

(Austin) Nels. & Macbr. in Bot. Gaz. lvi. 469 (1913).—Woodlands and clearings, southern Quebec to Ohio, south to Nova Scotia, New England, Long Island, Virginia, and upland of North Carolina and Tennessee. June–August.

III. ERIANTHUS BREVIBARBIS AND OTHER SPECIES

(Plates 758–761)

ERIANTHUS coarctatus, sp. nov. (TAB. 758), culmis rigidis 0.75–1.5 m. altis, ad basin 3–6 mm. diametro, nodis 4–6 barbatis barbis deciduis; foliis caulinis 4–6, vaginis glabris, laminis scabris e basi valde angustato sublanceolato-linearibus 2–10 mm. latis nerviis lateralibus prominulis utrinque 3–5; lamina superiore valde reducta 4–12 cm. longa; panícula lanceolata densa 1–1.7 dm. longa 3–4 cm. diametro basi deinde exserta, racemis valde adpressis 2–5 cm. longis; spiculis sessilibus lanceolatis, glumis strigoso-hirtellis 6.5–8 mm. longis, coma basilari 4–5 mm. longa; pedicellis strigoso-hirtellis; arista tereti porrecta 1.6–2 cm. longa.—Delaware, eastern Maryland and eastern Virginia. DELAWARE: fencerow, $\frac{1}{4}$ mile east of Ellendale, Sussex County, October 12, 1940, *R. R. Tatnall*, no. 4745. MARYLAND: roadside 5 miles north of Princess Anne, Somerset County, October 2, 1937, *R. R. Tatnall*, no. 3574. VIRGINIA: peaty swale (cut-over cypress swamp), about 4 miles northwest of Homeville, Sussex County, September 20, 1937, *Fernald & Long*, no. 7301, as *E. brevibarbis* Michx. (TYPE in Herb. Gray); alluvial woods along Nottoway River, Green Church Bridge, northwest of Owen's Store, Sussex County, October 14, 1941, *Fernald & Long*, no. 13,884. All but the last distributed as *E. brevibarbis*.

Var. **Elliottianus**, var. nov., planta major; culmis ad 2 m. altis ad basin 6–10 mm. diametro; laminis 7–12 mm. latis; panícula laxiore majoreque 2–4.5 dm. longa 4.5–10 cm. diametro, racemis 4–8 cm. longis.—North Carolina to Florida. TYPE: thicket bordering pond near Live Oak, Florida, October 10, 1901, *A. H. Curtiss*, no. 6940, as *E. alopecuroides*, var. *brevibarbis*.—The plant beautifully described as *E. brevibarbis* by Elliott, Sk. i. 39 (1816) and very crudely illustrated by him.

Erianthus coarctatus and var. *Elliottianus* have passed, ever since Elliott, as *E. brevibarbis* Michx. Nash in North Am. Fl. xvi¹. 93 (1909) cites for *E. brevibarbis* the "TYPE LOCALITY: Tennessee" and then gives the range "Delaware to Florida, west of Louisiana"; while Hitchcock, Man. 723 (1935) says "Moist places, Coastal Plain, Delaware to Florida and Louisiana", but on p. 854 cites the type as from "Tennessee and Carolina, Michaux." Michaux, in originally describing it, Fl. Bor.-Am. i.

55 (1803), said "*HAB. in collibus Tennassée et Carolinae*". The discrepancy in Michaux's statement (and his label) and the Coastal Plain range of the plant usually taken to be *E. brevibarbis* has often been noted; and when Hitchcock examined the Michaux TYPE he wrote:

***Erianthus brevibarbis* Michx.**

"In collibus desertis ab amnio Wabash ad Ostium Missouri 5 diebus distantibus". The specimen belongs to the species described in Small's Flora under this name. The range as originally published is "in collibus Tennassée et Carolinae". The known range is from Delaware southward along the coast to Florida, and west to Louisiana. We do not know of its occurrence in southern Illinois, as given on Michaux's label.—Hitchc. Contrib. U. S. Nat. Herb. xii³. 151 (1908).

