida oligantha* Michx. Valid in *Aristida*.

Chaetaria pallens Beauv. 30, 152, 158. Based on *Aristida pallens* Cav. Valid in *Aristida*.

Chaetaria purpurascens Beauv. 30, 152, 158. *Aristida purpurascens* without author is referred to *Chaetaria*. Presumably Poiret's species was intended. Valid in *Aristida*.

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[61] Fl. Orient. 5: 491. 1884.

[62] Fl. Orient. 5: 491. 1884.

[63] Roem. & Schult. Syst. Veg. 2: 391. 1817.

[64] See Hitchcock, Contr. U. S. Nat. Herb. 22: 586. 1924.

[65] Enum. Philipp. Pl. 1: 79. 1922.

Chaetaria racemosa Beauv. 30, 152, 158. Name only. "*Aristida racemosa* R. Brow." is referred to *Chaetaria*. There is no species of that name in Brown's work. It is probably an error for *A. ramosa* R. Br., which is also referred to *Chaetaria*. *Aristida racemosa* Spreng. might be the species intended, but Beauvois seems not to have had Sprengel's work; it is nowhere cited.

Chaetaria setacea Beauv. 30, 152, 158. Based on *Aristida setacea* Retz. Valid in *Aristida*.

Chaetaria stipaeformis Beauv. 30, 152, 158. Based on "*Aristida stipaeformis* Poir." Poiret[66] cites "*Aristida stipiformis* Lam. . . . . Ill. no. 781." No. 781 is *Aristida stipoides* Lam., the word "stipiforme" being given as the French common name=*Aristida stipoides* Lam.

Chaetaria stricta Beauv. 30, 152, 158. *pl. 8. f. 5.* Based on *Aristida stricta* Michx. Valid in *Aristida*.

Chaetaria teneriffae Beauv. 30, 158. Name only.

Chaetaria vestita Beauv. 30, 152, 158. Based on *Aristida vestita* Thunb. Valid in *Aristida*.

GEN. XXX. APERA Adans.

Apera aspera Beauv. 151. Name only.

Apera crinita Beauv. 31, 151. Based on *Anthoxanthum crinitum* L.= *Dichelachne crinita* (L.) Hook. f.

Apera interrupta Beauv. 31, 151. Based on *Agrostis interrupta* L. Valid in *Agrostis*.

Apera purpurea Beauv. 31, 151. Based on *Agrostis purpurea* Gaudin. A form of *Agrostis spica-venti* L., according to Ascherson and Graebner.[67]

Apera spica venti Beauv. 31, 151. *pl. 3. f. 33; pl. 7. f. 11.* Based on *Agrostis spica-venti* L. Valid in *Agrostis*.

Apera tenuiflora Beauv. 148, 151. Based on *Agrostis tenuiflora* Willd.= *Muhlenbergia tenuiflora* (Willd.) B. S. P.

GEN. XXXI. CINNA L.

Cinna mexicana Beauv. 32, 148, 158. Based on *Agrostis mexicana* L. Beauvois lists *Agrostis mexicana* L. under both *Vilfa* and *Cinna* in the text and in the index. In the text the name is queried under *Cinna*. *Agrostis mexicana* L. in the index is referred to *Vilfa=Muhlenbergia mexicana* (L.) Trin.

CURTOPOGON Beauv. 32.

"Inflorescence paniculate; panicle branching; glumes membranaceous, often mucronate, the length of the lemma; lemma convolute, the apex 2-cleft, with a bristle between the slender lobes; bristle subreflexed, flexuous; palea much shorter, entire." [It will be noted that the short lateral awns of *Aristida dichotoma* are regarded as the cleft apex of the lemma.]

Aristida dichotoma Michx., the only species included, is the type=*Aristida* L.

Curtopogon dichotomus Beauv. 32, 151, 159. *pl. 8. f. 7.* Based on *Aristida dichotoma* Michx. Valid in *Aristida*.

ARTHRATHERUM Beauv. 32.

"Inflorescence paniculate; panicle subcompound, lax; glumes membranaceous, often mucronate, the upper longer than the lemma; lemma naked or

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[66] Lam. Encycl. Suppl. 1: 452. 1810. [67] Syn. Mitteleur. Fl. 2: 196. 1899.

bearded, awned; awn 3-parted, articulated with the apex of the lemma, caducous."

Two species are figured, *A. hygrometricum* with an awn having a long twisted base, and *A. pungens* (*Aristida pungens* Desf.) with plumose awns, not twisted at base. The first is taken as the type=*Aristida* L. *Arthratherum* is commonly accepted as a section of *Aristida*, comprising the species having articulate awns.

Arthratherum hygrometricum Beauv. 33, 152. *pl.* 8. *f.* 8. Based on *Aristida hygrometrica* R. Br. Valid in *Aristida.*

Arthratherum pungens Beauv. 33, 152. *pl.* 8. *f.* 9. Based on *Aristida pungens* Desf. Valid in *Aristida.*

Arthratherum stipoides Beauv. 33, 152. Based on *Aristida stipoides* R. Br. Valid in *Aristida.*

GEN. XXXII. ARISTIDA L.

Beauvois' understanding of true *Aristida* is that the lemma bears two bristles with an awn between them. He says that of all the species he has seen in herbaria only *Aristida lanata* [Forsk.], in which the middle awn is of a different substance from the lateral ones, can be said to have a true awn [arista]. For this reason he conserves the name *Aristida* for that.

Aristida gossypina Bosc; Beauv. 30, 152. Name only. (See *Chaetaria gossypina* Bosc page 164).

Aristida subrecurvata Beauv. 152. Name only.

GEN. XXXV. PHALARIS L.

Phalaris boemerii Willd.; Beauv. 172. Name only, referred to *Chilochloa.* Probably error for *Phleum boehmeri* Wib.

Phalaris colorata Willd.; Beauv. 172. Willdenow[89] cites *Arundo colorata* "Sp. pl. ed. W. 1. p. 457." as synonym under *Phalaris arundinacea.* In Willdenow's edition of the Species Plantarum (page 457) *Arundo colorata* Ait. is given, with *Phalaris arundinacea* as synonym. *A. colorata* Ait. is based on *P. arundinacea* L., the later name valid.

Phalaris cuspidata Beauv. 37, 172. Name only, referred to *Chilochloa.*

Phalaris erucoides "Lin."; Beauv. 172. Referred to *Beckmannia.* Error for *P. erucaeformis* L.

Phalaris picta Beauv. 36, 172. Probably *P. arundinacea β picta* L. was intended though Linnaeus is not cited.

Phalaris pruinosa Lam.; Beauv. 173. Name only, referred to *Phalaris paradoxa.* Possibly an error for *P. praemorsa* Lam.

Phalaris semi-neutra Beauv. 149, 173. "*Aira semineutra* Wild." is referred to *Phalaris.* Willdenow[90] credits *Aira semineutra* to Waldstein and Kitaibel.

CHILOCHLOA Beauv. 37.

"Inflorescence spicate; spike compound, cylindric; glumes unequal, acute, often pilose on the back and margins, longer than the floret; lemma and palea subcartilaginous; rudiment of an abortive floret pedicellate, filiform; palea emarginate."

The species figured is called *C. michelii* in the Atlas. This name is not found in the Agrostographie itself. The figures of spikelet and floret do not agree with the above description. *Phalaris cuspidata,* the first of the five species cited under the genus, is a name only. The second, *Phalaris panicu-*

[89] Enum. Pl. 1: 84. 1809.

[90] Enum. Pl. 1: 100. 1809.

lata, is queried in the index. The third, *Phleum arenarium* L., is therefore taken as the type=*Phleum* L.

Chilochloa is commonly recognized as a section of *Phleum* for *P. arenarium* and its allies in which the rachilla joint is prolonged beyond the palea as a minute stipe.

Chilochloa arenaria Beauv. 37, 158, 173. Based on *Phleum arenarium* L. Valid in *Phleum*.

Chilochloa aspera Beauv. 37, 158, 173. "Phalaris aspera Lin." is referred to *Chilochloa*. Willdenow[70] cites "Sp. Pl. ed. W. 1. 328" after *Phalaris aspera*. Beauvois seems to have assumed that Linnaeus is the author. In his edition of the Species Plantarum Willdenow gives Lamarck as author of *P. aspera=Phleum paniculatum* Huds.

Chilochloa boemerii Beauv. 37, 158, 173. Based on *Phleum boë[h]meri* Wib. This is based on *Phalaris phleoides* L.=*Phleum phleoides* (L.) Karst.

Chilochloa cuspidata Beauv. 37, 158, 172. Name only.

Chilochloa hispida Beauv. 158. Name only.

Chilochloa michelii Beauv. Atlas *pl. 7, f. 3.* (See above.) This is not based on *Phleum michelii*, which is listed under *Phleum;* nor is that represented by the figure, which we are unable to identify.

Chilochloa paniculata Beauv. 37, 158, 172. Based on "*Phalaris paniculata* Ait.," which is based on *Phleum paniculatum* Huds. Valid in *Phleum*.

Caclachne (page 38) is misspelling of *Coelachne* R. Br.

BRACHYELYTRUM Beauv. 39.

"Inflorescence spicate; spike simple; spikelets pedicellate, alternate; glumes unequal, shorter than the floret, the lower one-fourth as long; lemma of fertile floret terminating in a very long bristle; palea bifid; abortive floret rudimentary, pedicellate, pubescent, clavate."

Muhlenbergia erecta Schreb., the species figured, is the type. Genus valid.

Brachyelytrum erectum Beauv. 39, 155. *pl. 9. f. 2.* Based on *Muhlenbergia erecta* Schreb. Valid.

GEN. XXXVII. TRIATHERA Desv.

Triathera juncea Desv.; Beauv. 40. *pl. 9. f. 4=Bouteloua juncea* (Desv.) Hitchc. The source of the plant is not given. Desvaux[71] gives the habitat as Hispaniola.

GEN. XXXVIII. BOUTELOUA Lag.

Bouteloua melicoides Horn.; Beauv. 40, 155. *pl. 9. f. 6.* Doubtless an error for *B. melicaeformis* Brouss.; Hornem.=*B. curtipendula* (Michx.) Torr.

GEN. XXXIX. CHONDROS[I]UM Desv.

Chondros[i]um ciliatum Beauv. 41, 158. Name only.

Chondros[i]um humile Beauv. 41, 158. Name only. Later described by Kunth[72]=*Bouteloua simplex* Lag.

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[70] Enum. Pl. 1: 84. 1809.

[71] Journ. de Bot. Desv. 1: 67. 1813.

[72] H. B. K. Nov. Gen. & Sp. 1: 175. *pl. 56.* 1816.

Chondros[i]um procumbens Desv.; Beauv. 41, 158. *pl. 9. f. 7.* The source of the specimen is not given. Under the genus "*Chloridis* spec. Durand" is cited. The name is probably based on *Chloris procumbens* Durand. Desvaux[73] bases the genus on *Chloris procumbens* Durand=*Bouteloua procumbens* (Durand) Griff.

Chondros[i]um tenue Beauv. 41, 158. Name only. Later described by Kunth[74]=*Boutcloua procumbens* (Durand) Griff. Beauvois cites "*Actinochloa* Wild. mss." and "*Actinochloa tenuis, ciliata, humilis* Wild. mss." under *Chondrosium*, and states that they were given to him by Willdenow, during his visit to Paris, and that they were brought back by Humboldt and Bonpland. All are names only.

Actinochloa Willd.; Beauv. 41. Roemer and Schultes[75] describe *Actinochloa* Willd., reducing *Chondrosium* to a synonym of it.

Actinochloa tenuis Willd.; Beauv. 41. Published by Roemer and Schultes[76] =*Bouteloua procumbens* (Durand) Griff.

Actinochloa ciliata Willd.; Beauv. 41.

Actinochloa humilis Willd.; Beauv. 41. Published by Roemer and Schultes[77] =*Bouteloua simplex* Lag.

GYMNOPOGON Beauv. 41.

"Inflorescence paniculate; panicle simple, open; branches elongate, alternate; spikelets sessile, remote, alternate; glumes lanceolate, acute, longer than the floret; lemma of fertile floret bifid-dentate, bearing a bristle below the apex; abortive floret consisting of a rudimentary nerved plicate naked lemma."

Andropogon ambiguus Michx., the only species cited under the description, is the type. Genus valid.

Gymnopogon racemosus Beauv. 41, 164. *pl. 9. f. 3.* Evidently a change of name for *Andropogon ambiguus* Michx., with which the figure agrees=*G. ambiguus* (Michx.) B. S. P.

ECHINOPOGON Beauv. 42.

"Inflorescence paniculate; panicle simple, the branches congested into a small head; glumes acute, subequal, shorter than the floret; lemma of fertile floret bristle-bearing below the entire apex; palea bifido-dentate; abortive floret a pedicellate pilose clavate rudiment."

"*Agrostis ovata* Labill" [error for Forst., correctly given in the index], the only species included, is the type. Genus valid.

Echinopogon ovatus Beauv. 42, 148, 161, *pl. 9. f. 5.* Based on *Agrostis ovata* Forst. Valid.

GEN. XLI. DEYEUXIA Clar. Mss.; Beauv. 43.

"Inflorescence paniculate; panicle compound; glumes membranaceous, much longer than the floret; fertile floret lanuginose-pilose at base, the lemma and palea bifid-dentate, the lemma awned from the back above or below the middle; abortive floret a pedicellate rudiment, the pedicel filiform, pilose, subclavate, the "clava" bristle-bearing"

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[73] Nouv. Bull. Soc. Philom. Paris 2: 188. 1810.
[74] H. B. K. Nov. Gen. & Sp. 1: 176. *pl.* 57. 1816.
[75] Syst. Veg. 2: 22, 417. 1817.
[76] Syst. Veg. 2: 418. 1817.
[77] Syst. Veg. 2: 417. 1817.

Deyeuxia montana Beauv., the first of the three species figured, is taken as the type. The figure of the floret agrees with the statement that the club-shaped pedicel bears a bristle. The structure shown is not found in any of the species of the genus. The drawing is doubtless due to faulty observation of the pencil of hairs at the tip of the rachilla joint=*Calamagrostis*, the section in which the rachilla joint is prolonged behind the palea. All the American species of *Calamagrostis* belong to this section. Maintained as valid by Pilger and others.

Deyeuxia acutiflora Beauv. 44, 152, 160. "*Arundo acutiflora* Wild." is referred to *Deyeuxia*. Willdenow[78] cites Schrader as author=*Calamagrostis acutiflora* (Schrad.) DC.

Deyeuxia airoides Beauv. 44, 152, 160. "*Arundo airoides* Mich. ined." is referred to *Deyeuxia*. *Arundo airoides* Lam. was described from a plant collected in North America by Michaux and is probably the species Beauvois had in mind. The species has not yet been identified. Lamarck's description suggests *Trisetum melicoides* (Michx.) Scribner, which was collected by Michaux and described by him as *Aira melicoides*.

Deyeuxia arundinacea Beauv. 160; Atlas 11. *pl. 15. f. 11.* No locality is given. See discussion under *Ampelodesma* (page 185).

Deyeuxia montana Beauv. 44, 153, 160. *pl. 9. f. 9.* *Arundo montana* Gaudin is referred to *Deyeuxia*, but the figure does not agree with the description of *Arundo montana* Gaudin. In that the awn is from near the base. Figure 9 shows a species of *Calamagrostis* with a lemma bearing an awn from near the apex. Beauvois' figure is unidentifiable. *Arundo montana* Gaudin=*Calamagrostis varia* (Schrad.) Host.

Deyeuxia sedenensis Beauv. 44, 153, 160. *pl. 9. f. 10.* "*Arundo sedenensis* Décand." is referred to *Deyeuxia*. This presumably is an error for *A. sedenensis* Loisel. The name is not found in DeCandolle's work=*Calamagrostis sedenensis* (Loisel.) Loisel., generally referred to *C. varia* (Schrad.) Host.

GEN. XLII. PANICUM L.

Panicum floridum "Retz. Wild."; Beauv. 169. Evidently an error for *P. flavidum* Retz., included in Willdenow's Species Plantarum.

Panicum glaucescens Beauv. 169. Name only, referred to *Arundinaria*. (See *Arundinaria glaucescens*. page 209.)

Panicum quale L.; Beauv. 170. Name only, referred to *Setaria viridis*.

PARACTAENUM Beauv. 47.

"Inflorescence paniculate; panicle simple; spikelets appressed to the axis and subimmersed in its cavities; glumes obtuse, the lower half as long as the upper; lower floret neuter, its lemma and palea herbaceous; upper floret perfect, the lemma and palea coriaceous-indurate, glabrous."

"OBS. . . . *Paractaenum* has an aspect quite distinct in the summit of its axis terminating in a point or sort of spine, a character of which *Dineba* alone [*Bouteloua* is meant] offers an example. * * * I suppose it is described in the interesting work of Robert Brown; but as my specimen is abortive or mutilated I can not place it satisfactorily in any of his genera."

Paractaenum novae-hollandiae, the only species, is the type. Miss Hughes[79] examined a specimen in the British Museum, sent from Paris in 1816 and named *Paractaenum novae-hollandiae* Beauv. "It was collected by Leschen-

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[78] Enum. Pl. 1: 127. 1809.

[79] Kew. Bull. Misc. Inf. 1923: 287. *f. 1–6.* 1923.

ault in 'Îles Stériles' (probably Shark's Bay) in 1802, and is possibly the plant described by Beauvois, as it is very similar to his illustration. The analyses of the spikelet agree perfectly, but the drawing is incorrect in that each spikelet really lies in a cavity between a bristle (which is broad, flat, and either acuminate or obtuse) and the flattened rhachis." The plant is a depauperate specimen of the species hitherto called *Panicum reversum* F. Muell. Miss Hughes gives an emended description and correct illustration and points out that the short branches are reversed at maturity and readily disarticulate, as in *Plagiosetum* Benth. to which it is related. Genus valid.

Paractaenum novae-hollandiae Beauv. 47. *pl. 10. f.* 6. Valid.

ANTHAENANTIA Beauv. 48.

"Inflorescence paniculate; panicle nearly simple; glumes subequal, concave, herbaceous; lower floret neuter, the lemma and palea membranaceous, opposite, placed contrariwise to the perfect floret; upper floret perfect, the lemma and palea subcartilaginous."

Phalaris villosa Michx., the only species included, is the type. Genus valid.

The figure of the spikelet shows two white lanceolate organs, like a lemma and palea, placed crosswise in front of the fertile floret. There is no such structure in the species cited, which the figures of the panicle and closed spikelet well represent. The name is derived from *ἀνθέω* flower and *ἐναντίως* contrary. Kunth [80] says that Beauvois must have split the palea of the sterile floret, and have mistaken the parts for lemma and palea of a lower floret, having mistaken the sterile lemma for the [first] glume. ['The first glume is wanting]. This is undoubtedly the correct explanation. In the index the name is spelled *Anthenantia*.

Anthaenantia villosa Beauv. 48, 151. *pl. 10. f.* 7. Based on *Phalaris villosa* Michx. Valid.

HYMENACHNE Beauv. 48.

"Inflorescence paniculate; panicle simple, spikelike; branches contracted; glumes unequal, herbacous, acute, the lower much shorter; lower floret neuter, the lemma acute, the palea very short, membranaceous, hyaline; upper floret perfect, the lemma and palea herbaceous, membranaceous, acute."

"*Agrostis myuros* Lam. *monostachya* Poir." are cited. Beauvois doubtless meant *Panicum myuros* Lam., but he misunderstood that species as shown by the figure named *H. myuros*. That represents *Agrostis monostachya* Poir., which is therefore taken as the type. This is *Hymenachne amplexicaulis* (Rudge) Nees. The type specimens of both species cited by Beauvois were examined by A. S. Hitchcock in the Paris Herbarium. Genus valid.

Hymenachne myuros Beauv. 49, 165. *pl. 10. f.* 8. The name is based on *Agrostis* [error for *Panicum*] *myuros* Lam. Lamarck's species is *Sacciolepis myuros* (Lam.) Chase, but the figure is *H. amplexicaulis*.

MONACHNE Beauv. 49.

"Inflorescence paniculate; panicle compound; glumes subequal, villous, longer than the floret; lower floret staminate, the lemma membranaceous, hyaline, the palea wanting; upper floret perfect the lemma coriaceous-indurate, entire."

Monachne unilateralis Beauv. *pl. 10. f. 9*, and *Saccharum reptans* Lam., *f. 10*, are cited and figured. Figure 9, showing a repeatedly branching panicle, a

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[80] Rév. Gram. 2: 217. 1830.

raceme, and a displayed spikelet enlarged, is not identifiable. It was probably drawn from more than one species, one of them, judging from the globular structure at the base of the spikelet, being a species of *Eriochloa*. The lemma shown in this spikelet is not awned. The first species being unidentifiable, the second, *Saccharum reptans* Lam. (*Monachne racemosum* Beauv.) is taken as the type. This is a South American species of *Panicum*, *P. reptans* (Lam.) Kunth, not L., allied to *P. urvilleanum* Kunth. Kunth's name being untenable, *P. racemosum* (Beauv.) Spreng. is the valid name. The source of Beauvois' specimen is not given=*Panicum* L.