Michaux's type, with the label as quoted by Hitchcock, is here reproduced $\times \frac{1}{2}$, as PLATE 759, FIG. 1. That it is very unlike the Coastal Plain plant for which it has passed is evident. Its apparently mature and disintegrated panicle is hidden amongst the broad and prolonged leaves and enlargements of the spikelets, FIG. 2, $\times 1\frac{1}{2}$, show them to be like those of the plant (PLATE 760) of Pulaski County, Arkansas, distributed by Dr. Delzie Demaree (by creek near old quarry, Pulaski Heights, Little Rock, September 23, 1931, *Demaree*, no. 8228). Like that of the Michaux type the panicle (PLATE 760, FIG. 1, $\times \frac{1}{2}$) of Demaree's no. 8228 is disintegrating. In equivalent latitudes of the Coastal Plain *E. coarctatus* sheds its fruit from mid-October into November. Since the Demaree plant is so like Michaux's type from well up in the Mississippi Valley we may note that it has 10, instead of only 4–6 nodes; the leaf-blades broader (up to 1.5 cm. wide) and with more numerous veins (the more prominent veins 6–8 each side of the midrib); the mature panicle partly included at base and greatly exceeded by the broad upper blade (2.3 dm. long); the glumes (PLATE 759, FIG. 3, $\times 6$) with glabrous and lustrous surfaces (Michaux said "*valvis acutissimis, nudis*"); the more abundant beard up to 6 mm. long; and the awn (PLATE 760, FIG. 3, $\times 3$) only 8–10 mm. long, less than twice, instead of nearly thrice the length of the glumes.

The collection in Arkansas of a plant which closely matches the Michaux type and which is so different from the *Erianthus "brevibarbis"* of most authors supports Michaux in his statement on the label. Although the assertion (generally attributed to

Richard who issued the work after the death of Michaux) in the original publication, that it came from hills of Tennessee and from Carolina does not coincide with the original label, there is now clear evidence that a plant like Michaux's does occur in the Mississippi basin. It is not without significance that Hackel, the master of the *Gramineae*, doubted the identity of Michaux's plant with that of Elliott. In his great work on the *Andropogoneae* in DC. Mon. Phan. vi. 131 (1889), treating *E. brevibarbis*, as *E. saccharoides* subsp. *brevibarbis*, he accurately described the newly recognized *E. coarctatus*, var. *Elliottianus*, doubting if he had the Michaux species (transferred by Persoon to *Saccharum*), his citations reading: "Er. brevibarbis Mich. . . . ?, certe Elliott, Sketch . . . et aliorum auctt. amer.; Sacch. brevibarbis Pers. . . . ?" His doubt seems to have been justified; at least, *E. coarctatus* and *E. brevibarbis* seem quite as distinct as do most of our species in the genus. As to the range of the latter, it is yet to be worked out. The botanists of Indiana, Illinois, Tennessee and Missouri seem not to have noted it; and, although Demaree's label bears the memorandum, "New to Ark.", Hackel, l. c. cited as *E. brevibarbis* Arkansas material at Berlin, received from Engelmann. Michaux's label, giving the data, on dry hills 5 days distant from the River Wabash toward the mouth of the Missouri, means that he got it in southern Illinois, presumably between Jefferson County at the east and Randolph County at the west. On August 23, 1795, Michaux, with an Indian, and a horse to carry his baggage, left Vincennes on the Wabash, in Knox County, Indiana, and on the 28th spent the day drying out his water-soaked collections by a camp-fire, reaching Kaskaskia, in Randolph County, Illinois, on the 30th. From late August to October 2 he collected up and down the Mississippi, with Kaskaskia as a base, and then returned to the Ohio. Five days travel from Vincennes, allowing for the stops recorded in Michaux's diary, means that he got *Erianthus brevibarbis* in southwestern Illinois; and it is clear that his over-mature material was collected, at latest, in early October. The latter fact and the over-ripe material from Arkansas, collected on September 23, indicate that true *E. brevibarbis*, although little known, is a relatively early species to mature.

In habit and in dense panicle with appressed-ascending

branches, typical *Erianthus coarctatus* strongly suggests *E. strictus* Baldwin; but the panicle of *E. strictus* is more slender and elongate and its spikelets are naked at base or with the merest suggestion of a greatly abbreviated coma at the tips of some pedicels. Furthermore, in eastern Virginia *E. strictus* is the earliest-flowering species of the genus, our 8 collections, from young anthesis to mature fruit ranging in date from July 20 to September 19, with a single one, from wet woods, secured on October 18; the Virginia collections of *E. coarctatus*, both immature, were made on September 20 and on October 14.

Michaux, who established the genus *Erianthus*, did not realize the complexity of the genus. He recognized but two species: his *E. saccharoides*, "a Carolina ad Floridam", with "gluma villis involucrantibus multo brevior", identical with *Anthoxanthum giganteum* Walt. (1788); and *E. brevibarbis*. *E. strictus*, *E. coarctatus* and other species which he must have encountered and collected, were not worked out by him or, presumably, were confused with those of which types are preserved.

Related to *Erianthus brevibarbis* and *E. coarctatus* in having the terete awns projected forward (rather than flattened ones spirally twisted at base and with the straightish tip thrown somewhat to one side) are two plants with thicker panicles and with coma exceeding the glumes: *E. saccharoides* Michaux or *Anthoxanthum giganteum* Walt. = *E. giganteus* (Walt.) F. T. Hubbard and sensu Hitchcock, but certainly not *E. giganteus* Muhl., to whom Hitchcock erroneously ascribes the species; and *E. compactus* Nash. Before considering the differences between these two it is necessary to consider the correct name for the plant which Hitchcock, Man., is calling *E. giganteus*, for it is quite clear that his discussion (Man. p. 854) was based on confused ideas and inaccurate quotation of Muhlenberg's Catalogue. Hitchcock's paragraph is as follows:

(5) ***Erianthus giganteus*** (Walt.) Muhl., Cat. Pl. 4. 1813. Based on *Anthoxanthum giganteum* Walt. Later (Descr. Gram. 192. 1817) Muhlenberg uses the name for both *E. saccharoides* [Michx., 1803] and *E. alopecuroides* [L. (Ell.)] (his herbarium specimen under this name including both species), but the description (awn twisted) applies better to *E. alopecuroides*. *Erianthus giganteus* was published as new by Hubbard (*Rhodora* 14: 166 (1912) based on *Anthoxanthum giganteum* Walt.

If, as Hitchcock definitely states, the name *Erianthus giganteus* Muhl. Cat. had been based on *Anthoxanthum giganteum* Walt., there was no need of a new combination by Hubbard; but Hubbard in 1912 was following the International Rules of that period and, as he clearly and correctly explained, *E. giganteus* Muhl. Cat. (1813) was NOT based on *Anthoxanthum giganteum* Walt., but was a change of name by Muhlenberg of *Andropogon alopecuroides* L. Since by present-day rules Muhlenberg had no right to give the new specific name, instead of using the one assigned by Linnaeus, Muhlenberg's quite new name, *Erianthus giganteus*, is illegitimate; but, by the "homonym rule", adopted in the International Rules since Hubbard wrote, there is no room for a second *E. giganteus*, based on Walter's name, especially since Walter's species is admittedly identical with *E. saccharoides* Michx. As to Hitchcock's flat statement that Muhl. Cat. (1813) based the name *E. giganteus* upon *Anthoxanthum giganteum* Walt., the following reproductions of Muhlenberg's text indicates that the statement could not have been verified. The first reproduction is from ed. 1 (1813), the second from ed. 2 (1818).

- [1] 26. ANTHOXANTHUM, SPRING GRASS,
 2. giganteum }
 Walter v. erianthus } gigantic,
 27. ERIANTHUS, ERIANTHUS, semen 1.
 1. giganteus, 2 }
 andropogon, } gigantic, Car. Virg.
 alopec. L. }
- [2] 27 ANTHOXAN'- }
 THUM } SPRING GRASS semen 1.
 2 giganteum, }
 Walter. v. erianthus } gigantic
 28 ERIANTHUS ERIANTHUS semen 1.
 1 giganteus 2 }
 Andropogon } gigantic Car. Virg.
 alopec. L. }

It is perfectly clear that Muhlenberg was maintaining Walter's *Anthoxanthum giganteum* under *Anthoxanthum*!, though with the rather vague intimation ("v. [vel] erianthus") that it was perhaps an *Erianthus*. He made no combination based directly upon it; but his *Erianthus*, the next genus, consisted of two other species, 1. *giganteus*, a substitute-name for *Andropogon alopec[uroides]* L., and 2. *E. brevibarbis* Michx., already discussed. In his Cat.

ed. 2: 4 (1818) Muhlenberg repeated (see quotation above) the treatment of ed. 1, merely making *Andropogon alopecuroides* more emphatically the nomenclatural basis of *E. giganteus* by using italics: "1 giganteus *Andropogon alopec.* L."