Monachne racemosa Beauv. 168. *pl. 10, f. 10.* In the text (page 49) this figure is cited as "Saccharum reptans ? Lam." but in the Atlas it is called *Monachne recemosa=Panicum racemosum* (Beauv.) Spreng. (See above.)

Monachne unilateratis Beauv. 49. *pl. 10. f. 9.* Unidentifiable. (See above.)

GEN. XLIII. STREPTOSTACHYS Desv.

Desvaux described this genus from a specimen having abnormal elongate falcate spikelets, consisting of many sterile lemmas. A. S. Hitchcock examined Desvaux's specimens in the Paris Herbarium. One had normal spikelets, one abnormal, and one had both kinds.

Streptostachys hirsuta Beauv. 50. *pl. 10. f. 11=Panicum asperifolium* (Desv.) Hitchc. (*Panicum vaginaeflorum* Steud. is the same species.)

GEN. LIV. DIGITARIA Hall.

Digitaria filiformis Beauv. 51, 160, 169. "*Panicum filiforme* Wild." is referred to *Digitaria*. Willdenow[61] gives Linnaeus as author=*Syntherisma filiformis* (L.) Nash.

Digitaria gibbosa Beauv. 160, 169. Based on *Panicum gibbosum* R. Br.= **Syntherisma gibbosa** (R. Br.) Chase.

Digitaria glabra Beauv. 51, 169. *Panicum glabrum* Gaudin is referred to *Digitaria*. Gaudin's name is based on *Syntherisma glabra* Schrad.=*S. ischaemum* (Schreb.) Nash.

Digitaria longifolia Pers.; Beauv. 10, 160. Error for *longiflora*. Persoon gives Retzius as author of *Paspalum longiflorum=Syntherisma longiflora* (Retz.) Skeels.

Digitaria papposa Beauv. 51, 160, 170. Based on *Panicum papposum* R. Br. *Digitaria papposa* is credited to R. Br. on page 160=*Leptoloma papposa* (R. Br.) Hughes.

Digitaria propinqua Beauv. 51, 160, 170. Based on *Panicum propinquum* R. Br. *Digitaria propinqua* is credited to R. Br. on page 160=*Syntherisma longiflora* (Retz.) Skeels.

Digitaria tenuiflora Beauv. 51, 160, 171. Based on *Panicum tenuiflorum* R. Br. *Digitaria tenuiflora* is credited to R. Br. on page 160=*Syntherisma longiflora* (Retz.) Skeels.

Digitaria thunbergii Beauv. 51. Name only.

Digitaria velutina Forsk.; Beauv. 51. Name only.

SETARIA Beauv. 51.

[Not *Setaria* Ach. 1798, nor Michx. 1803.]

"Inflorescence paniculate; panicle simple, spikelike; bristles of the spikelet 2 to many, subinvolucrate; lower glume small; lower floret neuter or staminate; lemma and palea [of perfect floret] coriaceous-indurate."

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[61] Sp. Pl. 1: 343. 1797.

Fourteen species are listed, *S. viridis*, being illustrated, is taken as the type[82]=*Chaetochloa* Scribn.

Setaria erubescens Beauv. 51, 169, 178. Based on *Panicum erubescens* Willd. This species, from the island of St. Thomas, has not been identified. The brief diagnosis suggests *Pennisetum setosum* (Swartz) Rich.

Setaria geniculata Beauv. 51, 169, 178. "*Panicum geniculatum* Wild." is referred to *Setaria*. Willdenow[83] cites "Hornem. cat. hort. haf. p. 28. Habitat in Antillis." In Hornemann[84] this is a name only, with Vahl as author. The name is not found in Vahl's works. Willdenow's description applies fairly well to *Chaetochloa geniculata* (Lam.) Millsp. & Chase.

Setaria germanica Beauv. 51, 169, 178. Based on *Panicum germanicum* Willd. A form of *Chaetochloa italica* (L.) Scribn.

Setaria glauca Beauv. 51, 169, 178. Based on *Panicum glaucum* L.=*Pennisetum glaucum* (L.) R. Br.[85]

Setaria italica Beauv. 51, 170, 178. Based on "*Panicum italicum* Wild." Willdenow[86] places "W." after his description, but this must imply that the description is original, not taken from Linnaeus. Several references cited by Linnaeus are given=*Chaetochloa italica* (L.) Scribn.

Setaria muricata Beauv. 51, 170, 178. Based on *Panicum muricatum* Michx. =*Echinochloa crusgalli* (L.) Beauv. (Held distinct by some as *E. muricata* (Michx.) Fernald.)

Setaria purpurea Beauv. 51, 170, 178. Based on *Panicum purpureum* Ruiz & Pav. This Peruvian species has not been identified.

Setaria sericea Beauv. 51, 171, 178. Based on *Panicum sericeum* Ait. This species, described from plants grown from seed from the West Indies, has not been identified. The description suggests *Pennisteum setosum* (Swartz) Rich., but does not wholly agree with that.

Setaria setosa Beauv. 51, 171, 178. Based on *Panicum setosum* Swartz= *Chaetochloa setosa* (Swartz) Scribu.

Setaria verticillata Beauv. 51, 171, 178. Based on *Panicum verticillatum* L.=*Chaetochloa verticillata* (L.) Scribn.

Setaria villosa "Lin."; Beauv. 51, 171, 178. Name only.

Setaria viridis Beauv. 51, 171, 178. *pl. 13. f. 3.* Based on *Panicum viride* L.=*Chaetochloa viridis* (L.) Scribn.

Setaria umbrosa Beauv. 51, 178. Name only.

Setaria vulpina Beauv. 51, 171, 178. Based on *Panicum vulpinum* Willd.= *Pennisetum ciliare* (L.) Link.

Setaria longiseta Beauv. Fl. Owar. **2**: 81. *pl. 110.* 1818.[87] The type, collected by Beauvois in Oware, Africa, was examined in the Delessert Herbarium. This species was referred to *Pennisetum* by Schumann[88] and placed in subseries *Beckeropsis* of *Pennisetum* by Leeke,[89] but the Beauvois specimen does not belong in *Pennisetum*. It is the species represented by Stolz no.

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[82] See Hitchcock, Contr. U. S. Nat. Herb. **22**: 156, 208. 1920.

[83] Enum. Pl. 1031. 1809.

[84] Enum. Pl. Hort. Hafn. 28. 1807.

[85] See Chase, Amer. Journ. Bot. **8**: 41–49. 1921.

[86] Sp. Pl. **1**: 336. 1797.

[87] The date on the title page is 1807, but the fascides were issued at irregular intervals. (See pages 173, 213.)

[88] Engl. Pflanzenw. Ost-Afr. C: 105. 1895.

[89] Zeitschr. Naturw. **79**: 28. 1907.

1384 from Kyimbila, Africa, distributed by the Berlin Herbarium as *Setaria longiseta* Beauv.=**Chaetochloa longiseta** (Beauv.) Chase.

UROCHLOA Beauv. 52.

"Inflorescence spicate; spike compound, the spikelets alternate or opposite; spikelets subgeminate, subinvolucrate with few (2 or 3) hairs; lower glume very small; lower floret staminate, the lemma and palea herbaceous; upper floret perfect, the lemma and palea coriaceous-indurate, transversely wrinkled, the lemma terminating in a short bristle."

Urochloa panicoides Beauv., is the only species=*Panicum panicoides* (Beauv.) Hitchc. *Urochloa* is maintained as valid by Stapf[90] for the group containing *Panicum reptans* L. and other species in which the panicle consists of racemes borne on a main axis, the group *Fasciculata* of Hitchcock and Chase in North American Species of Panicum.[91]

Urochloa panicoides Beauv. 53. *pl. 11. f. 1.* From Isle of France communicated by Jussieu=*Panicum panicoides* (Beauv.) Hitchc. This species had been confused with *Panicum helopus* Trin., from which it is distinct.[92]

ECHINOCHLOA Beauv. 53.

"Inflorescence spicate; spike compound; racemes alternate; spikelets unilateral; glumes and sterile lemma hirsute, acute, the lowest small, its base convolute; lower floret staminate or neuter, the lemma and palea herbaceous, the lemma long-acuminate or bearing a bristle, the palea bifid-dentate; upper floret perfect, the lemma and palea coriaceous-indurate, the lemma acuminate."

Panicum crusgalli, the species figured, is taken as the type. Genus valid.

Echinochloa cruscorvi Beauv. 53, 161, 169. Based on *Panicum cruscorvi* L. Probably a form of *E. crusgalli* (L.) Beauv.

Echinochloa crusgalli Beauv. 53, 161, 169. *pl. 11, f. 2.* Based on *Panicum crusgalli* L. Valid.

Echinochloa echinata Beauv. 53, 161, 169. Based on *Panicum echinatum* Willd. This species has not been identified.[93]

Echinochloa lanceolata Beauv. 53, 161, 170. Based on *Panicum lanceolatum* Retz. The original description suggests *Oplismenus* to which Kunth transferred this name.

Echinochloa setigera Beauv. 53, 161, 171. Based on *Panicum setigerum* Retz. The description suggests *Oplismenus.*

Echinochloa stagnina Beauv. 53, 161, 171. Based on *Panicum stagninum* Retz. Valid.

OPLISMENUS Beauv. Fl. Owar. **2**: 14. *pl. 68. f. 1.* 1809.[94]

Based on a single species, *O. africanus* Beauv. The type, consisting of two good specimens, collected by Beauvois in Oware, Africa, was examined in the Delessert Herbarium. The plants agree with the plate and are not

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[90] In Prain, Fl. Trop. Afr. **9**: 586. 1920.

[91] Contr. U. S. Nat. Herb. **15**: 35. 1910.

[92] See Hitchcock, Journ. Washington Acad. Sci. **9**: 551. 1919.

[93] See Hitchcock, Contr. U. S. Nat. Herb. **22**: 153. 1920.

[94] The dates at which the fascicles of this work were issued are somewhat uncertain. The date on the title page of vol. 2 is 1807, but in the discussion of *Oplismenus* (p. 15) a paper read to the Institute on September 25, 1809, is referred to.

O. burmanni, the species represented by *Zenker & Staudt* 515, from Kamerun, Africa, the spikelet of which was figured as *O. africanus* by Chase.[96] Beauvois' specimens are allied to *O. hirtellus*. Genus valid.

Oplismenus bromoides Beauv. 54, 168, 169. Based on *Panicum bromoides* Lam.=*O. burmanni* (Retz.) Beauv.

Oplismenus burmanni Beauv. 54, 168, 169. Based on *Panicum burmanni* Retz. Valid.

Oplismenus compositus Beauv. 54, 168, 169. "*Panicum compositum* Burm." is referred to *Oplismenus*. Burmann[96] gives Linnaeus as author. Valid.

Oplismenus elatior Beauv. 54, 168, 169. Based on "*Panicum elatior* Lin." [error for *elatius*]. Probably *O. compositus*.

Oplismenus foliaceus Beauv. 54. Error for *loliaceus*, *Panicum loliaceum* Lam. being referred to *Oplismenus* (page 168).

Oplismenus helvolus Beauv. 54, 168, 170. Based on *Panicum helvolum* L. A species of *Chaetochloa*.

Oplismenus hirtellus Beauv. 54, 168, 170. Based on *Panicum hirtellum* L. Valid.

Oplismenus loliaceus Beauv. 168, 170. Based on *Panicum loliaceum* Lam.=*O. compositus* (L.) Beauv.

Oplismenus undulatifolius Beauv. 54, 168, 171. Name only. "*Panicum undulatifolius* And." [error for Ard.] is referred to *Oplismenus burmanni*, and "*Panicum undulatifolium* Lin." doubtfully to *Oplismenus*. There is no *Panicum undulatifolium* L. *Panicum undulatifolium* Ard.=*O. undulatifolius* (Ard.) Roem. & Schult.[97]

MELINIS Beauv. 54.

"Inflorescence paniculate; panicle compound; lower glume minute, entire; upper glume 3 or 4 times larger, the apex emarginate, cordate-mucronate; lower floret neuter, the lemma herbaceous, the apex sub-bilaciniate, bearing a long bristle between the lobes, the palea wanting; upper floret perfect, the lemma and palea coriaceous-indurate; lemma sub-bidentate, muticous."

Melinis minutiflora, is the only species. Genus valid.

Melinis minutiflora Beauv. 54. *pl. 11. f. 4.* A plant from Rio Janeiro was communicated by Jussieu. Valid.

ARRHENATHERUM Beauv. 55.

"Inflorescence paniculate; panicle compound, effuse; glumes membranaceous, shorter than the florets; lower floret staminate, the lemma bilaciniate at the apex, the lobes often erose-ciliate, awned from below the middle of the back, the palea membranaceous, hyaline, bifid-dentate * * *; upper floret perfect, the lemma and palea bifido-dentate, the lemma awned below the apex, the awn short, rather inconspicuous."

Avena elatior L., the first species cited and the one illustrated in the figure referred to by Beauvois, is the type. Genus valid.

Arrhenatherum americanum Beauv. 56, 152. Name only.

Arrhenatherum avenaceum Beauv. 152, 153. *pl. 11. f. 5.* A change of name for *Avena elatior*=*Arrhenatherum elatius* (L.) Mert. & Koch.

Arrhenatherum precatorium Beauv. 56, 152, 154. *pl. 1. f. 2.* Based on *Avena precatoria* Thuill.=*Arrhenatherum elatius tuberosum* (Gilib.) Halácsy.

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[96] Proc. Biol. Soc. Washington **24**: 152. 1911.

[96] Fl. Ind. 25. 1768.

[97] Syst. Veg. **2**: 482, 1817.

POGONATHERUM Beauv. 56.

"Culm branching; inflorescence spicate; spike simple; glumes villous at base, the lower muticous, the upper bearing a long bristle; lower floret neuter, the lemma and palea membranaceous, muticous; upper floret perfect, the lemma awned from the back."

Saccharum paniceum Lam., cited under the genus and the basis of *P. saccharoideum*, is the type. Genus valid.

Pogonatherum saccharoideum Beauv. 176. *pl. 11. f. 7.* Evidently a change of name for *Saccharum paniceum*=*P. paniceum* (Lam.) Hack.

ICHNANTHUS Beauv. 56.

"Inflorescence paniculate; panicle compound; spikelet 3-flowered; glumes unequal, the lower shorter and broader, the apex bifid-dentate, mucronate between the teeth; lowest floret neuter, the lemma muticous, the palea wanting; middle floret incomplete, abortive, the lemma and palea cartilaginous, opposite, placed contrariwise to the other florets; upper floret perfect, the lemma and palea coriaceous-indurate, muticous, entire."

The structure mistaken for an abortive middle floret is the pair of wings at the base of the fertile lemma which in *I. panicoides*, the type species, are unusually large.[88] Genus valid.

Ichnanthus panicoides Beauv. 57. *pl. 12. f. 1.* "Croit dans l'Amerique méridionale . . . communiquée par M. Desfontaines." Valid.

GEN. XLVI. CENCHRUS L.

Cenchrus gracilis Beauv. 57, 157. Name only, for a specimen communicated by Bosc.

Cenchrus orientalis Beauv. 157. Referred to *Pennisetum;* probably the Willdenow herbarium name cited by Richard[89] as a synonym of *Pennisetum orientale* L. Rich. is intended.

Cenchrus spinifer Beauv. 57. Error for *spinifex.*

GEN. XLVIII. PENICILLARIA Swartz.

Penicillaria cylindrica Beauv. 59, 172. Name only.

GEN. XLIX. PENNISETUM L. Rich.

Pennisetum amethistinum [*amethystinum*] Beauv. 59, 172. Name only.

GYMNOTHRIX Beauv. 59.

"Inflorescence spicate; spike simple; fascicles involucrate, the involucre simple, setose, the setae glabrous, unequal, one of them twice as long as the rest; spikelet one [to a fascicle]; glumes unequal, the lower truncate; lower floret neuter; upper floret perfect, the lemma and palea acute."

Gymnothrix thuarii is the only species included=*Pennisetum* L. Rich.; commonly regarded as a subgenus, including species in which the bristles are not plumose.

Gymnothrix thuarii Beauv. 60. *pl. 13. f. 6.* Communiquée par M. Dupetit-Thouars, * * * l'Isle-de-France." Probably *Pennisetum caffrum* (Bory) Leeke.

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[88] See Chase, Proc. Biol. Soc. Washington 24: 142. *f. 10.* 1911.

[89] In Pers. Syn. Pl. 1: 72. 1805.

GEN. L. ARUNDO L.

Arundo lanceolata Koel.; Beauv. 20. Name only, listed under *Achnatherum*. Probably *Calamagrotis lanceolata* Koel. was intended. (See page 160.)

Arundo littoralis Beauv. 144. Name only, cited under *Psamma=Ammophila arenaria* (L.) Link.

Arundo montana "Wild."; Beauv. 78, 152. Name only, cited under *Donax*.

Ehrartha Schreb. (pp. 60, 161) is a misspelling of *Ehrharta*.

GEN. LII. TROCHERA L. Rich.

Trochera bulbosa Beauv. 62, 161, 181. *pl. 12. f. 3.* Based on *Ehrharta bulbosa* Smith. Valid in *Ehrharta*.

Trochera calicina Beauv. 62, 161, 181. *pl. 12. f. 4.* Based on *Ehrharta calycina* Smith. Valid in *Ehrharta*.

GEN. LIII. HIEROCHLOA Gmel.

Hierochloa odorata Beauv. 62, 164. *pl. 12. f. 5.* Based on *Holcus odoratus* L.=*Torresia odorata* (L.) Hitchc.

Hierochloa repens Beauv. 62, 164. *Holcus repens* Pers. is cited (page 62) and the same name without author is referred (page 165) to *Hierochloa*. The name does not appear in Persoon's work. Presumably meant for *Holcus repens* Host, which is *Torresia odorata* (L.) Hitchc.

GEN. LV. "TORESIA Fl. Peruv." [Error for *Torresia* Ruiz & Pav.]

Tor[r]esia antar[c]tica Beauv. 63, 179. *pl. 12. f. 7.* Based on *Disarrhenum antarcticum* Labill. Labillardiere's description and plate[100] show this to be the same as *Torresia redolens* (Forst.) Roem. & Schult.

Tor[r]esia magellanica Beauv. 179. Name only. "*Aira magellanica* Lam." is cited under *Torresia* (page 63) but this name is not found in Lamarck's work, nor in any work previous to Beauvois.

Aira magellanica Lam.; Beauv. 63. Name only, cited under *Toresia* [*Torresia*].

GEN. LXI. CAMPULOSUS Desv.

Campulosus falcatus Beauv. 64, 157, 158. Based on *Chloris falcata* Swartz, this based on *Melica falx L. f.*, which is the type of the genus *Harpochloa* Kunth,[101] the specific name being changed to *H. capensis=Harpochloa falx* (L. f.) Kuntze.

Campulosus monostachyos Beauv. 64, 157, 158. *pl. 13. f. 1.* Based on *Chloris monostachya* Michx.=*C. aromaticus* (Walt.) Trin.

GEN. LVIII. CYNOSURUS L.

Cynosurus caerulescens L.; Beauv. 159. Error for *C. coeruleus=Sesleria coerulea* (L.) Ard.

Cynosurus domingensis Pers.; Beauv. 159. Evidently meant for *Eleusine domingensis* Pers., which is based on *Cynosurus domingensis* Jacq. Referred to *Rabdochloa=Leptochloa domingensis* (Jacq.) Trin.

Cynosurus durus Hoffm.; Beauv. 159. Referred to *Sclerochloa;* under *Sclerochloa* (page 98) *Poa dura* L. is cited. "Hoffm." is evidently an error

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[100] Nov. Holl. Pl. 2: 83. *pl. 232.* 1806. [101] Rév. Gram. 1: 92. 1829.

for L., and *Poa dura* an error for *Cynosurus dura* L.=*Sclerochloa dura* (L.) Beauv.

Cynosurus effusus "Lin." ; Beauv. 159. (Probably an error for Link.) Referred to *Chrysurus*. *Cynosurus effusus* Link is commonly referred to *Cynosurus elegans* Desf.

Cynosurus flocciformis Forsk.; Beauv. 159. Error for *C. floccifolius* Forsk.=*Eleusine floccifolia* (Forsk.) Spreng.

Cynosurus glaber Beauv. 159. Name only, referred to *Dactyloctenium*.

Cynosurus pilosus Beauv. 159. Name only, referred to *Dactyloctenium*.

Cynosurus retroflexus L.; Beauv. 98, 159. (L. is probably an error for Vahl.) Referred to *Dineba*=*Dinebra retroflexa* (Vahl) Panz.

Cynosurus uniola Thunb.; Beauv. 159. Thunberg[102] does not cite the author, but it is doubtless Linnaeus' species which he describes=*Brizopyrum uniolae* (L. f.) Schrad.=**Desmazeria uniolae** (L. f.) Chase.

The name *Brizopyrum* is not tenable, that genus being based by Link[103] on *Poa sicula* Jacq., which is also the type species of *De[s]mazeria* Dum.[104] published earlier. Stapf[105] uses the name "*Brizopyrum* Nees (in part, not of other authors)" for the South African species included by Nees in *Brizopyrum* Link. Bentham and Hooker[106] and Hackel[107] include the South African species in *Desmazeria* Dum. with *D. sicula*, with which to us they seem to be congeneric.

ELYTROPHORUS Beauv. 67.

"Inflorescence spicate; spike compound; fascicles sessile, globose-contracted, the lowermost rather remote; partial involucre of 3 to 7 lanceolate bracts; glumes acute, subulate, 3 to 6-flowered, nearly as long as the florets; lemma and palea unequal, the lemma keeled, ventricose, subulate, the palea 2-cleft, emarginate, short-mucronate between the denticulate lobes."

Elytrophorus articulatus is the only species. Genus valid.

Elytrophorus articulatus Beauv. 67. *pl. 14. f. 2.* No locality is given, but "Gramen alopecuroides, Maderaspastanum etc. Pluck. Alm. tab. cxc, fig. xvi [vi]" is cited. Plukenet's name indicates that his plant was from India. Valid.

Briza multiflora Forsk. (page 155) is referred to *Megastachya*. Doubtless a mistake for *Poa multiflora* Forsk.

GEN. LX. MELICA L.

Melica aquatica Web.; Beauv. 167. Name only, referred to *Poa aquatica* L. "Web." is evidently an error for Wibel; *Melica aquatica* is not found in his work, but "*M[olinia] aquatica*" Wib., based on *Aira aquatica* L., is on the page[108] with Melica, and doubtless was what caught Beauvois' eye. *Aira aquatica* L. is the basis of *Catabrosa aquatica* (L.) Beauv. *Poa aquatica* L. is the basis of *Panicularia aquatica* (L.) Kuntze.

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[102] Prodr. Pl. Cap. 23. 1794.
[103] Hort. Berol. 1: 159. 1827.
[104] Comm. Bot. 26. 1822.
[105] Thiselt. Dyer, Fl. Cap. 7: 701. 1898.
[106] Gen. Pl. 3: 1194. 1883.
[107] In Engl. & Prantl, Pflanzenfam. 2^2: 72. 1887.
[108] Prim. Fl. Werthem. 116. 1799.

Melica curtipendula "Mich."; Beauv. 98. Name only, evidently error for *Chloris curtipendula* Michx.

GEN. LXIII. ORTHOCLADA Beauv. 69.

"Inflorescence paniculate; panicle compound, the branches numerous, subverticillate, very long, straight, rigid, spikelet-bearing only at the ends; glumes 3 or 4-flowered, shorter than the florets."

Orthoclada rariflora, the species illustrated, is the type. This is the same as *O. laxa*. Genus valid.

Orthoclada laxa Beauv. 70, 149, 168. Based on *Aira laxa* Rich. Valid.

Orthoclada rariflora Beauv. 70. *pl. 14. f. 9.* Based on *Panicum rariflorum* Lam. [In the Atlas the name is erroneously given as "*rarifolia*"]=*O. laxa* (Rich.) Beauv.

GEN. LXIV. POA L.

Poa aegyptia Beauv. 173. Name only.

Poa airoides Desmaz.; Beauv. 173. Referred to *Catabrosa aquatica*. Desmazieres[109] gives no authority for this name but he cites *Aira aquatica* L. *Poa airoides* Koel.[110] is based on *Aira aquatica* L.=*Catabrosa aquatica* (L.) Beauv.

Poa altissima Hall.; Beauv. 173. Referred to *Poa aquatica*. Haller[111] does not use binomials. One of his species bears a phrase name beginning "Poa altissima, foliis latissimis." A Scheuchzer phrase name is cited that Linnaeus[112] cites under *Poa aquatica*. That is *Panicularia aquatica* (L.) Kuntze.

Poa aristata "Leer."; Beauv. 174. Name only, referred to *Koeleria gracilis*. This name is not found in Leers' work. Probably *Poa cristata* L. given by Leers[113] (which is *Koeleria cristata* (L.) Pers.) was intended.

Poa caerulescens Michx.; Beauv. 77. Name only, referred to "*Tricuspis carolin.*" (See *T. caroliniana* page 184.) *Poa sesleriioides* Michx. (*Triodia flava* (L.) Hitchc.) may have been meant.

Poa curvata Beauv. 99, 174. Name only, referred to *Schenodorus* [*Schedonorus*].

Poa dura L.; Beauv. 98, 174. Referred to *Sclerochloa*. Evidently an error for *Cynosurus durus* L. (See page 176.)

Poa gracilescens Beauv. 174. Name only.

Poa minuta Beauv. 175. Name only.

Poa oblonga Moen.; Beauv. 175. Name only, referred to *Megastachya*.

Poa obtusata Beauv. 175. Name only.

Poa palustris Hoffm.; Beauv. 175. Name only, referred to *Poa trivialis* L.

Poa polymorpha Willd.; Beauv. 175. Referred to *Poa palustris*. Willdenow[114] cites *Poa polymorpha* Wlb. as a synonym of *P. serotina* [Ehrh.] Schrad. (which is *Poa palustris* L.), but Ascherson and Graebner[115] refer Wibel's species to *P. nemoralis* var. *rigidula* Mert. & Koch.

Poa pratensis Roth; Beauv. 175. Name only, referred to *Poa trivialis*.

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[109] Agrost. Départ. Nord France 85. 1812.
[110] Descr. Gram. 194. 1802.
[111] Nom. Hist. Pl. Helv. 133. 1769.
[112] Sp. Pl. 67. 1753.
[113] Fl. Herborn. 31. 1775.
[114] Enum. Pl. 1: 105. 1809.
[115] Syn. Mitteleur. Fl. 2: 411. 1900.

Poa salina Roth; Beauv. 175. Name only, referred to *Poa distans*. Roth cites Pollich as author. *P. salina* Poll. is a species of *Puccinellia*.

Poa squamosa Beauv. 176. Name only.

Poa stricta "Thunb., Wild.;" Beauv. 176. Name only, probably an error for *Poa striata* Thunb. given in Willd.[116] That is referred by Stapf[117] to *Eragrostis bergiana* Trin.

Poa sylvatica Hoffm.; Beauv. 176. Name only, referred to *Poa trinervata*.

Poa tremula "Lin."; Beauv. 176. Evidently an error for Lam., Lamarck's species is the basis of *Eragrostis lamarckii* Steud. (not *E. tremula* Hochst.).

ERAGROSTIS Beauv. [Host.] 70.

The genus was published by Host[118] with the description of one species, based on *Briza eragrostis* L., but with no generic diagnosis. Beauvois gives a diagnosis and proposes the name as his own. He cites *Poa eragrostis* L. and figures the species as *Eragrostis eragrostis*. It seems probable that Beauvois did not know of Host's publication of the same generic name. It must have been suggested to both authors by the Linnaean specific names *Briza eragrostis* (*Eragrostis cilianensis* (All.) Link), and *Poa eragrostis* (*E. eragrostis* (L.) Beauv.).

Eragrostis cynosuroides Beauv. 71, 162, 174. Based on *Poa cynosuroides* Retz. Valid.

Eragrostis cyperoides Beauv. 71, 162, 174. Based on *Poa cyperoides* Thunb. Valid.

Eragrostis eragrostis Beauv. 71, 174. *pl. 14. f. 11.* Based on *Poa eragrostis* L. Valid.

Eragrostis ferruginea Beauv. 71, 162, 174. Based on *Poa ferruginea* Thunb. Valid.

Eragrostis interrupta Beauv. 71, 162, 175. Based on *Poa interrupta* R. Br. There has been much confusion in regard to this name. Bentham[119] reduces *Poa interrupta* R. Br. to *Eragrostis brownii* var. *interrupta* Benth. Judging form the description, Brown's plant, from the coast of Australia, is the perennial species represented by specimens collected by E. N. Parker, Moreton Bay, Queensland, July, 1918, distributed as *Eragrostis brownii* var. *interrupta*. There is an earlier *Poa interrupta* Lam.[120] collected by "Sonnerat", presumably in the East Indies. The very meager description gives little clue to the identity, except for "glumis minutissimis." That suggests the annual plant of Asia and the Philippines, represented by specimens distributed by the Philippine Bureau of Science as *Eragrostis interrupta* (Lam.) Doell (nos. 468, 6634, 7791, 7810, 7920); by *Levine* 3364, Kwong Tung Province, China; and by G. King, Central India, under the name *Poa diarrhena*. Stapf[121] describes this annual species as "*E. interrupta* Beauv. Agrost. 71 (non Roem. & Sch., nec Trin.)." As stated above, *E. interrupta* Beauv. is based on *Poa interrupta* R. Br. (since there is no description there can be no question of misapplication of the name). Roemer and Schultes[122] cite "*E. interrupta* P. de Beauv. * * * *Poa interrupta* R. Brown." Trinius[123] cites

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[116] Sp. Pl. 1: 398. 1797.
[117] Thiselt. Dyer, Fl. Cap. 7: 625. 1898.
[118] Icon. Gram. Austr. 4: 14. *pl. 24.* 1809.
[119] Fl. Austral. 7: 647. 1878.
[120] Tabl. Encycl. 1: 185. 1791.
[121] Hook. f. Fl. Brit. Ind. 7: 316. 1896.
[122] Syst. Veg. 2: 577. 1817.
[123] Mém. Acad. St. Pétersb. VI. Math. Phys. Nat. 1: 399. 1830.

"*Eragrostis interrupta* Pal. [Beauv.] * * * *Poa interrupta* Br." Neither of them cites *Poa interrupta* Lam. *Eragrostis interrupta* is sometimes credited to Steudel [124] who also bases the name on *P. interrupta* R. Br. In the synonymy Stapf cites *Poa interrupta* Lam. but not *P. interrupta* R. Br. Under *Eragrostis elongata* (Willd.) Jacq. Stapf (page 319) cites as synonyms "*E. interrupta* Steud. (non Beauv.) * * * *Poa interrupta* & *polymorpha*, Br. Prod. 180." As shown above, *Poa interrupta* R. Br. is the basis of *E. interrupta* Beauv., Roem. & Schult., Trin, and Steud. *Poa interrupta* R. Br. is invalidated by the Lamarck name, hence is not valid in *Eragrostis*. *Eragrostis interrupta* (Lam.) Doell [125] is invalidated by *E. interrupta* (R. Br.) Beauv. What the valid names for these very different species are we are not prepared to say without study of the many types involved. For the present, in the United States National Herbarium, Brown's species is placed as a form under *E. brownii* (Kunth) Nees, based on *Poa polymorpha* R. Br., and Lamarck's under *E. japonica* (Thunb.) Trin.

Eragrostis pilosa Beauv. 71, 162, 175. Based on *Poa pilosa* L. Valid.

Eragrostis poaeoides Beauv. 162. Name only, probably meant for change of name of *Poa eragrostis*, given as *Eragrostis eragrostis* in the Atlas.

Eragrostis riparia Beauv. 71, 162, 175. *Poa riparia*, without author, is referred to *Eragrostis*. *Poa riparia* Willd.[126] (the only species of the name), described from the West Indies, is, from the description, a species of *Eragrostis*, probably *E. ciliaris* (L.) Link. *Eragrostis riparia* Nees is based on "*Megastachya riparia* Willd." [Roem. & Schult.], which is based on *Poa riparia* Willd.

Eragrostis verticillata Beauv. 71, 162, 176. "*Poa verticillata* Wild." is referred to *Eragrostis*. Willdenow [127] credits the name to Cavanilles. Cavanilles's illustration (plate 93) shows this to be a species of *Eragrostis*, apparently a large form of *E. pilosa* (L.) Beauv.

LEPTOCHLOA Beauv. 71.

"Inflorescence paniculate; panicle simple, the branches or racemes alternate, simple; spikelets subsecund; glumes 3 to 5-flowered, lanceolate, acute, nearly the length of the florets; lemma keeled, acute; palea bifid-dentate."

Leptochloa virgata, the species figured, is taken as the type. Genus valid.

Leptochloa capillacea L.; Beauv. 71, 166. Name only.

Leptochloa filiformis Beauv. 71, 161, 166. Based on *Eleusine filiformis* Pers., which is evidently based on *Festuca filiformis* Lam., though that author is not cited. Valid.

Leptochloa virgata Beauv. 71, 161, 166. *pl. 15. f. 1.* Based on *Eleusine virgata* Pers., which is based on *Cynosurus virgatus* L. Valid.

GEN. LXVII. DACTYLOCTENIUM Willd.

Dactyloctenium glabrum Beauv. 72, 160. Name only.

Dactyloctenium pilosum Willd.; Beauv. 72, 160. Name only.

Dactyloctenium radulans Beauv. 72, 160. Based on *Eleusine radulans* R. Br. Bentham [128] identifies this with *Dactyloctenium aegyptium* (L.) Richt.

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[124] Syn. Pl. Glum. 1: 279. 1854.

[125] Mart. Fl. Bras. 2[3]: 157. 1878.

[126] Ges. Naturf. Freund. Berlin Neue Schrift. 4: 185. 1803.

[127] Sp. Pl. 1: 393. 1797.

[128] Fl. Austral. 7: 615. 1878.

ACHNERIA Beauv. 72.

"Inflorescence paniculate; panicle compound; glumes subequal, 2-flowered; lemma and palea lanuginose-villous."

Four species of *Eriachne* R. Br. are cited, two of them being queried in the text. None are figured. Beauvois explains that having established the principle that awned and muticous species should not be included in a single genus, it was necessary to segregate the two groups included in *Eriachne* R. Br. He suggests that perhaps all the species of *Eriachne* may belong in known genera, such as *Poa*, *Aira*, or *Festuca*, but not knowing any of the species it was impossible for him to decide, for which reason he proposes a generic division between species muticous and species awned. For the muticous species he makes an anagram of *Eriachne*. The two species queried by Beauvois are described as having mucronate lemmas. *E. obtusa*, not queried, having obtuse lemmas, is taken as the type=*Eriachne* R. Br. See discussion of *Achneria*, page 205.

Achneria brevifolia Beauv. 73, 146. Based on *Eriachne brevifolia* R. Br. Referred by Bentham [129] to *Eriachne mucronata* R. Br.

Achneria capillaris Beauv. 73, 146. Based on *Eriachne capillaris* R. Br. Valid in *Eriachne*.

Achneria mucronata Beauv. 73, 146. Based on *Eriachne mucronata* R. Br. Valid in *Eriachne*.

Achneria obtusa Beauv. 73, 146. Based on *Eriachne obtusa* R. Br. Valid in *Eriachne*.

SCHISMUS Beauv. 73.

"Inflorescence paniculate; panicle simple, contracted, spikelike; glumes 3 to 6-flowered, the length of the florets or longer; lemma cordate-emarginate, the nerve produced between the lobes into a filiform mucro; palea entire."

Schismus marginatus, the species illustrated, is taken as the type. Genus valid.

Schismus fasciculatus Beauv. 74, 177. Name only, "plante communiquée par M. Persoon et M. Balbis." Later published with a few words of description by Trinius [130] who gives *Festuca calycina* L. as a synonym=*Schismus barbatus* (L.) Chase. (See page 182.)

Schismus marginatus Beauv. 177. *pl. 15. f. 4.* The source of the specimen is not given. Nees [131] describes *S. marginatus* from South Africa, and gives *Festuca calycina* L. as a synonym. Stapf [132] considers *S. fasciculatus*, *S. marginatus*, *Festuca calycina*, and *F. barbata* L. to be the same species, using the name *Schismus fasciculatus* Beauv. *Festuca calycina* was first published by Loefling [133] in 1758. Previously, however, Linnaeus [134] described the species as *Festuca barbata* (the description given in a footnote) based on "Loefl. Habitat in Hispania." It would seem that when Loefling himself renamed his plant *F. calycina*, Linnaeus accepted the change,[135] dropping *F. barbata*, which does not again appear in his works, though he cites "Amoen. acad. 3. p. 400," and copies the diagnosis of *F. barbata* in the second edition of the Species Plantarum. The nomenclature of this species

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[129] Fl. Austral. 7: 632. 1878.
[130] Fund. Agrost. 148. 1820.
[131] Linnaea 7: 323. 1832; Fl. Afr. Austr. 421. 1821.
[132] Thiselt. Dyer, Fl. Cap. 7: 693. 1898.
[133] Iter. Hisp. 116. 1758.
[134] Amoen. Acad. 3: 400. 1756.
[135] Syst. Nat. ed. 10. 877. 1759; Sp. Pl. ed. 2. 1: 110. 1762.

is discussed at length by Billot,[136] who transfers *F. calycina* instead of *F. barbata* to *Schismus*, because Linnaeus had abandoned *F. barbata*=**Schismus barbatus** (L.) Chase.

MEGASTACHYA Beauv. 74.

[Spelled *Magastachya* in the generic heading, but *Megastachya* in the index]. "Inflorescence paniculate; panicle compound; spikelets elongate, the florets distichous, imbricate; glumes 5 to 20-flowered, shorter than the florets; lemma emarginate, mucronate between the lobes; palea bifid-dentate."

Megastachya owariensis, the only species illustrated, is taken as the type. This name appears in the Atlas only. The figure shows mucronate lemmas. It is undoubtedly the same as "*Poa mucronata* fl. Ow." cited in the text (page 74) and in the index referred to *Megastachya*. This is *Centotheca mucronata* (Poir.) Kuntze. *Megastachya* Beauv. is, therefore, a synonym of *Centotheca*, though it has usually been referred to *Eragrostis*, to which belong most of the species placed by Beauvois in *Megastachya*.

Megastachya amabilis Beauv. 74, 167, 173. Based on *Poa amabilis* "Fl. Zeyl." [of Linnaeus]=*Eragrostis amabilis* (L.) Wight & Arn.

Megastachya badensis Beauv. 74, 167, 174. Based on "*Poa badensis* Wild." This species was published by Willdenow[137] with Haenke as author=*Poa alpina badensis* (Haenke) Mert. & Koch.

Megastachya bipennata Beauv. 74, 155, 167. "*Briza bipennata*? Lam." is cited under *Megastachya*. "*Briza bipennata* Lin., Lam." is referred to *Eragrostis* (page 155). Lamarck[138] gives Linnaeus as author. (The correct spelling is *bipinnata*.)=*Eragrostis bipinnata* (L.) K. Schum.

Megastachya brizoides Beauv. 167. Probably meant for change of name of *Briza eragrostis* L., which is cited under *Megastachya* (page 74) and referred to that genus in the index.

Megastachya ciliaris Beauv. 74, 167, 174. Based on *Poa ciliaris* L.=*Eragrostis ciliaris* (L.) Link.

Megastachya elongata Beauv. 74, 167, 174. *Poa elongata* without author is referred to *Megastachya*. Probably *P. elongata* Willd. was intended=*Eragrostis elongata* (Willd.) Jacq.

Megastachya hypnoides Beauv. 74, 167, 175. Based on *Poa hypnoides* Lam. Michaux is given as authority on page 74 but on page 175 the name is correctly credited to Lamarck=*Eragrostis hypnoides* (Lam.) B. S. P.

Megastachya mucronata Beauv. 74, 167. Based on "*Poa mucronata* Fl. Ow."=*Centotheca mucronata* (Poir.) Kuntze. See *Megastachya owariensis* below. Poiret[139] published *Poa mucronata* for a plant from Africa which he saw in Jussieu's herbarium. It seems probable that it was Beauvois' collection from Africa which he saw. The description applies well to the species represented by *Jeffreys* 32, Opoba, South Nigeria, and *Ledermann* 921, Kamerun. The title page date of Flore Oware volume 1 is "1804–07" but the first fascicle did not appear until 1805. Kuntze[140] and Hackel[141] transferred

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[136] Annot. Flore France et d'Allemagne 285. 1861. (The article is unsigned, hence it is assumed that it is the work of the editor, Billot.)

[137] Sp. Pl. 1: 392. 1797.

[138] Encycl. 1: 465. 1783.

[139] Lam. Encyc. 5: 91. 1804.

[140] Rev. Gen. Pl. 765. 1891. The exact date is uncertain. This part was reviewed in November, 1891, issue of Naturae Novitates. It seems probable that Kuntze's work appeared earlier than Hackel's.

[141] Journ. Linn. Soc. Bot. 29: 66. 1891 (Aug. 22).