There is no question, apparently, about the identity of *Erianthus alopecuroides* (L.) Ell., which was based on *Andropogon alopecuroides* L. Sp. Pl. ii. 1045 (1753), the type being Clayton, no. 601 from Virginia. A photograph of the type, $\times \frac{1}{2}$, is reproduced as PLATE 761, FIG. 1, with an enlargement (FIG. 2) of spikelets, $\times 3$, showing the characteristic flattened and twisted awn and the copious long coma. *Erianthus giganteus* Muhl. Cat. (1813), based directly upon it, has nothing to do with *E. giganteus* (Walt.) F. T. Hubbard; and the latter, a valid combination when published, must give way to *E. SACCHAROIDES* Michx. As to the definition by Muhlenberg of a plant he subsequently called *Erianthus giganteus*, that simply confirms his identification of it with *Andropogon alopecuroides* L., for he emphasized the twisted awn. I cannot follow the reasoning by which *E. giganteus* was taken up by Hitchcock in his Manual as *E. giganteus* "(Walt.) Muhl." In 1908 he was apparently right when he wrote of *Anthoxanthum giganteum* Walt. "The specific name can not be taken up because there is an *Erianthus giganteus* Muhl., based upon *Andropogon alopecuroides* L."—Hitchc. in Contrib. U. S. Nat. Herb. xii³. 151 (1908).

Although Nash in N. Am. Fl. xvii¹. 94 (1909) reduced to *Erianthus saccharoides* Michx. his own *E. compactus* Nash in Bull. Torr. Bot. Cl. xxii. 419 (1895) and although Hitchcock, Man. also reduces it to the ill-fated *E. giganteus*, it seems to me a very well defined variety. Typical *E. saccharoides*, as shown by a photograph of the type before me, has the excessively hairy panicle 2–6 dm. long, the long beard of the spikelet 2 or 3 times as long as the blades of the glumes. It occurs from Florida to Texas, north to southeastern Virginia. Typical *E. compactus* has the panicle only 1–2 dm. long and the beard from slightly longer than to barely twice the length of the blades of the glumes. It occurs from the Carolinas and Alabama northward to southeastern New York, New Jersey, eastern Pennsylvania, the District of Columbia, northern Virginia and Kentucky, in the southern part of its range working back to the Appalachian

Mountains. Throughout the region where it is beyond the range of *E. saccharoides* it is readily recognizable and quite distinct, but a large proportion of specimens before me from South Carolina show a mixture of the two trends (panicles up to 3.5 dm. long but with short coma, the blades of the glumes thus very evident in the panicle as contrasted with the hidden blades in typical *E. saccharoides*) while some specimens from Georgia lie between *E. saccharoides* and *E. compactus*; so that I am forced to consider *E. compactus* an essentially northern and inland variety rather than a true species:

E. SACCHAROIDES Michx., var. **compactus** (Nash), comb. nov.
E. compactus Nash in Bull. Torr. Bot. Cl. xxii. 419 (1895).

It is, unhappily, necessary to discuss the type of *Andropogon divaricatum* L. Sp. Pl. i. 1045 (1753). This species has been made by Hitchcock and by Nash identical with *A. alopecuroides* L. l. c. (1753) and in 1908 Hitchcock took it up, apparently because of priority on the page, to replace *E. alopecuroides* (L.) Ell. (1816), saying

Andropogon divaricatum L. Sp. Pl. 1045. 1753.

The type specimen is marked "2 divaricatum" and is from Gronovius. As pointed out elsewhere ^b [b Bot. Gaz. **35**: 215. 1903], this is the same as *A. alopecuroides* L., which is an *Erianthus*. It should be called **Erianthus divaricatus** (L.) instead of *Erianthus alopecuroides* (L.) Ell. Linnaeus also cites a synonym from Gronovius which is based on Clayton no. 600. This is *Sorghastrum linnaeanum* (Hack.) Nash.—Hitche. in Contrib. U. S. Nat. Herb. xii³. 125 (1908).