Poa mucronata to *Centotheca* the same year. *Eragrostis beninensis* Steud. and *E. owariensis* Steud. are based on *Poa mucronata* Beauv. and *Megastachya owariensis* Beauv., respectively.

Megastachya multiflora Beauv. 74, 167. Beauvois refers "*Briza multiflora* Forsk." to *Megastachya*, but Forskål did not publish that name. Doubtless *Poa multiflora* Forsk. was intended. That is *Eragrostis multiflora* (Forsk.) Schweinf. & Aschers. 1867 (not Trin. 1830). Probably *E. cilianensis* (All.) Link.

Megastachya oblonga Beauv. 74, 167, 175. Based on "*Poa oblonga* Moench," evidently an error for *Briza oblonga* Moench. Based on a garden plant.

Megastachya owariensis Beauv. Atlas 11. *pl. 15. f. 5.* This is given in the Atlas only. "*Poa mucronata* Fl. Ow." is referred (p. 175) to *Megastachya*. In the Flore d'Oware [142] Beauvois describes the species from his own collection, without reference to Poiret's description of it under the same name the year before. (See *M. mucronata* above.)=*Centotheca mucronata* (Poir.) Kuntze.

Megastachya polymorpha Beauv. 74, 167, 175. Based on *Poa polymorpha* R. Br.=*Eragrostis brownii* (Kunth) Nees.

Megastachya reptans Beauv. 74, 167, 175. Based on *Poa reptans*, no author given, presumably Michx.=*Eragrostis hypnoides* (Lam.) B. S. P.

Megastachya rigida Beauv. 74. 167, 175. Based on *Poa rigida* L.=*Scleropoa rigida* (L.) Griseb.

GEN. LXVII. UNIOLA L.

Uniola ciliata Beauv. 75. Name only.

Uniola intermedia Bosc mss.; Beauv. 75, 181. Name only.

Uniola pungens Beauv. 75, 181. Name only.

Uniola latifolia "Lin."; Beauv. 181. Error for *U. latifolia* Michx.

Uniola maritima "Lin."; Beauv. 181. Error for *U. maritima* Michx. which is *Uniola paniculata* L.

CERATOCHLOA Beauv. 75.

"Inflorescence paniculate; panicle subsimple; spikelets compressed, the florets distichous-imbricate; glumes 12 to 18-flowered, shorter than the florets; lemma and palea bifid-dentate, the lemma mucronate between the teeth."

Festuca unioloides [Willd.], the only species cited under the genus, and the one illustrated, is the type=*Bromus* L., commonly maintained as a section for the species having strongly flattened spikelets.

Ceratochloa festucoides Beauv. 158. Name only.

Ceratochloa unioloides Beauv. 75. Atlas 11. *pl. 15. f. 7.* *Festuca unioloides* without author is cited under the genus. Willdenow's species is the only one of that name. This was described from a garden specimen, the habitat doubtfully given as "Carolina." The plate shows the awnless cultivated rescue grass (*Bromus willdenowii* Kunth based on *Festuca unioloides* Willd.), which is an ally of *Bromus unioloides* H. B. K., described from Ecuador, with out reference to Willdenow's species.

GEN. LXX. TRIODIA R. Br.

Triodia decumbens Beauv. 76, 160, 179. *pl. 15. f. 9.** Based on *Danthonia decumbens* DC., which is based on *Festuca decumbens* L.=*Sieglingia decumbens* (L.) Bernh.

Triodia glumosa Beauv. Atlas 12. *pl. 18. f. 7.* This is evidently an error for *Danthonia glumosa*. That name and the figure are cited under *Danthonia*

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[142] Beauv. Fl. Owar. 5. *pl. 4.* 1805.

(page 92), and the figure, which represents a species of *Danthonia*, is not cited under *Triodia*. (See *Danthonia glumosa* (Michx.) Beauv., page 191.)

TRICUSPIS Beauv. 77.

"Inflorescence paniculate; panicle subsimple; glumes keeled, 5 to 7-flowered, shorter than the florets; lemma bifid-dentate, mucronate between the teeth and on both sides; palea truncate, nearly emarginate."

Tricuspis caroliniana Beauv., the species illustrated, is the type=*Triodia* R. Br.

Tricuspis caroliniana Beauv. 179. *pl. 3. f. 29; pl. 15. f. 10.* "Communiquée par M. Bosc" (probably from South Carolina). The figures represent *Triodia flava* (L.) Hitchc., though that of the lemma is inaccurate in that it is represented as hairy across the back instead of on the nerves only.

Tricuspis novae-boracensis Beauv. 77, 179. "l'Etat de New-Yorck, d'ou M. Delille l'a rapportée." Name only.

DONAX Beauv. 77.

"Inflorescence paniculate; panicle compound; glumes membranaceous, 5 to 7-flowered; lemma with 3 bristles, the middle one longer; palea truncate, emarginate or bifid-dentate."

Donax arundinacea (based on *Arundo donax* L., the origin of the generic name) is the type=*Arundo* L.

There are three illustrations. Beauvois observes (page 78) that *Donax* might easily be divided into two or three genera, on the differences in the lemma, the lodicules, and the ovary, but he does not wish to add to the number of new genera. The three illustrations are explained: I. *Pl. 15, f. 11,* is named *Deyeuxia arundinacea* in the Atlas (see *Ampelodesma*, page 185.) II. *Pl. 16, f. 4* (named *Donax arundinaceus* and representing *Arundo donax*) and *f. 5* (named *D. thuarii*, see below) are true *Donax*. III. *Pl. 19, f. 1* (also named *Donax arundinaceus* in the Atlas, though no name is mentioned in the observation), represents a very different grass. The spikelet and floret appear to have been drawn from a specimen of *Fluminea festucacea* (Willd.) Hitchc., but the panicle was either drawn from another grass or was greatly idealized. Possibly "*arundinaceus*" in the name of this figure may be an error for "*festucacea*." (See below.)

Donax acutiflorus Schleich.; Beauv. 161. Name only, "*Arundo acutiflora* Schleich." being referred (page 152) to *Donax montana*, and *A. acutiflora* Willd. to *Deyeuxia*. Schleicher[142] lists *Arundo acutiflora* Schrad. That is a species of *Calamagrostis*.

Donax arundinaceus Beauv. 78, 152, 161. *pl. 16. f. 4.* (This name is given also to plate 19, figure 1, see above, but that is obviously an error.) Based on *Arundo donax* L. Valid in *Arundo*.

Donax benghalensis Beauv. 78, 152, 161. Based on *Arundo benghalensis* [*bengalensis*] Retz. Referred by Hooker[144] to *Arundo donax* L.

Donax bicolor Beauv. 78, 152, 161. Based on *Arundo bicolor* Desf. This species, illustrated by Desfontaines,[145] was described earlier by Poiret[146]= *Ampelodesmos bicolor* (Poir.) Kunth.

Donax festucacea Beauv. 78, 152, 161. Based on *Arundo festucacea* Willd. The genus *Scolochloa* Link (1827, not Mert. & Koch, 1823) is based on this species=*Fluminea festucacea* (Willd.) Hitchc. *Donax* is masculine, but Beauvois uses both masculine and feminine endings.

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[143] Cat. Pl. Helv. 7. 1807.
[144] Fl. Brit. Ind. 7: 303. 1896.
[145] Fl. Atlant. 1: *pl. 33.* 1798.
[146] Voy. Barb. 2: 104. 1789.

Donax festucoides Beauv. 78, 161. Based on *Arundo festucoides* Desf. which is the basis of *Ampelodesmos festucoides* (Desf.) Steud. Generally referred to *Ampelodesmos tenax* (Vahl) Link, which is *A. mauritanicus* (Poir.) Dur. & Schinz.

Donax mauritanica Beauv. 78, 152, 161. Based on *Arundo mauritanica* Poir.=*Ampelodesmos mauritanicus* (Poir.) Dur. & Schinz.

Donax montana Beauv. 52, 161. Name only. "*Arundo montana* Wild." (name only) is cited under *Donax* (page 78) and referred to it in the index.

Donax tenax Beauv. 78, 153, 161. Based on *Arundo tenax* Vahl. This species is the type of *Ampelodesmos* Link. (See *Ampelodesma* below)=*A. mauritanicus* (Poir.) Dur. & Schinz.

Donax th[o]uarii Beauv. 78, 161. *pl. 16. f. 5.* No locallty is given. Kunth,[147] who changes the name to *Arundo madagascariensis*, states that he received a specimen of this from Petit-Thouars who collected it in Madagascar=*Arundo thouarii* (Beauv.) Dur. & Schinz.

Donax versicolor Beauv. 78, 153, 161. *Arundo versicolor*, without author, is referred to *Donax*. Beauvois probably meant *Arundo versicolor* Mill., cited by Lamarck [148] under *A. donax* L.

Ampelodesma Beauv. 78. *pl. 15. f. 11.* This name is mentioned under Donax, in explanation of the figure cited. "Lemma bifid-dentate * * * It might be called *Ampelodesma*." (This name is not in the index.) In the Atlas (page 11) plate 15, figure 11 is called *Deyeuxia arundinacea*, and that name is listed in the index. The spikelet shown consists of unequal glumes, a lower floret with the lemma hairy on the back, and with a short awn from between two small lobes of the apex, and an additional structure like an empty, glabrous lemma, not toothed or awned. This figure has been generally identified as *Ampelodesmos tenax* (Vahl) Link. It may have been drawn from a depauperate specimen of that in which only the lowest floret is well developed. The generic name is credited to Beauvois by Bentham and Hooker, Hackel, and others, but Beauvois observes only that if *Donax* were to be divided into two or three genera this might be called *Ampelodesma*, adding that he is not willing to increase the number of new genera. No specific name is cited in his note and the name given to the figure, *Deyeuxia arundinacea*, is obviously an error. Link [149] published *Ampelodesmos* with one species, *A. tenax*, based on *Arundo tenax* Vahl. Link cites "*Donax tenax* Beauv. R. S. 2.601" as a synonym. The citation of Roemer and Schultes seems to indicate that Link did not have Beauvois' book. (They do not cite *Ampelodesma* on page 601, but give it (page 34) as a section of *Donax*.) Link cites *Arundo ampelodesmos* Cyrillo [150] as synonym of *A. tenax*. That and not Beauvois' suggestion must have been the source of the generic name. The genus *Ampelodesmos* should be credited to Link and take date from 1827. Link and Vahl [151] both cite *Arundo mauritanica* Poir.[152] as a synonym of *A. tenax*=*Ampelodesmos mauritanicus* (Poir.) Dur. & Schinz.

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[147] Rév. Gram. **2**: 273. *pl. 48.* 1830.

[148] Encycl. **6**: 268. 1804.

[149] Hort. Berol. **1**: 136. 1827.

[150] Cyrillo, Pl. Rar. Neap. **2**: 30. *pl. 12.* 1792. The specific name is spelled *ampelodesmon*. The illustration is unmistakable.

[151] Symb. Bot. **2**: 25. 1791.

[152] Voy. Barb. **2**: 105. 1789.

Sesleria microcephala "Hoffm., Pers." Beauv. 78. Persoon [133] cites "Hoffm." as author of the name under *Cynosurus*. Referred by Ascherson and Graebner [134] to *Sesleria ovata* (Hoppe) Kern.

GEN. LXXII. CHLORIS Swartz.

Chloris emarginata Beauv. 79, 158. Name only.

Chloris radicata Beauv. 158. Error for *C. radiata* Swartz.

Chloris scariosa Beauv. 79, 158. Name only.

Chloris tetrapogon Beauv. 158, 179. *Tetrapogon* Desf. is referred to *Chloris; T. villosus* Desf., the only species included by Desfontaines, must be the basis of *C. tetrapogon*. Valid in *Tetrapogon*.

Chloris verrucosa Beauv. 158. Probably an error for *C. ventricosa* R. Br.

STREPTOGYNA Beauv. 80.

"Inflorescence spicate; spike compound; spikelets not crowded, sessile, 3 to 5-flowered; glumes unequal, the lower one-third as long as the upper; lemma and palea convolute, emarginate and bearing a bristle; * * * stigmas rough, retrorsely barbed, twisted in drying."

Streptogyna crinita, is the only species. Genus valid. Beauvois spells the name *Streptogyna*, giving Streptogyne as the French name.

Streptogyna crinita Beauv. 80. *pl. 16. f. 8.* Beauvois states that he brought back this plant from the United States, Carolina; that he also saw specimens in the Paris Museum and in the herbarium of Richard, but from Guyane [Guiana]. The notes on Beauvois' collections must have become mixed. This grass is from the tropics; his specimen probably came from the West Indies. Beauvois spent a few years in Santo Domingo. (See page 211.)

Streptogyna guyanensis Beauv. 179. "De la Guyane." Said to differ from *S. crinita* only in having a 3-parted style, presumably an error in observation.

DIPLACHNE Beauv. 80.

"Inflorescence paniculate; panicle simple, the branches numerous, alternate, filiform; glumes 7 to 9-flowered, the upper mucronate; lemma 2-laciniate, bearing a bristle between the lobes; palea subtruncate, emarginate."

Festuca fascicularis Lam., the only species, is the type=*Leptochloa* Beauv.

Diplachne fascicularis Beauv. 81, 160. *pl. 16. f. 9.* Based on *Festuca fascicularis* Lam.=*Leptochloa fascicularis* (Lam.) Gray.

TRIPLASIS Beauv. 81.

"Inflorescence spicate; spike compound; branches alternate, simple, spikelet-bearing at the apex; glumes membranaceous, acute, 4-flowered, the florets pedicellate, the uppermost incomplete, abortive; lemma and palea unequal, the lemma bifid, deeply cleft, the midnerve produced into a long bristle between the subulate lobes; apex of palea entire, extrorsely pilose, reflexed."

Triplasis americana is the only species. Genus valid.

Triplasis americana Beauv. 81. *pl. 16. f. 10.* "Communiquée par M. Delille, des États-Unis d'Amerique." Valid.

GEN. LXXIII. ENNEAPOGON Desv.; Beauv. 81.

"Inflorescence spicate; spike simple; spikelets few, 2 or 3-flowered; glumes longer than the florets; lemma with nine bristles bearded on the margins; palea entire, muticous."

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[133] Syn. Pl. 1: 72. 1805.

[134] Syn. Mitteleur. Fl. 2: 311. 1900.

Enneopogon desvauxii, the species figured, is taken as the type=*Pappophorum* subgenus; regarded as valid by Rendle,[154] Stapf,[155] and others.

Enneapogon desvauxii Beauv. 82. 161. *pl. 16. f. 11.* No locality is given. Desvaux[157] in discussing the genus states that he has examined a "plante des îles Manilles." No species of *Enneapogon* or *Pappophorum* is known from the Philippines.[158] Desvaux refers *E. desvauxii* Beauv. to *E. gracile* (R. Br.) Desv. Bentham[159] refers the four species of *Pappophorum* described by Brown to *P. nigricans* R. Br., the first one.

Enneapogon gracilis Beauv. 82, 161, 171. Based on *Pappophorum gracile* R. Br.

Enneapogon nigricans Beauv. 82, 161, 171. Based on *Pappophorum nigricans* R. Br.

Enneapogon pallidus Beauv. 82, 162, 171. Based on *Pappophorum pallidum* R. Br.

Enneapogon purpurascens Beauv. 82, 162, 171. Based on *Pappophorum purpurascens* R. Br.

RABDOCHLOA Beauv. 84.

"Inflorescence paniculate; panicle simple, the branches few or fascicled, simple, filiform; spikelets subunilateral; glumes 3 to 5-flowered, shorter than the florets; lemma with a bristle below the crenate apex; palea entire.

Rabdochloa domingensis, the species figured, is taken as the type=*Leptochloa* Beauv.

Rabdochloa cruciata Beauv. 84, 158, 176. Based on *Agrostis cruciata* L. This is referred to *Chloris cruciata* and the latter to *Rabdochloa*=*Chloris cruciata* (L.) Swartz.

Rabdochloa domingensis Beauv. 84, 159, 176. *pl. 17. f. 3.* "*Cynosurus domingensis* Pers." is referred to *Rabdochloa*. In Persoon's work[160] the name is *Eleusine domingensis*, based on *Cynosurus domingensis* Jacq.=*Leptochloa domingensis* (Jacq.) Trin.

Rabdochloa monostachya Beauv. 84, 159. Based on *Cynosurus monostachyus* Vahl. *Chloris monostachya* Poir. (not Michx. 1803) is based on this. Referred by Kunth[161] to *Chloris distachya* Kunth.

Rabdochloa mucronata Beauv. 84, 158, 176. Based on *Chloris mucronata* Michx.=*Dactyloctenium aegyptium* (L.) Richt.

Rabdochloa virgata Beauv. 84, 158. *Cynosurus virgatus* is given (page 84) under *Rabdochloa*, but in the index ("Lin" as author) it is referred to *Leptochloa*. *Chloris virgata* Swartz is referred to *Rabdochloa* (page 158). The two names were evidently confused. *Chloris virgata* Swartz is true *Chloris*; *Cynosurus virgatus* L. is *Leptochloa virgata* (L.) Beauv., cited by Beauvois under *Leptochloa* and listed in index.

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[154] Cat. Afr. Pl. Welwitsch 2[1]: 229. 1899.

[155] Thiselt. Dyer, Fl. Cap. 7: 654. 1900.

[157] Journ. de Bot. Desv. 1: 69. 1813.

[158] For unreliability of localities cited by Desvaux see Hitchc. & Chase, Contr. U. S. Nat. Herb. 15: 166. 1910.

[159] Fl. Austral. 7: 600. 1878.

[160] Syn. Pl. 1: 86. 1805.

[161] Rév. Gram. 1: 291. *pl.* 57. 1830.

GEN. LXXVI. KOELERIA L.

Koeleria avenacea Beauv. 166. Name only.

Koeleria pubescens Beauv. 85, 166. Name only. "*Aira pubescens* Lin." is cited under *Koeleria*. Linnaeus did not publish this name. *Aira pubescens* Vahl (page 149) is referred to *Koeleria villosa*.

Koeleria pyramidata Beauv. 84, 166, 175. Based on *Poa pyramidata* Lam.= *Koeleria cristata pyramidata* (Lam.) Pers.

GEN. LXXVII. DACTYLIS L.

Dactylis brevifolia "Koel. Wild."; Beauv. 85, 159. Willdenow[162] credits the name to Koenig and cites "*Dactylis lagopoides* [L.] Mant. 33" (1767), explaining that Koenig's plant is the same as that, but not the same as that of the second edition of the Mantissa (1771) nor of Burmann (1768). (See below.) Several names have been based on *Dactylis brevifolia* Koen. in Willd., *Koeleria brevifolia* Spreng.,[163] *Poa brevifolia* Kunth[164] (not DC. 1806), *Eragrostis brevifolia* Benth.[165] (based on "*Dactylis brevifolia* Roem.," though Roemer and Schultes[166] cite Koenig in Willd.), *Aeluropus brevifolius* Nees; Aschers. & Schweinf.[167] Hooker[168] refers "*D. brevifolia* Koen. ex Willd. (excl. syn.)" to *Elcusine brevifolia* R. Br.; Hook. Durand and Schinz[169] refer it to *Aeluropus brevifolius* (Koen.) Nees.

Dactylis fasciculata "Wild."; Beauv. 159. Referred to *Spartina*. (See page 162.)

Dactylis lagopoides R. Br.; Beauv. 159. Name only; it is not found in Brown's work; probably Linnaeus was meant. Under *Dactylis lagopoides* L.[170] "Bur. ind. t. 10. f. 1. Habitat in India. Burmannus." is cited. Burmann's Flora Indica was published in 1768. The illustration of *Dactylis lagopoides* is plate 12, figure 2. It seems probable that Linnaeus had a plant from Burmann and that he saw manuscript or proofsheets of his work, the number of the plate and figure being subsequently changed. In the second edition[171] Linnaeus cites "Mant. 33" but gives a new description which includes some characters in Burmann's description and which does not seem to apply to the species of 1767. *Koeleria lagopoides* Panz.[172] and *Aeluropus lagopodioides* Trin.[173] are based on *D. lagopoides* L. (1767). Several other names are based on *D. lagopoides* Burm. (1768). It is possible that "R. Br." was a misprint for Burmann.

Dactylis lagopodoides L. Beauv. 159. Evidently an error for *D. lagopoides* L.; referred in the index to *D. brevifolia*. (See above.)

Dactylis stricta Pers.; Beauv. 160. Referred to *Spartina*. In Persoon's work[174] "*Dactylis stricta* Smith" is changed to *Limnetis pungens* Rich.

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[162] Sp. Pl. 1: 410. 1797.
[163] Pl. Pugill. 2: 21. 1815.
[164] Rév. Gram. 1: 111. 1829.
[165] Hook. Icon. Pl. 51. *pl. 1368*. 1881.
[166] Syst. Veg. 2: 630. 1817.
[167] Mem. Inst. Egypt 2: 173. 1889.
[168] Fl. Brit. Ind. 7: 295. 1896.
[169] Consp. Fl. Afr. 5: 901. 1894.
[170] Mant. Pl. 33. 1767.
[171] Mant. Pl. ed. 2 (appendix) 557. 1771.
[172] In Spreng. Syst. Veg. 1: 332. 1825.
[173] In Thwaites, Enum. Pl. Zeyl. 374. 1864.
[174] Syn. Pl. 1: 72. 1805.

Smith credits the name to "Soland. in Ait. Hort. Kew," but Solander's name does not appear in connection with *D. stricta* Ait.=*Spartina maritima* (Curt.) Fernald.

Gen. LXXVIII. CALOTHECA Desv.

Calotheca brizoidea Beauv. 86, 155, 157. *pl. 17. f. 6.* Based on *Briza erecta* Lam. Valid in *Briza.*

Calotheca elegans Beauv. 86, 157. *pl. 17. f. 7.* "*Cascoelytrum elegans* Desv.", an unpublished name, is cited but the source of the specimen is not given. *Briza elegans* (Beauv.) Doell (not Osbeck, 1757) is based on *Calotheca elegans.* Doell cites *Bromus brizoides* Lam. as synonym. Lamarck's brief description, based on a plant collected by Commerson at Monte Video, applies well to this species. Parodi [175] identifies them as the same species=*Briza brizoides* (Lam.) Kuntze.

TRICHAETA Beauv. 86.

"Inflorescence spicate; spike simple; spikelets crowded; glumes acute, hispid on the back, 2 or 3-flowered; lemma hispid on the back, with a flexuous, divergent bristle below the bisetose apex; palea bifid-dentate."

Bromus ovatus Cav. is the only species cited=*Trisetum* Pers.

Trichaeta ovata Beauv. 86, 156, 179. *pl. 17. f. 8.* Based on *Bromus ovatus* Cav. [not Gaertn. 1770]=*Trisetum ovatum* (Cav.) Pers. (There seems to be no tenable name.)

Gen. LXXXI. TRISETUM Pers.

Trisetum alpestre Beauv. 88, 153. Based on *Avena alpestris* Host. Valid.

Trisetum distichophylla Beauv. 88, 153. "*Avena distichophylla* Lin." is referred to *Trisetum.* Probably *A. distichophylla* Vill. was meant. Valid.

Trisetum flavescens Beauv. 88, 153. *pl. 3. f. 8; pl. 18. f. 1.* Based on *Avena flavescens* L. Valid.

Trisetum forskalii Beauv. 88, 153, 180. "*Avena forskalii* Vahl, Wild." and "*Trisetaria* Forsk." are referred to *Trisetum*, the first with a query. These two citations refer to very different species. *Avena forskalii* Vahl [176] is based on "*Avena pensylvanica* [misapplied by] Forsk." [177] These two names are cited by Willdenow.[178] No specific name is given with the generic and specific description of *Trisetaria* Forsk.,[179] but *Trisetaria linearis* is listed on page LX under Flora Aegyptiaca. *T. forskalii* J. F. Gmel. (1791) is based on Forskäl's supposedly unnamed species. *Trisetum forskalii* Beauv. may have been based on *Trisetaria forskalii,* but Beauvois nowhere cites Gmelin. It seems more probable that he supposed *Avena forskalii* and *Tristetaria* [*linearis*] to be the same. *Trisetaria linearis* Forsk. is valid. *Avena forskalii* Vahl is a species of *Danthonia; D. forskalii* Trin.[180] is based on "*Trisetum forskali* Pal. [Beauv.] R. et S. II. p. 658." Roemer and Schultes cite *Avena forskali* Vahl and "*Avena pensylvanica* Forsk." under *Trisetum forskalii* Beauv. Wherefore *Avena forskalii* is taken as the basis=*Danthonia forskalii* (Vahl) Trin.

Trisetum loefflingii Beauv. 88, 153, 180. (Spelled "*loaflingi*" on page 88.) Based on "*Avena Loëflingia* Lin." (error for *A. loeflingiana*)=*T. loeflingiana* (L.) Beauv.

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[175] Revis. Fac. Agron. Vet. **3**: 130. 1920.
[176] Symb. Bot. **2**: 25. 1791.
[177] Fl. Aegypt. Arab. 23. 1775.
[178] Sp. Pl. **1**: 447. 1797.
[179] Fl. Aegypt. Arab. 27. 1775.
[180] Gram. Icon. **1**: 49. 1828.

Trisetum macrum Beauv. 88, 153. *Avena macra* without author is referred to *Trisetum*. *Avena macra* Stev.[181] was probably intended. That is *Ventenata macra* (Stev.) Boiss. & Bal.

Trisetum pungens Beauv. 88. Name only.

Trisetum sesquiterium Beauv. 88, 154. "*Avena sesquiteria* Lin." is referred to *Trisetum*. Error for *A. sesquitertia* L. (*Avena*, species uncertain).

Trisetum subspicatum Beauv. 88, 149. Based on *Aira subspicata* L.= *Trisetum spicatum* (L.) Richt.

Trisetum villosum Beauv. 88, 180. Name only.

GEN. LXXXII. AVENA L.

Avena bifida Beauv. 89, 153, 155. Based on *Bromus bifidus* Thunb. Referred by Franchet and Savatier[182] to *Trisetum cernuum* Trin.

Avena capillacea Beauv. 89, 153. Name only.

Avena magellanica Beauv. 89, 153. Name only.

Avena nigra "C. B." Beauv. 154. A pre-Linnaean name of Caspar Bauhin's referred to *A. sativa*.

Avena praecox Beauv. 89, 149, 154. Based on *Aira praecox* L.=*Aspris praecox* (L.) Nash.

Avena pulchella Beauv. 89, 149, 154. *Aira pulchella* without author is referred to *Avena*. Presumably *A. pulchella* Willd. was meant. *Deschampsia pulchella* Trin. is based on this. Valid in *Aira*.

Avena spicaeformis Beauv. 154. Name only, referred to *Danthonia*.

Avena vesca "Lob." Beauv. 154. A pre-Linnaean name of Lobelius referred to *A. sativa*.

CORYNEPHORUS Beauv. 90.

"Inflorescence paniculate; panicle compound; glumes membranaceous, 2-flowered, longer than the florets; lemma entire, awned from the base, the awn jointed and hairy in the middle, the lower part coriaceous, twisted, filiform, the upper part clavate, smooth; palea bifid-dentate."

Corynephorus canescens, the species figured, is taken as the type=*Weingaertneria* Bernh.

Corynephorus articulatus Beauv. 90, 149, 159. "*Aira articulata* Lin." is referred to *Corynephorus*. Desfontaines, not Linnaeus, published the name= *Weingaertneria articulata* (Desf.) Aschers. & Graebn.

Corynephorus canescens Beauv. 90, 149, 159. *pl. 3. f. 9; pl. 18. f. 2.* Based on *Aira canescens* L.=*Weingaertneria canescens* (L.) Bernh.

DESCHAMPSIA Beauv. 91.

"Inflorescence paniculate; panicle compound; glumes 2 or 3-flowered, longer than the florets; lemma many-toothed at the apex, awned from the base, the awn straight, scarcely longer than the lemma; palea bifid-dentate."

Deschampsia caespitosa, the species figured, is taken as the type=*Aira* L.[183]

Deschampsia caespitosa Beauv. 91, 149, 160. *pl. 3. f. 31*; *pl. 18. f. 3.* Based on *Aira caespitosa* L. Valid in *Aira*.

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[181] In Bieb. Fl. Taur. Cauc. 1: 77. 1808.

[182] Enum. Pl. Japon. 2: 173. 1879.

[183] For discussion of the type of *Aira* L. see Hitchcock, Genera of Grasses of the United States, U. S. Dept. Agr. Bull. 772: 114. 1920.

Deschampsia discolor Beauv. 149, 160. "*Aira discolor* Lin." is referred to *Deschampsia*. Thuillier, not Linnaeus, is the author. Referred by Ascherson and Graebner [184] to *A. setacea* Huds.

Deschampsia juncea Beauv. 91, 149, 160. *Aira juncea*, without author, is referred to *Deschampsia*. Presumably *A. juncea* Vill. is meant. That is referred by Ascherson and Graebner [185] to *A. media* Gouan.

Deschampsia parviflora Beauv. 91, 149, 160. "*Aira parviflora* Lam." is referred to *Deschampsia*. Lamarck and DeCandolle [186] give *A. parviflora* Thuil. as β under *Aira caespitosa* L.

Gen. LXXXV. DANTHONIA Lam. & DC.

Danthonia glumosa Beauv. 92, 153, 160. Based on *Avena glumosa* Michx.= *Danthonia spicata* (L.) Beauv.

Danthonia penicillata R. Br.; Beauv. 92, 153, 160. Based on *Arundo penicillata* Labill. The combination is credited to R. Brown=*Danthonia racemosa penicillata* (Labill.) Benth.

Danthonia purpurea Beauv. 154, 160. Based on *Avena purpurea* L. f. "Martinique" is given as the locality in the original publication. The description [187] indicates a species of *Danthonia*, but does not apply to either of the two species of *Danthonia* known from the West Indies. It is probable, as suggested by Willdenow,[188] that the locality is erroneous. Thunberg [189] includes *A. purpurea* (no author cited) among South African plants, with a diagnosis, partly taken from Linnaeus. Roemer and Schultes,[190] Nees,[191] and Stapf [192] regard *A. purpurea* L. f. as being the same as *A. purpurea* Thunb., and a valid species of *Danthonia* in South Africa.

Danthonia ramosa R. Br.; Beauv. 92, 160. Presumably an error for *D racemosa* R. Br.

Danthonia setacea Beauv. 92, 160. No author is given, presumably *D. setacea* R. Br. is intended. Roemer and Schultes [193] erroneously refer *Danthonia setacea* Beauv. to *Avena setacea* Vill. Beauvois lists *Avena setacea* Vill. in the index but does not refer it to *Danthonia*.

Danthonia spicaeformis Beauv. 160. Name only; *Avena spicaeformis*, name only, is referred to *Danthonia*. Roemer and Schultes [194] cite these names as synonyms of *D. spicata* (L.) Beauv.

Danthonia strigosa Beauv. 154, 160. Based on *Avena strigosa* Schreb. Valid in *Avena*.

PENTAMERIS Beauv. 92.

"Inflorescence paniculate; panicle subsimple; glumes membranaceous, 2-flowered, longer than the florets; lemma broad, emarginate, with 4 bristles, awned in the middle, the awn twisted, bent, ribbon-like; palea subtruncate, emarginate."

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[184] Syn. Mitteleur. Fl. 2: 288. 1899.
[185] Syn. Mitteleur. Fl. 2: 295. 1899.
[186] Fl. Franç. 3: 45. 1805.
[187] L. f. Suppl. Pl. 112. 1781.
[188] Sp. Pl. 1: 450. 1797.
[189] Prodr. Pl. Cap. 23. 1794.
[190] Syst. Veg. 2: 690. 1817.
[191] Fl. Afr. Austr. 326. 1841.
[192] Thiselt. Dyer, Fl. Cap. 7: 530. 1898.
[193] Mant. 2: 373. 1824.
[194] Syst. Veg. 2: 690. 1817.

Pentameris thuarii is the only species=*Danthonia*, subgenus. Regarded as valid by Stapf.[196]

Pentameris thuarii Beauv. 93. *pl. 3. f. 30; pl. 18. f. 8.* "Communiquée par M. Dupetit-Thouars." No locality given, probably Madagascar or South Africa=*Danthonia thuarii* (Beauv.) Desv.

Eriachne pallens Beauv. 93, 162. Error for *E. pallescens* R. Br.

GAUDINIA Beauv. 95.

"Inflorescence spicate; spike compound; spikelets sessile, alternate, 9 to 11-flowered, the florets distichous; glumes unequal, obtuse; lemma bifid-dentate, awned on the back above the middle, the awn twisted; palea 2 or 4-toothed."

Avena fragilis L., the species figured (as *G. avenacea*), is the type. Genus valid.

Gaudinia avenacea Beauv. Atlas 13. *pl. 19. f. 5.* This name is in the Atlas only, obviously based on *Avena fragilis* L.=G. *fragilis*.

Gaudinia fragilis Beauv. 95, 153, 164. Based on *Avena fragilis* L. Valid.

Gaudinia planiculmis Beauv. 95, 154, 164. "*Avena planiculmis* Wild." is referred to *Gaudinia*. Willdenow[196] gives Schrader as author. Valid in *Avena*.

Beckmannia erucoides Beauv. 96, 155. *pl. 19. f. 6*, and *Phalaris erucoides* L., referred to it, are evidently errors for *erucaeformis*.

CATABROSA Beauv. 97.

"Inflorescence paniculate; panicle compound; glumes 2 to 5-flowered, shorter than the florets, and like the lemma subtruncate, erose-denticulate; palea nearly trifid."

Aira aquatica L., illustrated, is the type. Genus valid.

Catabrosa aquatica Beauv. 97, 149, 157. *pl. 19. f. 8.* Based on *Aira aquatica* L. Valid.

Catabrosa verticillata Beauv. 97, 157. *Poa verticillata* Poir. is cited. Poiret[197] credits the species to Cavanilles. (See *Eragrostis verticillata*, page 180.)

SCLEROCHLOA Beauv. 97.

"Inflorescence spicate; spike simple; spikelets unilateral or dichotomous; glumes 3 to 5-flowered, obtuse, shorter than the florets; lemma cordate-emarginate, obtuse; palea entire."

Sclerochloa dura, the species illustrated, is the type. Genus valid.

Sclerochloa divaricata Beauv. 98, 174, 177. "*Poa divaricata* Wild." is referred to *Sclerochloa*. Willdenow[198] gives Gouan as author=*Sphenopus divaricatus* (Gouan) Reichenb.

Sclerochloa dura Beauv. 98, 174, 177. *pl. 19. f. 4.* "*Poa dura* Lin." is cited under the genus. In the index "*Poa dura* Lin." and "*Cynosurus durus* Hoffm." are referred to *Sclerochloa*. The species was published by Linnaeus as *Cynosurus durus*. Valid.

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[195] Thiselt. Dyer, Fl. Cap. 7: 512. 1898.
[196] Enum. Pl. 1: 124. 1809.
[197] Lam. Encycl. 5: 91. 1804.
[198] Sp. Pl. 1: 402. 1797.

Sclerochloa procumbens Beauv. 98, 175, 177. "*Poa procumbens* Smith, Pers." is referred to *Sclerochloa*. Persoon [199] cites "Smith, brit. p. 99" [98]. J. E. Smith [200] gives Curtis as author=*Puccinellia rupestris* (With.) Fern. & Weath.[201]

GEN. LXXXVIII. DINEBA Delile.

Beauvois credits the name to Delile. Delile [202] says "I collected this plant at Damiette in a field of sugarcane in December 1798; sent seed to France in 1802; it grew well and has since been widely distributed in gardens under the name *Dinaeba* which I had given it. I formed the name from the Arabic word Denab, which means queue." Some of the plants reached the botanic garden at Vienna. Jacquin [203] says that garden had received the plant under the name "*Dinebra arabica*, new genus, which name, ignorant of the author, I take up." *Dinebra* being the earlier is generally accepted. *D. arabica*=*D. retroflexa* (Vahl) Panz.

Dineba americana Beauv. 98, 160. *pl. 16. f. 3.* Based on *Aristida americana* L.=*Bouteloua americana* (L.) Scribn.

Dineba curtipendula Beauv. 98, 158, 160. *pl. 16. f. 1.* *Melica curtipendula* Michx. and *Chloris curtipendula* Pers. are referred to *Dineba*. Persoon [204] credits this species to Michaux. The species had not been published under *Melica*=*Bouteloua curtipendula* (Michx.) Torr.

Dineba divaricata Beauv. 160. Name only.

Dineba lima Beauv. 98, 160. "*Cynosurus lima* Loeff., Pers." is referred to *Dineba*. Persoon [205] cites "Loefl. it. 41." Loefling's work was published in 1758. Linnaeus [206] describes this species from Spain, giving "Loefl." after the diagnosis. Doubtless the plant was received with the name or diagnosis from Loefling=*Wangenheimia lima* (L.) Moench; Trin.

Dineba melicoides Beauv. 160. Name only.

Dineba paspaloides Beauv. 98, 159, 160. Based on *Dactylis paspaloides* Willd. Willdenow [207] cites "*Dinebra arabica* Hortulan" and *Cynosurus retroflexus* Willd., both names referring to *Dinebra arabica* Jacq.=*Dinebra retroflexa* (Vahl) Panz.

SCHEDONORUS Beauv. 99.

"Inflorescence paniculate, the rachis articulate; panicle compound, the ultimate pedicels inflated, cuneiform; glumes 5 to 15-flowered, shorter than the florets; lemma with a bristle below the shortly emarginate-dentate apex, the teeth often barbed; palea bifid-dentate."

Schedonorus elatior, based on *Festuca elatior* L., the species figured, is the type=*Festuca* L. Spelled *Schenodorus* in the index, but the derivation given shows *Schedonorus* to be correct.

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[199] Syn. Pl. 1: 92. 1805.
[200] Fl. Brit. 1: 98. 1800.
[201] See Rhodora 18: 11. 1916, for discussion.
[202] Fl. Egypt. 26. *pl. 11. f. 3.* 1813.
[203] Fragm. Bot. Illustr. 77. *pl. 121. f. 1.* 1809.
[204] Syn. Pl. 1: 88. 1805.
[205] Syn. Pl. 1: 86. 1805.
[206] Sp. Pl. 72. 1753.
[207] Enum. Pl. 111. 1809.

Schedonorus altissimus Beauv. 99, 177. Based on *Festuca altissima* All. Valid in *Festuca*. Referred by Hackel[206] to *F. silvatica* Vill. [1787, not Huds. 1762].

Schedonorus auratus Beauv. 99, 177. Based on *Festuca aurata* Gaudin= A variety of *Festuca rubra* L.

Schedonorus aureus Beauv. 99, 177. Based on *Festuca aurea* Lam. On page 162, "Lin." is erroneously given as author. A variety of *Festuca spadicea* L.

Schedonorus calamarius Beauv. 99, 177. Based on *Festuca calamaria* Smith. Referred by Hackel[208] to *F. silvatica* Vill. (not Huds.)=*F. altissima* All.

Schedonorus curvatus Beauv. 99, 174, 177. *Poa curvata* and *Festuca curvata*, both without author, are referred to *Schedonorus*. All are names only.

Schedonorus dumetorum Beauv. 99, 162, 177. "*Festuca dumetorum* Wild." is referred to *Schedonorus*. Willdenow[209] gives Linnaeus as author, copying his description=*Festuca rubra* subsp. *dumetorum* (L.) Hack.

Schedonorus elatior Beauv. 99, 156, 177. *pl. 19. f. 2.* "Lin." is given as author of *Bromus elatior* on page 99 and "Koel." on page 156. Both are referred to *Schedonorus*. *Bromus elatior* Koel. is based on *Festuca elatior* L. Valid in *Festuca*.

Schedonorus eskia Beauv. 99, 177. *Festuca eskia* without author is referred to *Schedonorus*=*Festuca varia* subsp. *eskia* (Ramond) Hack.

Schedonorus gerardi Beauv. 99, 163, 177. Based on *Festuca gerardi* All.

Schedonorus glaucus Beauv. 99, 163, 177. Based on *Festuca glauca* Lam.= *Festuca ovina* var. *glauca* (Lam.) Fries.

Schedonorus inermis Beauv. 99, 177. *Festuca inermis* without author is referred to *Schedonorus*. Doubtless *F. inermis* DC. is intended=*Bromus inermis* Leyss.

Schedonorus littoralis Beauv. 99, 163, 177. Based on *Festuca littoralis* Labill. Valid in *Festuca*.

Schedonorus loliaceus Beauv. 99, 163, 177. Based on *Festuca loliacea* Huds. Probably a form of *F. elatior* L.

Schedonorus nigrescens Beauv. 99, 163, 177. Based on *Festuca nigrescens* Lam. Referred by Hackel[210] to a form of *F. rubra* var. *fallax* Hack.

Schedonorus pilosus Beauv. 99, 163, 177. Based on *Festuca pilosa* Gaudin [in Hall.]. Referred by Hackel[211] and by Ascherson and Graebner[212] to *Poa violacea* Bell.

Schedonorus poaeformis Beauv. 99, 163, 177. Based on *Festuca poaeformis* Host. Referred by Hackel[211] and by Ascherson and Graebner[212] to *Poa violacea* Bell.

Schedonorus pratensis Beauv. 99, 163, 177. Based on *Festuca pratensis* Huds.=*Festuca elatior* L.

Schedonorus pulchellus Beauv. 99, 163, 177. Based on *Festuca pulchella* Schrad. Valid in *Festuca*.

Schedonorus rhaeticus Beauv. 99, 163, 177. Based on *Festuca rhetica* without author, presumably Suter. Referred by Hackel[211] and by Ascherson and Graebner[212] to *Poa violacea* Bell.

Schedonorus scheuchzeri Beauv. 99, 163, 177. Based on *Festuca scheuchzeri* Gaudin. Referred by Hackel[213] to *F. pulchella* Schrad.

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[206] Monogr. Fest. Eur. 199. 1882.
[209] Sp. Pl. 1: 422. 1797.
[210] Monogr. Fest. Eur. 142. 1882.
[211] Monogr. Fest. Eur. 200. 1882.
[212] Syn. Mitteleur. Fl. 2: 435. 1900.
[213] Monogr. Fest. Eur. 192. 1882.

Schedonorus serotinus Beauv. 99, 163, 177. Based on *Festuca serotina* L.= *Molinia serotina* (L.) Mert. & Koch.

Schedonorus sylvaticus Beauv. 99, 163, 177. Based on *Festuca sylvatica* [*silvatica*] Vill. Probably *F. altissima* All. (See above.)

Schedonorus tenellus Beauv. 99, 163, 177. Based on *Festuca tenella* Willd.=*F. octoflora* Walt.

Schedonorus varius Beauv. 99, 164, 177. Name only. "*Festuca varia* Lin." is cited (page 99) and in the index is referred to *Schedonorus*. Linnaeus did not publish this species. *Festuca varia* Jacq. is referred to *F. pumila* and *F. varia* Schrad. is referred (page 164) to *F. flavescens* without author.

Schedonorus violaceus Beauv. 99, 177. Based on *Festuca violacea* Gaudin= *F. rubra* subsp. *violacea* (Gaudin) Hack.

Gen. LXXXIX. FESTUCA L.

Festuca curvata Beauv. 99, 162. Name only, referred to *Schenodorus* [*Schedonorus*].

Festuca distans Beauv. 162. Name only, referred to *Poa*.

BRACHYPODIUM Beauv. 100.

"Inflorescence spicate, the rachis articulate; spike compound; spikelets alternate on each joint of the rachis, pedicellate, the pedicels broad, thick; glumes 5 to 13-flowered, shorter than the florets, lemma and palea entire, the lemma with a bristle at the apex; palea obtuse, truncate, scarcely emarginate, the margins often with rigid reflexed hairs."

Brachypodium pinnatum, the species figured, is taken as the type. Genus valid.

Brachypodium cenesium Beauv. 101, 155, 174. *Poa cenisia* (also spelled *cenesia*), without author, is referred to *Brachypodium*. Presumably Allioni's species was intended. Valid in *Poa*.

Brachypodium ciliatum Beauv. 101, 155. Based on *Bromus ciliatus* Lam. Valid in *Bromus*.

Brachypodium commutatum Beauv. 101, 155. "*Bromus commutatus* Lam." is referred to *Brachypodium*. This name is not found in Lamarck's works; evidently an error for *Bromus commutatus* Schrad. Valid in *Bromus*.

Brachypodium distachyum Beauv. 101, 155, 156. Based on *Bromus distachyos* L. Valid.

Brachypodium festucoides Beauv. 101, 155, 180. *Triticum festucoides*, without author, is referred to *Brachypodium*. Probably *T. festucoides* Bertol. is intended. That is referred by Ascherson and Graebner[214] to a variety of *Festuca lachenalii* Spenn.

Brachypodium fragile Beauv. 100, 155, 180. Based on *Triticum fragile* Roth. This species described from a cultivated plant has not been identified.

Brachypodium gracile Beauv. 101, 155, 156. "*Bromus gracilis* Roth, Wild." is referred to *Brachypodium*. Willdenow[215] cites both Leysser and Weigel. According to Ascherson and Graebner[216] two species were described, that of Leysser (1761) being referred to *Brachypodium pinnatum* forma *gracile* (Leyss.) Posp., and that of Weigel to *Brachypodium sylvaticum* (Huds.) Roem. & Schult.

Brachypodium halleri Beauv. 101, 155, 163. Name only. *Festuca halleri*, without author, is cited on page 101. In the index *F. halleri* "Vill., Pers."

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[214] Syn. Mitteleur. Fl. 2: 539. 1900.

[215] Sp. Pl. 1: 438. 1797.

[216] Syn. Mitteleur. Fl. 2: 633, 635. 1901.

is not referred to any other genus, neither is it cited under *Festuca*. (*Brachypodium halleri* Roem. & Schult., is based on *Triticum halleri* Viv., not on *Festuca halleri* Vill.)

Brachypodium loliaceum Beauv. 101, 155, 180. "*Triticum loliaceum* Huds." is referred to *Brachypodium*. *T. loliaceum* Smith, is based on *Poa loliacea* Huds.=*Catapodium loliaceum* (Huds.) Link.

Brachypodium longifolium Beauv. 101, 155, 156. "*Bromus longifolius* Pers." is referred to *Brachypodium*. Persoon [217] gives Schousboe as author. Ball [218] suggests that this is a form of *Brachypodium pinnatum*.

Brachypodium nardus Beauv. 101. 155, 180. Based on *Triticum nardus* DC. Referred to *Festuca maritima* L. by Ascherson and Graebner.[219]

Brachypodium nigricans Beauv. 101, 155, 180. Based on *Triticum nigricans* Pers. This species, described from the the coast of Normandy, we are unable to identify.

Brachypodium phleoides Beauv. 155. Name only.

Brachypodium phoenicoides L.; Beauv. 156. Name only, referred to *Brachypodium* "*plucknetii.*" *Festuca phoenicoides* Lam. is referred (page 163) to "*Brachypodium ramosum.*" (See *Brachypodium ramosum.*) Lamarck [220] gives Linnaeus as author and quotes his diagnosis.

Brachypodium pinnatum Beauv. 101, 155. *pl. 19. f. 3.* Based on *Bromus pinnatus* L. Valid.

Brachypodium plucknetii [plukenetii] Beauv. 101, 155. "*Bromus plucknetii,*" without author, is referred to *Brachypodium*. Presumably Allioni's species is intended = *Brachypodium ramosum* var. *plukenetii* (All.) Aschers. & Graebn.

Brachypodium poa Beauv. 155. "*Poa loliacea* Huds." is referred to *Brachypodium* (page 175). "*Triticum loliaceum* Huds." had already been transferred to *Brachypodium*. It is probable that *B. poa* is a change of name for *Poa loliacea*. *Triticum loliaceum* Smith is based on *Poa loliacea* Huds. (See above.)

Brachypodium ramosum Beauv. 163. *Festuca phoenicoides* Lam. is referred to *Brachypodium ramosum*. This is the only place the latter name is found, *Bromus ramosus* L. being referred (page 156) to *Brachypodium plukenetii*. Roemer and Schultes [221] publish *Brachypodium ramosum*, based on *Bromus ramosus* L.

Brachypodium retusum Beauv. 101, 155. Based on *Bromus retusus* Pers. Probably a form of *Brachypodium ramosum* (L.) Roem. & Schult.

Brachypodium rottboella Beauv. 155, 180. Based on *Triticum rottboella* DC.=*Catapodium loliaceum* (Huds.) Link.

Brachypodium silvaticum Beauv. 101, 155, 156. *pl. 3. f. 11.* "*Bromus sylvaticus* Lin." is referred to *Brachypodium*. Linnaeus did not publish the name. *Bromus sylvaticus* Pollich, based on *Festuca sylvatica* Huds., is presumably the species intended. The illustration is identifiable. The name is spelled "*sylvaticus*" on pages 101 and 156. Valid.

Brachypodium tenellum Beauv. 101, 155, 181. Based on *Triticum tenellum* L. which is referred to *Festuca lachenalii* Spenn. by Ascherson and Graebner,[222] (though they refer *Brachypodium tenellum* Beauv. (based upon it) to *Festuca maritima* L.).

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[217] Syn. Pl. 1: 96. 1805.
[218] Spicil. Fl. Marocc. in Linn. Soc. Journ. Bot. 16: 731. 1878.
[219] Syn. Mitteleur. Fl. 2: 540. 1900.
[220] Encycl. 2: 462. 1786.
[221] Syst. Veg. 2: 737. 1817.
[222] Syn. Mitteleur. Fl. 2: 538. 1900.

Brachypodium tenue Beauv. 155. Name only. *Triticum tenue*, a name only, is cited (page 101) under *Brachypodium*.

Brachypodium unilaterale Beauv. 155. Name only. Roemer and Schultes[223] publish *B. unilaterale* based on *Triticum unilaterale* L. Beauvois refers *T. unilaterale*, without author, to *Agropyron*.

GEN. XC. AGROPYRON Gaertn.

Agropyron caninum Beauv. 102, 146, 180. "*Triticum caninum* Schreb." is referred to *Agropyron*. Schreber[224] cites *Elymus caninus* L.[225] which is based on *Triticum caninum* L. (first edition). Valid.

Agropyron capillare Beauv. 102, 146. Name only. *Triticum capillare*, name only, is cited under *Agropyron*.

Agropyron caudatum Beauv. 102, 146, 180. "*Triticum caudatum* Scheuch." is referred to *Agropyron*. Persoon,[226] the author of *T. caudatum*, cites "Scheuchz. gram. I. f. 4." as a good figure, merely; he describes a plant from Switzerland. Ascherson and Graebner[227] identify *T. caudatum* Pers. with *Secale villosum* L., which is *Haynaldia villosa* (L.) Schur. Persoon's description is too brief to be satisfactory, but Scheuchzer's description applies well to this species.

Agropyron dentiflorum Beauv. 146. Error for *densiflorum*. *Triticum densiflorum* without author is referred (pages 102, 180) to *Agropyron*. Presumably Willdenow's species was intended. That, described from Siberia, Willdenow says is related to *T. intermedium*. (See below.)

Agropyron distichum Beauv. 102, 146, 180. Based on *Triticum distichum* Thunb. Valid.

Agropyron elongatum Beauv. 102, 146, 180. Based on *Triticum elongatum* Host. Valid.

Agropyron intermedium Beauv. 102, 146, 180. *Triticum intermedium*, without author, is referred to *Agropyron*. Presumably Host's species was intended. Valid.

Agropyron junceum Beauv. 102, 146, 180. Based on *Triticum junceum* L. Valid.

Agropyron laevissimum Beauv. 146. Name only.

Agropyron maritimum Beauv. 102, 146, 180. Based on *Triticum maritimum* L.=*Cutandia maritima* (L.) Benth.

Agropyron multiflorum Beauv. 102, 146, 180. "*Triticum multiflorum* Rich." is referred to *Agropyron*. Persoon[228] describes "*β multiflorum*" as a variety of *Triticum repens*, and states that it was observed by Richard. Probably a form of *Agropyron repens* (L.) Beauv.

Agropyron pectinatum Beauv. 102, 146, 180. "*Triticum pectinatum* R. Brow" is referred to *Agropyron*. This is based on *Festuca pectinata* Labill. Valid.

Agropyron prostratum Beauv. 102, 146, 180. "*Triticum prostratum* Lin." is referred to *Agropyron*. *Triticum prostratum* L. f. is based on *Secale prostratum* Pall. Valid.

Agropyron pumilum Beauv. 102, 146, 180. Based on *Triticum pumilum* L. Probably the same as *A. prostratum* (L.) Beauv.

Agropyron repens Beauv. 102, 146, 180. *pl. 20. f. 2.* Based on *Triticum repens* L. Valid.

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[223] Syst. Veg. 2: 747. 1817.
[224] Spic. Fl. Lips. 51. 1771.
[225] Sp. Pl. ed. 2. 124. 1762.
[226] Syn. Pl. 1: 110. 1805.
[227] Syn. Mitteleur. Fl. 2: 672. 1901.
[228] Syn. Pl. 1: 109. 1805.

Agropyron rigidum Beauv. 102, 146. *Triticum rigidum* without author is cited under *Agropyron*. Presumably Schrader's species was intended. According to Ascherson and Graebner [229] this is the same as *A. elongatum*.

Agropyron scabrum Beauv. 102, 146, 181. *Triticum scabrum* R. Br. is referred to *Agropyron*. This is based on *Festuca scabra* Labill. Valid.

Agropyron sepium Beauv. 102, 146, 181. "*Triticum sepium* Lin." is referred to *Agropyron*. Evidently an error for Lam.=*A. caninum* (L.) Beauv.

Agropyron sibiricum Beauv. 102, 146, 181. "*Triticum sibiricum* Lin." is referred to *Agropyron*. Presumably an error for Willdenow. Valid.

Agropyron tenuiculum Beauv. 146. Name only. *Triticum tenuiculum* is referred (page 181) to *Brachypodium*, but the name is not listed under that genus.

Agropyron unilaterale Beauv. 102, 146. *Triticum unilaterale* without author is referred to *Agropyron*. Presumably Linnaeus' species was intended. Ascherson and Graebner [230] identify *Triticum unilaterale* L., 1767, with *Festuca rottboellia* Aschers. & Graebn., based on "*Triticum rottbolla* Lam. & DC." 1805, which is the same as *Catapodium loliaceum* (Huds.) Link, based on *Poa loliacea* Huds., 1762. *Triticum unilaterale* has been confused with slender forms of *Festuca maritima* L., but Linnaeus' brief description, as well as the Plukenet figure cited [231] agrees with *Catapodium loliaceum* not with *F. maritima* L.=*Catapodium loliaceum* (Huds.) Link.

Ascherson and Graebner,[232] though they clear up the confusion in regard to Linnaeus' two species involved, cloud the matter somewhat by the disposition of certain names. *Agropyron unilaterale* Beauv., *Triticum unilaterale* DC. (credited to Linnaeus, but with the Bauhin synonym excluded), and several other names based on *Triticum unilaterale* L., are placed as synonyms under *Festuca maritima* L., though *Triticum unilaterale* L. itself is referred as a synonym to *Festuca rottboellia* Aschers. & Graebn. (that combination made earlier by Raspail,[233] the specific name spelled "*rottboella*"), based on *Triticum rottbolla* Lam. & DC. [The name *loliacea* is preoccupied in *Festuca*.] In like manner *Brachypodium tenellum* Beauv., based on *Triticum tenellum* L., which Ascherson and Graebner (page 538) refer to *Festuca lachenalii* Spenn., is given as a synonym of *Festuca maritima L.*

Agropyron vaginans Beauv. 102, 146, 181. Based on *Triticum vaginans* Pers. This species described from "Americ. meridionali" has not been identified. The description suggests *Elymus virginicus* L.

GEN. XCI. LOLIUM L.

Lolium procumbens Hall.; Beauv. 166. Referred to *Sclerochloa dura* Beauv. "*Lolium procumbens*" is part of a phrase name used by Haller.[234]

Lolium ramosum "Leer., Pers." Beauv. 166. Presumably based on *Lolium perenne γ ramosum* Leers; Pers. Persoon [235] gives Leers as author, and cites "t. 12. f. 1." Leers [236] describes "var. β" with branching spike, and in plate 12, figure 1, shows such a spike=*Lolium perenne ramosum* Leers; Pers.

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[229] Syn. Mitteleur. Fl. 2: 661. 1901.
[230] Syn. Mitteleur. Fl. 2: 544. 1900.
[231] Pluk. Phytogr. *pl. 32. f.* 7. 1691.
[232] Syn. Mitteleur. Fl. 2: 540, 543, 544. 1900.
[233] Ann. Sci. Nat. 5: 445. 1825.
[234] Nom. Hist. Pl. Helv. 129. 1769.
[235] Syn. Pl. 1: 110. 1805.
[236] Fl. Herborn. 48. 1775.

Lolium tenellum "Lin."; Beauv. 166. Name only, referred to *Brachypodium.* Presumably an error for *Triticum tenellum* L., which is *Festuca lachenalii* Spenn.

GEN. XCII. TRITICUM L.

Triticum aegilops Beauv. 103, 146, 180. Presumably based on *Aegilops squarrosa,* which is the only species of *Aegilops* referred to *Triticum.* "Schreb. Pers." are cited as authority. Persoon[237] under *A. squarrosa* refers to an illustration in Schreber's Beschreibung der Gräser. Schreber gives Linnaeus as author. Valid, *T. squarrosum* being preoccupied.

Triticum brevissimum Beauv. 102. Name only, cited under *Agropyron*; probably error for *laevissimum.* (See below.)

Triticum capillare Beauv. 180. Name only, referred to *Agropyron.*

Triticum creticum Beauv. 103, 178, 180. *Secale creticum* Tournef. is referred to *Triticum.* This pre-Linnaean name is published by Linnaeus, with the Tournefort phrase name and "glumis extrorsum ciliatis" as the only diagnosis. Desfontaines[238] identifies the Tournefort plant with his own *Hordeum strictum* (which is the same as *H. bulbosum* L.), declaring the Linnaean plant to be distinct. The glumes of *H. bulbosum* are not ciliate. We are unable to identify the Linnaean species.

Triticum festucoides Beauv. 180. Referred to *Brachypodium.* (See *B. festucoides,* page 195.)

Triticum laevissimum Hall.; Beauv. 180. Part of a phrase name,[239] referred to *Triticum polonicum* L.

Triticum multiflorum Rich.; Beauv. 180. Name only, referred to *Agropyron.* (See *A. multiflorum,* page 197.)

Triticum pungens "Lin." Beauv. 180. Error for Pers.

Triticum sativum "Lin."; Beauv. 180. Error for Lam.

Triticum tenue Beauv. 181. Name only, referred to *Brachypodium.*

Triticum tenuiculum Beauv. 181. Name only, referred to *Brachypodium.*

GEN. XCIV. SECALE L.

Secale pumilum L.; Beauv. 178. The Linnaean name is *Triticum pumilum.* This Beauvois tranfers to *Agropyron. Secale pumilum* Pers. is based on *T. pumilum* L. (See *Agropyron pumilum,* page 197.)

Secale triflorum Beauv. 105, 178. "J'ai trouvé cette * * * espèce a Dunkerque." It differs from *S. cereale* only in having a third floret. Probably *S. cereale* L.

GEN. XCVI. ISCHAEMUM L.

Ischaemum striatum "Lin."; Beauv. 166. Name only, referred to *Ischaemum imberbe* Retz.

Ischaemum vulgare Lob.; Beauv. 166. A pre-Linnaean name referred to *Digitaria sanguinalis=Syntherisma sanguinalis* (L.) Dulac.

LODICULARIA Beauv. 108.

"Culm branching; spikes many, simple, alternate or fascicled, articulate-dentate;[240] spikelets not crowded; glumes 2-flowered, longer than the florets; lower floret neuter, the palea wanting; upper floret perfect, the lemma coriaceous, the palea membranaceous."

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[237] Syn. Pl. 1: 107. 1805.
[238] Fl. Atlant. 1: 113. 1798.
[239] Hall. Nom. Hist. Pl. Helv. 130. 1769.
[240] See page 142.

Lodicularia fasciculata is the only species=*Manisuris* L.

Lodicularia fasciculata Beauv. 108, 166. *pl. 21. f. 6.* Based on *Rottboella fasciculata* Desf. This name was first published by Lamarck. Desfontaines fails to cite the author, but his plate shows his species to be Lamarck's=*Manisuris fasciculata* (Lam.) Hitchc.

Lodicularia fastigiata Beauv. Atlas 14. *pl. 21. f. 6.* Error for *fasciculata.*[341]

Rottboëlla monandra Roth; Beauv. 177. Name only, referred to *Monerma.* See *Monerma monandra.*

MEOSCHIUM Beauv. 111.

"Inflorescence spicate, the rachis articulate; spikes 2, paired; glumes subcoriaceous, 2-flowered, longer than the florets; lower floret staminate; upper perfect, the lemma and palea membranaceous, the lemma awned below the bifid-dentate apex, the awn plicate, twisted; the palea entire." (The name is meant for an anagram of *Ischaemum.*)

Meoschium aristatum, the species illustrated, is taken as the type=*Ischaemum* L.

Meoschium aristatum Beauv. 111, 167. *pl. 21. f. 4.* Based on *Ischaemum aristatum* L. Valid in *Ischaemum.*

Meoschium barbatum Beauv. 111, 167. *Ischaemum barbatum* without author is referred to *Meoschium.* Doubtless Retzius is intended=*Ischaemum aristatum* subsp. *barbatum* (Retz.) Hack.

Meoschium ciliare Beauv. 111, 167. Based on *Ischaemum ciliare* Retz. Valid in *Ischaemum.*

ARTHRAXON Beauv. 111.

"Culm branching; inflorescence paniculate, the panicle simple; glumes membranaceous, 2-flowered, longer than the florets; lower floret neuter, the palea wanting; upper floret perfect, the lemma and palea subcoriaceous, the lemma bifid-dentate at the apex, awned from the base, the awn plicate, twisted; the palea entire."

Arthraxon ciliaris is the only species. Genus valid.

Arthraxon ciliaris Beauv. 111, 152. *pl. 11. f. 6.* "Communicated by M. Richard. I have found it only in his herbarium. It was formerly cultivated * * * at Trianon." Valid.

GEN. CI. HORDEUM L.

Hordeum avenaceum Wigg.; Beauv. 165. Name only, referred to *Arrhenatherum.*

Hordeum commune Beauv. 165. Name only, referred to *Zeocriton.*

Hordeum heterostychon "Lin."; Beauv. 114, 165. Name only. The name is spelled *heterostichon* on page 165. It may be an error for *Hordeum hexastichon* L.

Hordeum hystrix Lin.; Beauv. 165. Name only, referred to *Zeocriton.* (See *Z. hystrix*, page 201.)

ZEOCRITON Beauv. 114.

"This genus differs from *Hordeum* only in that the two lateral spikelets are staminate or neuter. While this character is the only distinctive one

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[341] The reverse error is made in *Diectomis*, *D. fastigiata* being given as *D. fasciculata* in the Atlas. See page 207.

for the genus, it appears to me important enough to be considered, otherwise one ceases to be consistent, and it would be necessary to give up the division of the Gramineae into polygamous and hermaphrodite. * * *"

Zeocriton distichum, the species illustrated, is taken as the type=*Hordeum* L.

Zeocriton commune Beauv. 165, 182. Based on *Hordeum zeocriton* L., a form of *H. vulgare* L.

Zeocriton complanatum Beauv. 115, 182. Name only.

Zeocriton distichum Beauv. 115, 165, 182. *pl. 21. f. 2.* Based on *Hordeum distichon* L. Valid in *Hordeum.*

Zeocriton hystrix Beauv. 115, 182. "*Hordeum hystrix* Lin." is referred (page 165) to *Zeocriton.* This may be an error for *Elymus hystrix* L., there being no *H. hystrix. Elymus hystrix* is the type of the genus *Hystrix* Moench.

Zeocriton maritimum Beauv. 115, 165, 182. Based on "*Hordeum maritimum* Hoff., Wild." Willdenow [342] gives Roth as author. Valid in *Hordeum.*

Zeocriton murinum Beauv. 115, 182. Based on *Hordeum murinum* L. Valid in *Hordeum.*

Zeocriton nodosum Beauv. 115, 165, 182. Based on *Hordeum nodosum* L. Valid in *Hordeum.*

Zeocriton rigidum Beauv. 115, 165, 182. Based on *Hordeum rigidum* Roth. Ascherson and Graebner [343] doubtfully refer this to *Hordeum maritimum* Roth.

Zeocriton secalinum Beauv. 115, 165, 182. "*Hordeum secalinum* Lin." is referred to *Zeocriton.* The species was published by Schreber, not Linnaeus. Valid in *Hordeum.*

Zeocriton strictum Beauv. 115, 165, 182. Based on *Hordeum strictum* Desf. = *Hordeum bulbosum* L.

GEN. CII. MICROCHLOA R. Br.

Microchloa indica Beauv. Atlas 13. *pl. 20. f. 8.* This name is found in the Atlas only, but "*Nardus indica* Lin." is referred (page 168) to *Microchloa.* Valid.

GEN. CIII. OPHIURUS Gaertn.

Ophiurus cylindricus Beauv. 116, 168, 176. Based on *Rottboellia cylindrica* Willd.=*Lepturus cylindricus* (Willd.) Trin.

Ophiurus incurvatus Beauv. 116, 168, 176. *pl. 21. f. 3.* Based on *Rottboellia incurvata* L., which is based on *Aegilops incurva* L.=*Pholiurus incurvus* (L.) Schinz & Thell.

Ophiurus pannonicus Beauv. 116, 168, 177. Based on *Rottboellia pannonica* Host.=*Pholiurus pannonicus* (Host) Trin.

MONERMA Beauv. 116.

"Inflorescence spicate, the rachis articulate-dentate; spike simple; spikelets subimmersed in the excavations of the rachis; glume 1, cartilaginous, sulcate; lemma and palea membranaceous-hyaline."

Monerma monandra, the species illustrated, is taken as the type=*Lepturus* R. Br.

Monerma monandra Beauv. 117, 168, 177. *pl. 20. f. 10.* "*Rottboella monandra* Lin." (page 117) and "*R. monandra* Roth" (page 177) are referred to *Monerma.* No species has been described as *R. monandra,* but plate 20, figure

[342] Sp. Pl. 1: 475. 1797.

[343] Syn. Mitteleur. Fl. 2: 737. 1902.

10, is recognizable as *Lepturus cylindricus* (Willd.) Trin. The source of the specimen is not given.

Monerma repens Beauv. 117, 168, 177. Based on *Rottboellia repens* Forst.= *Lepturus repens* (Forst.) R. Br.

GEN. CVII. PELTOPHORUS Desv.

Peltophorus elegans Beauv. 172. Name only.

GEN. CIX. AEGOPOGON Humb. & Bonpl.

Beauvois states that he unites *Amphipogon* R. Br. with *Aegopogon*, persuaded from Brown's description and from two species he possessed, that they can not be separated. "It is to be noted, however, that Brown says nothing of the lateral staminate or neuter spikelets * * *"

Aegopogon avenaceus Beauv. 122, 146, 150. Based on *Amphipogon avenaceus* R. Br. Valid in *Amphipogon*.

Aegopogon debilis Beauv. 122, 146, 150. Based on *Amphipogon debilis* R. Br. Valid in *Amphipogon*.

Aegopogon laguroides Beauv. 122, 146, 150. Based on *Amphipogon laguroides* R. Br. Valid in *Amphipogon*.

Aegopogon strictus Beauv. 122, 146, 150. Based on *Amphipogon strictus* R. Br. Valid in *Amphipogon*.

Aegopogon pusillus Beauv. 122. *pl. 22. f. 4.* The source of the specimen is not given. The illustration represents *A. cenchroides* Humb. & Bonpl., while plate 22, figure 3, named *A. cenchroides*, shows the broad glumes of *A. tenellus* (Cav.) Trin.=*A. cenchroides* Humb. & Bonpl.

GEN. CX. CHRYSURUS Pers.

Chysurus echinatus Beauv. 123, 158, 159. Based on *Cynosurus echinatus* L. Valid in *Cynosurus*.

Chrysurus effusus Beauv. 123, 158, 159. "*Cynosurus effusus* Lin." is referred to *Chrysurus;* presumably an error for Link=*Cynosurus elegans* var. *effusus* (Link) Aschers. & Graebn.

Chrysurus elegans Beauv. 123, 158, 159. Based on *Cynosurus elegans* Desf. Valid in *Cynosurus*.

Zizania lenticularis "Mich."; Beauv. 182. Name only, probably an error for *Leersia lenticularis* Michx. which is *Homalocenchrus lenticularis* (Michx.) Scribn.

DIPOGONIA Beauv. 125.

"Having for some time used the word *Diplopogon* in my méthode of the mosses, I am obliged to change it and not apply it to a genus of grasses." *Diplopogoni* is used as a section name,[344] not as a generic name; no species is combined with it=*Diplopogon* R. Br.

Dipogonia setacea Beauv. 125, 160. Based on *Diplopogon setaceus* R. Br. Valid in *Diplopogon*.

ANATHERUM Beauv. 128.

"Inflorescence paniculate; panicle subcompound, the branches simple, subverticillate, or culm branching, the inflorescence spicate; spikelets dissimilar,

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[344] Beauv. Prodr. Aetheog. 29. 1805.

2-flowered, one pedicellate, staminate or neuter, the pedicel naked or hairy, the other sessile, polygamous, the lower floret in each neuter; lower glume sometimes verrucose, muricate; lemma and palea membranaceous, hyaline, muticous."

Two species, *Anatherum muricatum* and *A. bicorne*, are illustrated. The description is drawn to cover both (the principal character being the want of an awn on the fertile lemma), but the characters of *A. muricatum* are given first, which seems to indicate that the author had that species chiefly in mind. For this reason Hitchcock and Chase[245] took *A. muricatum* as the type. But this seems to be a case where the well-known name of an economic species might be preserved by choosing for the type, of two species equally eligible, the one that will allow the better known name to be retained. If *A. bicorne* be taken as the type of *Anatherum* that becomes a synonym of *Andropogon*, leaving *Vetiveria* Thouars as the valid name of the widely cultivated vetiver or khus-khus grass used in perfumery. On reconsideration we therefore take *A. bicorne* as the type of *Anatherum*=*Andropogon* L.

Anatherum bicorne Beauv. 128, 150. *pl. 22. f. 11.* Based on *Andropogon bicornis* L. Valid in *Andropogon.*

Anatherum muricatum Beauv. 150. Atlas 15. *pl. 22. f. 10.* Based on *Andropogon muricatus* Retz. "*Panicum mucronatum* Lin." is cited under the genus (page 128), and "*Panicum muricatum* Lin." is referred (page 170) to *Anatherum.* Neither of these names is found in Linnaeus' work. They are presumably errors for *Andropogon muricatus*=*Vetiveria zizanioides* (L.) Nash.

Anatherum muticum Beauv. 128, 150. Based on *Andropogon muticus* L. Hackel[246] says this is probably a species of *Chloris*, possibly *C. petraea* Thunb.

Anatherum refractum Beauv. 128, 150. Based on *Andropogon refractus* R. Br.=*Cymbopogon refractus* (R. Br.) A. Camus.

Anatherum squarrosum Beauv. 128, 150. *Andropogon squarrosus* without author is cited under *Anatherum* (page 128), but "*Andropogon squarrosus* Lin." is referred (page 151) to *Anatherum muricatum. Andropogon squarrosum* L. f. (Suppl. 433. 1781) has commonly been held to be the same as *A. muricatus* Retz. Stapf[247] examined the specimen in the Linnaean Herbarium and identifies it as *Chamaeraphis spinescens* (R. Br.) Poir., calling attention to Brown's identification, also. [Brown[248] cites "*Andropogon squarrosum* Herb. Linn." as a synonym of his *Panicum abortivum*, which is the same as his *P. spinescens* or a closely related species.] The description by the younger Linnaeus "Flos hermaphroditus sessilis, masculi pedicellati" is misleading, as is the description of the first glume (the second is what is described, the first being overlooked), but otherwise the characters are those of *Chamaeraphis.* The spikelets in this species are appressed to a slender rachis, and the panicle has a superficial resemblance to species of *Rhaphis*= **Chamaeraphis squarrosa** (L. f.) Chase.

CALAMINA Beauv. 128.

"Culm branching; racemes numerous, each subtended by a leaflike spathe; 4 spikelets at the base of the raceme, staminate or neuter, verticillate; 2

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[245] Contr. U. S. Nat. Herb. **18**: 285. 1917.
[246] In DC. Monogr. Phan. **6**: 651. 1889.
[247] Kew Bull. Misc. Inf. **1906**: 348. 1906.
[248] Prodr. Fl. Nov. Holl. 193. 1810.

spikelets at the apex, one sessile, the other pedicellate, included in a setigerous, involucriform spathe, all 2-flowered; glumes longer than the florets; lower florets staminate, the upper perfect, the lemmas and paleas hyaline. * * * OBS. This is a natural genus. It approaches *Anthistiria* in having 4 neuter verticillate spikelets. It is differentiated by the absence of the awn and of the two staminate pedicellate spikelets."

Calamina gigantea, the species illustrated, is taken as the type. The figure represents *Apluda mutica* L.=*Apluda* L.

Calamina gigantea Beauv. 129, 151, 157. *pl. 23. f. 1.* *Anthistiria gigantea* Cav. is referred to *Calamina*, but the illustration, which represents *Apluda mutica*, and the note on absence of awns show that Beauvois misunderstood Cavanilles' species, which is *Themeda gigantea* (Cav.) Hack.

Calamina imberbis Beauv. 129, 151, 157. "*Anthistiria imberbis* Desf., Pers." is referred to *Calamina*. *A. imberbis* Desf. (as shown by the illustration)[249] is a misapplication of *A. imberbis* Retz. Desfontaines' plate represents *Themeda triandra* Forsk. See Stapf's discussion[250] of this name and its synonyms. Persoon[251] gives Retzius as author.

Calamina mutica Beauv. 129, 151, 157. Based on *Apluda mutica* L. Valid in *Apluda*.

Calamina sehima Beauv. 157, 178. Referred to *Schima* (page 157), while *Sehima* Forsk. (page 128) and *S. ischaemoides* Forsk. (page 178) are doubtfully referred to Calamina. *Sehima ischaemoides* Forsk. is referred to a variety of *Ischaemum laxum* R. Br. by Hackel.[252] *I. sehima* R. Br. is the earliest specific name under *Ischaemum*. *Sehima* is maintained as valid by Stapf.[253]

Calamina themeda Beauv. 157, 179. This is referred to *Themeda*, while *Themeda* Forsk. is listed as a doubtful synonym under *Calamina* (page 128) and, in another place (page 179), referred to *Calamina*, without query.

CYMBACHNE Retz.

Cymbachne alata Beauv. 159. Doubtfully identified with "*Rottboella cymbachne* Retz. Wild." Beauvois observes under "*Rottboella*" (page 109): "It would appear that the *Cymbachne* of Loureiro is only a species of *Rottboella*." Under *Cymbachne* (page 129) he observes, "Willdenow described a *Rottboella Cymbachne* which appears to be the same plant as the above [*Cymbachne* Retz.]. However, its characters remove it considerably from the genus *Rottboella*. It is to be verified." It is evident that Beauvois is guessing from descriptions only. *Cymbachne alata* seems to be published for *R. cymbachne*, in case it proves to be a species of *Cymbachne*. Hackel[254] refers *Cymbachne ciliaris* Retz. (the basis of the genus and of *Rottboellia cymbachne* Willd.) to *Andropogon cymbachne* (Willd.) Hack.

GEN. CXV. ANDROPOGON L.

Andropogon fastigiatus Lin.; Beauv. 132. Name only, error for *A. fastigiatus* Swartz. (See discussion under *Dicctomis*, page 206.)

Andropogon fuscatus Beauv. 131. Error for *furcatus* [Muhl.].

Andropogon radiatus R. Br.; Beauv. 131, 151. Name only.

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[249] Journ. de Phys. **40**: 293. *pl. 1.* 1792.

[250] In Prain. Fl. Trop. Afr. **9**: 418. 1919.

[251] Syn. Pl. **1**: 105. 1805.

[252] DC. Monogr. Phan. **6**: 245. 1889.

[253] In Prain, Fl. Trop. Afr. **9**: 37. 1917.

[254] DC. Monogr. Phan. **6**: 450. 1889.

GEN. CXVI. SORGHUM Pers.

Sorghum asperum Beauv. 131, 164, 178. *Holcus asper* without author is referred to *Sorghum*. Presumably Thunberg's species is intended; that is *Pentaschistis aspera* (Thunb.) Stapf.

Sorghum avenaceum Beauv. 131, 164, 178. Based on *Holcus avenaceus* Thunb. Nees [255] referred this to *Danthonia curvifolia* Schrad., which is the basis of *Pentaschistis curvifolia* (Schrad.) Stapf.

Sorghum capillare Beauv. 131, 164, 178. Based on *Holcus capillaris* Thunb. That is the basis of *Achneria capillaris* (Thunb.) Stapf. Bentham and Hooker [256] and Hackel [257] use "*Achneria* Munro non Beauv." for the South African species described by Nees under *Eriachne* R. Br., and are followed by Durand and Schinz [258] and by Stapf.[259] The species of *Eriachne* R. Br. (except for one in China) are confined to Oceanica. Beauvois proposed the anagram *Achneria* for Brown's awnless species (see page 181), true *Eriachne*. Nees [260] uses *Achneria* Beauv. as a subgeneric name under *Eriachne* R. Br. Munro [261] takes up *Achneria* Beauv., citing "Nees 273, sub *Eriachne*"; he does not propose a new genus. "*Achneria* Munro * * * non Beauv." is described by Bentham and Hooker (loc. cit.). The South African genus is without a valid name.

Sorghum caffrorum Beauv. 131, 164, 178. *Holcus caffrorum* without author is referred to *Sorghum*. *H. caffrorum* Thunb. is a form of *Holcus sorghum* L.

Sorghum commune Beauv. 131, 178. Name only, though from comparison (in Obs. page 132) of the spikelets with those of *S. halepense*, the cultivated *Holcus sorghum* seems to be indicated. *Holcus sorghum*, however, is referred to *Sorghum vulgare*.

Sorghum decolorans Beauv. 164, 178. *Holcus decolorans* without author is referred to *Sorghum*. On page 131 the name is spelled "*decolor*". *Holcus decolorans* Humb. & Bonpl.; Willd., described from Venezuela, is a form of *H. halepensis* L.

Sorghum elongatum Beauv. 131, 164, 178. Based on *Holcus elongatus* R. Br. This is the basis of *Chrysopogon elongatus* Benth.=**Rhaphis elongatus** (R. Br.) Chase.

Sorghum flavum Beauv. 131, 178. Name only; probably meant for *fulvum*, *Holcus fulvus* R. Br. being referred (page 164) to *Sorghum*.

Sorghum pallidum Beauv. 131, 165, 178. Based on *Holcus pallidus* R. Br. A form of *Rhaphis gryllus* (L.) Desv.

Sorghum parviflorum Beauv. 132, 165, 178. Based on *Holcus parviflorus* R. Br. This is the basis of *Andropogon micranthus* Kunth and the type species of the genus *Capillipedium* Stapf=**Rhaphis parviflora** (R. Br.) Chase.

Sorghum plumosum Beauv. 132, 165, 178. Based on *Holcus plumosus* R. Br. This is the basis of *Andropogon australis* Spreng. (not *A. plumosus* H. B. K.). Valid in *Holcus*.

Sorghum rubens Gaertn.; Beauv. 178. Based on *Holcus rubens* Gaertn. A form of *Holcus sorghum* L.

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[255] Fl. Afr. Austr. 322. 1841.
[256] Gen. Pl. 3: 1158. 1883.
[257] In Engler & Prantl, Pflanzenfam. 2[2]: 54. 1887.
[258] Consp. Fl. Afr. 5: 836. 1894.
[259] In Thiselt. Dyer, Fl. Cap. 7: 456. 1898.
[260] Fl. Afr. Austr. 273. 1841.
[261] In Harvey, Gen. Pl. Cap. ed. 2. 449. 1868.

Sorghum saccharatum Mieg; Beauv. 165, 178. "*Holcus saccharatus* Wigg., Pers." (page 165) is referred to *Sorghum*. Persoon [262] uses *Holcus* for *H. lanatus* and *H. mollis* only, not for the sorghums. Under *Sorghum* (page 101) is *S. saccharatum* with a doubtful reference to an illustration by Mieg. The quotation of part of Linnaeus' description of *Holcus saccharatus* credited to "Lin." identifies the species=*Holcus sorghum saccharatus* (L.) Bailey.

Sorghum spicatum Beauv. 178. Name only, referred to *Penicillaria*. Evidently an error for *Holcus spicatus* L., which is *Pennisetum glaucum* (L.) R. Br.[263]

Sorghum striatum Beauv. 132, 165. *Holcus striatus* without author is referred to *Sorghum*. Doubtless Linnaeus' species is intended. That is *Sacciolepis striata* (L.) Nash.

Sorghum strictum Beauv. 178. Probably error for *S. striatum*. See above.

GEN. CXVII. **DIECTOMIS** Beauv. 132.

"Culm branching; inflorescence paniculate, the panicles subcompound; spikelets in pairs, 2-flowered, dissimilar, one sessile with polygamous florets, the other pedicellate with staminate florets, the glumes herbaceous, longer than the florets, the lower tridentate at the apex, the lemma and palea membranaceous, the lemma subbifid; lower floret of polygamous spikelet staminate, the upper perfect; lower glume with an obtuse unguiculate apex, the upper tridentate; lemma and palea membranaceous; lemma of the perfect floret rudimentary, awned; awn very long, plicate, twisted."

In the index (page 160) "Humb. et Bonpl., Wild." are given as authors of *Diectomis*. This name is not found in Willdenow's works,[264] Beauvois must have seen the name in manuscript. *Diectomis fastigiata* is the only species included. *Andropogon fastigiatus* Swartz is referred to *Diectomis*. ("Lin." is given as author on page 132.) But the generic description and illustration (plate 23, figure 5) do not at all agree with *Andropogon fastigiatus* Swartz. The illustration was evidently drawn from a specimen of *Apluda aristata* L., though it (and the description) are inaccurate in some points. The summit of the first glume is shown as a striate structure with entire margin. This is obviously meant for the greenish, herbaceous, nerved tip characteristic of *A. aristata* which, however, is minutely 2-toothed. The fertile lemma described as "subnulla" is well developed but deeply cleft and is so shown in the figure. In the displayed spikelet the staminate floret is shown above the second glume instead of above the first, and the fertile floret is in the axil of the sterile lemma. Kunth [265] suggests that Beauvois' illustrator confused a specimen Beauvois had from the herbarium of Humboldt and Bonpland with a fragment of some other grass. That would appear to be the case, and Beauvois evidently drew up his description from the drawing. The description and illustration being identifiable as *Apluda aristata*, *Diectomis* Beauv. is really a synonym of *Apluda*, though Beauvois apparently supposed his plant to be *Andropogon fastigiatus* Swartz. In the Delessert Herbarium is

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[262] Syn. Pl. 1: 78. 1805.

[263] See Chase, Amer. Journ. Bot. 8: 41. 1921.

[264] Hackel (DC. Monogr. Phan. 6: 392. 1889) cites "*Diectomis* (genus) Humb. et Bonpl. ap. Willd. Spec. 4, p. 741." This is an error, page 741, volume 4 having no grass genera. *Andropogon fastigiatus* (the type species of *Diectomis* H. B. K.) is found on page 913, but the name *Diectomis* does not appear.

[265] Mém. Mus. Hist. Nat. 2: 70. 1815.

a fragment of *Andropogon fastigiatus* Swartz marked "*Diectomis fastigiata*, Humboldt & Bonpl. sp. pl. amer." in an unknown script, and "*Andropogon fastigiatus* Swartz" in Beauvois' script. Hackel[266] cites *Diectomis fasciculata* Beauv. (the name as given in the Atlas) plate 23, figure 6, under *Andropogon leptocomus* Trin., referring to a correction in a supplementary "erratorum." Such correction is not made in the Errata in our copy of the Agrostographie, nor in Beauvois' own annotated copy which is now in the library of the United States Department of Agriculture. But there must have been a later printing of the work, for in Hackel's copy, now in the Rijks Herbarium of Leiden, the "Errata" is followed by a "Supplément a l'Errata" which reads as follows [translated]: "Page 132. Gen. CXVII. For *Diectomis*, read *Apluda*, and transfer the species to the genus following; also on page 133, line 3, in place of 'lower terminated' read 'lower not terminated.' [The observation reads: "This genus, *Diectomis*, improperly placed in *Andropogon*, approaches *Apluda*, from which it differs essentially in that the lower glume is terminated by an impression in the form of a nail (or claw). Fresh material should be examined."]

"Page 133. Gen. CXVIII. For *Apluda*, read *Diectomis* Wild. mss., and transfer the species to the preceding genus. Make the same transposition of the names in the explanation of the figures, *pl. 23, fig. 5 and 6*." This transposing of names does not rectify the errors. The description of *Diectomis*, even with the "unguiculate apex" of the first glume eliminated, applies to figure 5, not to figure 6, and that of *Apluda* applies to figure 6, not to figure 5. Neither is *Andropogon fastigiatus* Swartz nor *Andropogon gryllus* L., as Beauvois supposed. (See *Apluda*, below.)

We are indebted to Dr. J. Th. Henrard of Leiden for a transcript of the Supplémenta l' Errata. He states that this is found also in the copy in the library of the University of Leiden. Copies containing this supplement must be of later date than copies without it. This supplement would not then affect the typification of the genus, especially since the descriptions are left uncorrected. *Diectomis* Beauv. is such a complex of errors that it should not be allowed to invalidate *Diectomis* H. B. K. (1816) based on *Andropogon fastigiatus* Swartz, but should be rejected as not properly published.

Diectomis fasciculata Beauv. Atlas 15. *pl. 23. f. 5.* Error for *fastigiata.*

Diectomis fastigiata Beauv. 132, 150, 160. *pl. 23. f. 5=Apluda aristata* L. (See above; also *Apluda* below.)

GEN. CXVIII. APLUDA L.

Apluda distachya Beauv. 133, 150, 151. Based on *Andropogon distachyon* L. [spelled *distachyos*]. Valid in *Andropogon.*

Apluda gryllus Beauv. 133, 150, 151. *pl. 23. f. 6. Andropogon gryllus* L. is referred to *Apluda* but the illustration does not represent that species. Stapf[267] suggests that figure 6 represents *Andropogon leptocomus* Trin. (*Anadelphia leptocoma* (Trin.) Stapf) or an allied species. Comparison with this species confirms this identification. (See discussion under *Diectomis*, above.)

GEN. CIX. ANTHISTIRIA L.

Anthistiria villosa Beauv. 134, 151. Name only.

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[266] DC. Monogr. Phan. 6: 396. 1889.

[267] In Prain, Fl. Trop. Afr. 7: 391. 1919

Heteropogon hirsutis Beauv. 134 [error for *hirtus* Pers.]

LITHACHNE Beauv. 135.

"Culm branching; inflorescence spicate; spikes simple, dissimilar, one terminal with 1-flowered staminate spikelets, the glumes wanting, the lemma and palea acuminate, the other axillary with 1-flowered pistillate spikelets, the glumes herbaceous, acuminate; lemma and palea coriaceous-indurate, the lemma truncate, keeled, gibbous."

Olyra pauciflora, the only species cited under the description, is the type. Genus valid.

Lithachne axillaris Beauv. 166. *pl. 24. f. 2.* This is the same as *Olyra axillaris* Lam., but no reference to Lamarck is given=*Lithachne pauciflora* (Lam.) Beauv.

Olyra pauciflora Swartz is referred (page 168) to *Lithachne*, but the specific name is not transferred, *axillaris* evidently being the preferred name= *Lithachne pauciflora* (Lam.) Beauv.; Poir.

HYDROCHLOA Beauv. 135.

"Culm branching; inflorescence spicate; spikes simple, dissimilar, one terminal, with 1-flowered staminate spikelets, the glumes wanting, the stamens 6, the other axillary, with 1-flowered pistillate spikelets, the glumes wanting, the lemma and palea herbaceous."

Hydrochloa caroliniensis is the only species. Genus valid.

Hydrochloa caroliniensis Beauv. 165. *pl. 3. f. 18; pl. 24. f. 4.* (Spelled *caroliniana* on page 3 of Atlas.) "*Zizania natans* Mich." is cited under the genus, and *Z. fluitans* Michx. is referred in the index to *Hydrochloa*. *Zizania natans* Bosc was later published by Trinius as a synonym of *Hydrochloa caroliniensis* Beauv. Beauvois probably saw this name in some herbarium. *Zizania fluitans* Michx. is evidently the basis of *Hydrochloa caroliniensis* Beauv. Valid, *fluitans* now being preoccupied by *H. fluitans* Hartm. 1819.

GEN. CXXV. GYNERIUM Humb. & Bonpl.

Gynerium procerum Beauv. 164. *pl. 24. f. 6.* Presumably a change of name for *G. sagittatum* [Humb. & Bonpl.] which is cited under the genus but not given in the index. The generic description begins "* * * Culmus procerus."

GRAMINA OF UNCERTAIN POSITION.

NASTUS Juss.

Nastus verticillatus Beauv. 168. Name only. "*Bambos* Wild." is cited under *Nastus* (page 141). Willdenow[208] cites *Nastus* Juss. under *Bambusa arundinacea* Willd. A second species is *B. verticillata* Willd.; possibly this is the basis of *N. verticillatus*. Beauvois gives an illustration (plate 25, figure 3) which in the explanation is named "*Nastus*" only. This represents a species of *Bambos* Retz.

DIARRHENA [Raf.]

"*Diarrhena* Smart." is cited (page 42) and "*Diarrhena* Shmal" is given in the index. Rafinesque-Schmaltz is the author referred to.

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[208] Sp. Pl. 2: 245. 1799.

Diarrhena americana Beauv. 142. *pl. 25. f. 2.* "*Festucae* spec. Rich. in Mich." The last species of *Festuca* in the work referred to is *F. diandra* Michx.[269] (not Moench 1794), which is the species upon which Rafinesque based the genus *Diarina*. The illustration represents this species, for which *D. americana* is a change of name=*Diarina festucoides* Raf.

PSAMMA Beauv. 143.

"Inflorescence spicate; spike compound, erect, cylindrical; glumes submuticous, longer than the emarginate mucronate lemma and palea."

The only species cited under the genus is "*Arundo littoralis*"=*Ammophila* Host.

Psamma littoralis Beauv. 144, 176. *pl. 6. f. 1.* The illustration is recognizable as *Ammophila arenaria* (L.) Link, though the palea is erroneously shown with a minute awn just below the tip as in the lemma. The same error is found in the description.

ARUNDINARIA Michx.

Arundinaria glaucescens Beauv. 144, 152. Based on *Ludolfia glaucescens* Willd. Referred by Munro, Gamble, and others to *Bambusa* [*Bambos*] *nana* Roxb.

STEMMATOSPERMUM Beauv. 144.

"Inflorescence paniculate; panicle subsimple; spikelets sessile, many-flowered, the lower floret neuter, the palea wanting, the upper perfect, with a pedicellate capitate rudiment beyond the uppermost; glumes subcoriaceous, shorter than the florets; lemma subtridentate; palea entire."

Stemmatospermum verticillatum is the only species=*Nastus* Juss.; Gmel.

Stemmatospermum verticillatum Beauv. 145. *pl. 25. f. 5.* The illustration, emphasizing the indurate tips of the lemmas, represents *Nastus borbonicus* J. F. Gmel. The source of the specimen is not given.

In the index are the following new names which are not included under any of the genera enumerated in the text.

Cembul Moris.; Beauv. 157. Name only, referred to *Campulosus*. Morison[270] says that *Cembul* of the Arabs is *Nardus spica* and *Cembul* of India is *Nardus spica indica*. These names were used for *Cymbopogon schoenanthus* (L.) Spreng. Beauvois' identification is probably due to Morison's figure (Sect. 8, Tab. 13) of another *Nardus* which represents a species of *Campulosus*.

Dylepyrum [Dilepyrum] diffusum Beauv. 160. Name only, referred to *Muhlenbergia*. Probably an error for *Muhlenbergia diffusa* Willd., which is the same as *M. schreberi* Gmel.

Dylepyrum [Dilepyrum] multiflorum Beauv. 160. Name only, referred to *Muhlenbergia*.

Kerpa "Hort. Mal."; Beauv. 166, referred to *Imperata cylindrica*. This name is found in Hortus Malabaricus[271] on an illustration which was probably drawn from *Saccharum arundinaceum* Retz.

Sanguinella thunbergii Beauv. 177. Name only, referred to *Digitaria*.

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[269] Michx Fl. Bor. Amer. 1: 67. 1803.

[270] Pl. Hist. 3: 256. 1699.

[271] Rheede, Hort. Malabar. 12: 85. *pl 46*. 1703.

Sanguinella tripsacoides Beauv. 177. Name only, referred to *Rottboellia compressa.*

Tremula Scheuch.; Beauv. 179. Referred to *Briza.* There is no specific name. *Gramina tremula* in Scheuchzer (Agrost. 202. 1719) is *Briza maxima* L.

Sparteum Clus.; Beauv. 178. A pre-Linnaean name for *Stipa pennata* L.

Sparteum austriacum Beauv. 178. Name only, referred to *Stipa pennata* L.

LIST OF NEW NAMES.

BIOGRAPHICAL SKETCH.[272]

Ambroise Marie François Joseph Palisot, baron de Beauvois, was born at Arras, Province of Artois (now Pas-de-Calais), France, October 28, 1755. After having served a short time in the Mousquetaires, Beauvois studied law until the death of his father and elder brother conferred on him the office of receiver general for Picardie, Flanders, and Artois, hereditary in his family. This office paid well and did not require much time, so the young man devoted his leisure to study under Lestiboudois, professor of natural history at Lille, and became an enthusiastic collector of plants and insects. When he was 22 an edict of the king abolished the receivers general and Beauvois returned to private life. He went to Paris and became a follower of Jussieu, soon distinguishing himself among the younger botanists, presenting many papers on botanical subjects, especially on mushrooms and mosses, to the Academy of Sciences. He must have had a winning personality, for he seems to have had warm friends and admirers among those who knew him, and was honored by election to the Academy of Sciences of the Royal Institute.

Beauvois delighted in reading the accounts of voyagers and became eager to travel himself. He wished to carry on the exploration

[272] Sources: Cuvier's Eloge delivered before the Institut de France, March 27, 1820; Jussieu's introductory note in the Flore d'Oware et Benin, and Laségue's Musée botanique de B. Delessert.

planned by the Danish naturalist Forskål and ended by his untimely death. Beauvois planned after reaching the Red Sea to cross Africa from Egypt to Senegal or Guinea. At first he received some encouragement from the Government, but nothing came of it. In 1786, however, he found a way to go to west Africa. A negro sea captain, Landolphe, carrying on trade for a French commercial house, interested the native king of Awerri (in the delta of the Niger River) in the project of securing a French trading station. The king sent his adopted son and heir to France to be educated. The youth, Boudakau, was well received and was presented to Louis XVI. The opportunity for trade and profit was so glowingly presented by Captain Landolphe that authorization from the French Government was obtained to form a company of merchants, who furnished the funds for the enterprise. The captain had met Beauvois and also Jussieu. He asked the latter to recommend an able gardener to direct the projected plantations. Beauvois, eager to visit a region wholly unknown to botanists, offered himself for the post, hoping that after becoming established on the coast of Africa he might later realize his dream of crossing the continent. He seems to have had little intention of entering the service of the company and he provided himself with books, instruments, and provisions at his own expense. Fired by his enthusiasm his brother-in-law joined him in the venture. They sailed July 17, 1786. Beauvois expected to be gone about 4 years, but it was 12 years before he returned to France. The little fleet made many stops on the way south and at each point Beauvois collected plants and seeds which he sent to Jussieu by the ships which they encountered. The fleet reached its destination November 17, 1786, and the adventurers were most kindly received by the natives. But the poor colonists suffered tortures from the heat and humidity, the insects, and rats, which the natives took as matters of course. Yellow fever broke out among the Europeans. Of the 300 French who had gone to Africa 250 died during the five months they remained at Oware (or Awerri), among the victims being Beauvois' brother-in-law and two servants he had brought from France. In spite of his own ill health Beauvois explored Oware, part of Calabar (the coast region to the west), and Benin, where he remained for some time. His extensive collections of plants and insects he sent to Jussieu to hold until his return to Europe. Finally, after 15 months, his health became so critical that he was placed on board a "Negro vessel" (apparently a slave ship) bound for Saint Dominique (now Santo Domingo), then a French possession. He reached there June 28, 1788, after three and one-half months' voyage, in a very weak condition. He gradually recovered and then explored the

country with great ardor. But this far-off possession soon felt the tremor of the approaching French Revolution. The revolt of the negroes and the attempt to suppress it on the part of the whites made travel dangerous, but Beauvois, nevertheless, continued his explorations, collecting plants and sending seeds to France. He was made a member of the council general of the colony and had to interrupt his botanical work to take part in the discussions of that body, and, as the revolt spread, to command various detachments sent against the negroes. The revolt filled other slave-holding regions with fear and deputations were sent to Martinique, Jamaica, and the United States to implore aid. Beauvois was sent on this mission to Philadelphia in October, 1791. He made use of the time afforded by diplomatic delays to botanize in the region about Philadelphia and southward. In the meantime the negroes were gaining ground in Saint Dominique and after a year and a half Beauvois was recalled. He reached the island in June, 1793, just after the burning of Cape Français, to find his house in ruins and the collections of his three years in the island utterly destroyed. He was imprisoned but at the intercession of a kindly mulatto was released and ordered to leave the country. He set sail with the possessions he had taken back with him from the United States, but the ship was captured by the British and everything seized except one small trunk. With this and ten francs in money he reached Philadelphia. He could get no help from France, for the monarchy had been overthrown and Beauvois learned that his name was on the list of emigrés forbidden to return to France. He made a living by teaching music and French. The Quaker physician, Caspar Wistar, received the exile into his house. Later Peale employed him to arrange the collections in his museum. With his slender earnings and some help from the new French minister he continued his explorations, going as far as eastern Tennessee, collecting plants, seeds, animals, and fossils. According to Cuvier it was Beauvois who sent the teeth of Megalonyx to Jefferson. From time to time Beauvois sent his collections to the Paris Museum, some of the shipments reaching there safely and some being lost. After some years his friends in France succeeded in having his name removed from the list of emigrés and he was informed that his property had been restored and that he might return and enjoy the status of a French citizen under the new constitution. He abandoned a projected journey to Arkansas, assembled what remained of his collections, and sailed for home, landing in Bordeaux in August, 1798.

Again in Paris, Beauvois seems to have taken an active part in scientific circles, where his collections of plants, of insects and other animals, as well as of minerals, had made him well known. He pre-

sented numerous papers before the Academy and began work on his collections of plants and insects. The first fascicles of his Flore Oware et Benin were published in 1804, and the work continued to appear at intervals until 1820. His work on the insects collected by him in Africa, Saint Dominique, and America appeared in 12 parts between 1805 and 1820. Beauvois seems to have adjusted himself to the new régime. His Flore Oware and his Insectes were issued in sumptuous form under the patronage of the Government, and one of his new African plants he named *Napoleana imperialis*.

During his earlier years in Paris Beauvois had been interested in cryptogams, which he designated *Aethogamie* (unusual marriage) instead of *Cryptogamia* (hidden marriage), the term coined by Linnaeus for them. Beauvois seems to have been confident that all plants had stamens and pistils; Linnaeus' statement that in the *Cryptogamia* the flowering is not visible to the naked eye was a challenge to him to discover it. As the result of his "researches" he thought that he found the pollen, the stigmas, and grain in polyporous and gill-fungi. His explanation of the fructification of the puffballs is especially ingenious. The powder in the puffballs, which botanists had taken for the seed, is combustible and floats on water and is, therefore, to be regarded as pollen. The seed was contained in a deeper recess and issued through the same opening as the pollen and at the same time, being fertilized in the passage. This was analogous to the fertilization of the eggs of the frog at the time they were laid. On his return to Paris he found that Hedwig had been publishing works on the mosses and their fructification that did not at all accord with his own ideas. In 1805 he published[273] the "result of many years of research" which he "hastened to offer to the public" because of the differences between his system and that of Hedwig.

Beauvois' interpretation of the organs of mosses and his ideas of their fructifications are as ingenious as his explanations concerning the mushrooms, and display an unscientific type of mind that felt no need of verification by experiment or repeated observations. Then he leaves it to botanists to decide whether his explanations "are not more natural and more probable" than the statements of Hedwig (who had germinated the "green powder," which Beauvois maintained was pollen, and obtained moss plants). These ideas of Beauvois do not appear to have been accepted by the botanists of his acquaintance, which would account for the author's repeated appeal to the judgment of "impartial botanists."

Of the history of his attempt to work out a new classification for the grasses we know nothing except what he tells in the Advertise-

[273] Prodr. cinquième et sixième familles de l'Aethéogamie.

ment and Introduction to the Essay. The morphology of the grasses fared better at his hands than did that of the cryptogams, but the nomenclature suffered far more.

Beauvois died in Paris, January 21, 1820, leaving no children.

Beauvois' own copy of his Essay is now in the library of the United States Department of Agriculture. It is inscribed [translated] "Copy corrected by the hand of the author and given, after his death, to M. Thém. Lestiboudois by Mme. Palisot de Beauvois. [Signed] Thém. Lestiboudois." In this is a manuscript Tabula Methodique, using different characters from those in the original table, bringing the genera into less unnatural groups. Group names are suggested as: "Les Saccharées: *Imperata*, *Saccharum*, *Trichoon* [*Phragmites*], *Erianthus*, *Dimeria*." In the book (p. 5) *Agraulus* and *Trichodium* are crossed out, the first annotated "réunie a l'*Agrostis*," the second "réunie au *Vilfa*." Under *Axonopus* (p. 12) "*paniceum*" is crossed out. *Heleochloa* (p. 23) is marked "réunie au *Crypsis*," and *Bouteloua* (p. 40) "réunie au *Chondrosium*." Under *Setaria* (p. 51) "*Setaria longiseta* nob. fl. Ow." is added. *Molinia* (p. 68) and *Orthoclada* (p. 69) are referred to *Poa; Schismus* (p. 73) to *Triodia; Diplachne* (p. 80) to *Schedonorus; Lodicularia* (p. 108) to *Rottboell*[*i*]*a; Zeocriton* (p. 114) to *Hordeum;* and *Lithachne* (p. 135) to *Olyra*. *Remirea* and *Diaphora* (p. 143) are each marked "c'est une cypérée." There are changes in a number of the generic descriptions, but none in *Anthaenantia*, *Ichnanthus*, *Diectomis*, *Apluda*, or other genera obviously incorrectly described. The index is full of changes and additions. We can not give these here, because to do so would publish many new names. There is nothing, except the manuscript Tabula Methodique, that indicates a serious revision of the work.