My faith in the acumen of Linnaeus is such that I do not expect to find him describing identical species twice on the same page, although such accidents did happen. The diagnosis in 1753 of *Andropogon alopecuroides* was "4. ANDROPOGON panicula laxa, aristis tortuosis". That was all except literary citations, which, since Linnaeus had a specimen (our PLATE 761, FIGS. 1 and 2) matching the diagnosis, are wholly secondary. Similarly *A. nutans* L., type of *Sorghastrum nutans* (L.) Nash, had a "panicula nutante" and our familiar *Andropogon virginicum* was described "paniculae spicis conjugatis" &c. All these accounts (except of *Andropogon nutans* L.) are borne out by photographs of the types before me. *Andropogon divaricatum* did not have a panicle. Instead it was clearly defined: "2. ANDROPOGON spica oblonga, floribus lanatis remotis divaricatis: arista flexuosa

nuda"; and the specimen in Linnaeus's Herbarium (PLATE 761, FIGS. 3 and 4) when he prepared his diagnosis, therefore the TYPE, coincides most accurately with the brief but clear account. What it is I do not know. It was misidentified by Linnaeus with a plant of Clayton's from Virginia, "*Lagurus humilior*, panicula conica laxa nutante culmum terminante", a plant which Hitchcock says is the same as 3. *A. nutans* L. (*Sorghastrum nutans*). It would be most extraordinary if Linnaeus confused specimens of his nos. 2 and 3 and if Gronovius and Clayton before him treated as two different species from Virginia material of only one, *A. nutans*, while they did not recognize the conspicuously different *Sorghastrum Elliottii* (Mohr) Nash, which is frequent in eastern Virginia.

According to Hitchcock's statement in 1908, "Linnaeus also cites a synonym from Gronovius which is based on Clayton no. 600. This is *Sorghastrum linnaeanum* (Hack.) Nash"—Hitchc. in Contrib. U. S. Nat. Herb. xii³. 125 (1908); and he subsequently (Man. 951) states that *S. Linnaeanum* (Hack.) Nash, going back to *Sorghum nutans*, subsp. *Linnaeanum* Hackel in Martius, Fl. Bras. ii³. 276 (1883), was "misapplied" by Nash "to *S. Elliottii* (Mohr) Nash". Most unfortunately, here, as in so many cases already discussed, error seems to have crept in. Clayton's no. 600, basis of the Gronovian reference given by Linnaeus under *Andropogon divaricatum*, is beautifully preserved material, for a photograph of which (our PLATE 761, FIG. 5) I am indebted to Dr. Ramsbottom. It is, indeed, the best sort of *Sorghastrum Linnaeanum*, i. e. *S. Elliottii*; and my faith in the acuteness of Clayton, Gronovius and Linnaeus is justified. To be sure, Hitchcock reduced *S. Linnaeanum* to *S. nutans* (L.) Nash; but it seems improbable that he could have read Hackel's original diagnosis:

Panicula laxa, 25 cm. lg., nutans, oblonga, ramulis longioribus apice bispiculatis. Spiculae intense rufae, 6 mm. lg.; gluma prima ad medium parce pilosa, secunda glabra. Arista 23-25 mm. lg., columna subulam aequans, medio interum geniculata.

Andropogon nutans L. Spec. ed. 1. II. 1045 (non Mant. II); Ell. Sketch. I. 141.

Sorghum nutans Chapm. l. c.

America borealis: Florida, Georgia — Texas.

The clear description by Hackel is very close to Hitchcock's

account of *Sorghastrum Elliottii*, with "panicle loose, 15 to 30 cm. long, nodding at apex, the filiform branchlets and pedicels flexuous . . . ; spikelets 6 to 7 mm. long, chestnut-brown at maturity, . . . first glume hirsute or glabrescent on the back; awn 2.5–3.5 cm. long, twice-geniculate". This strongly contrasts with the account of the plant Hitchcock calls *S. nutans*, with "panicle . . . yellowish, rather dense, contracted . . . at maturity . . . ; awn 1–1.5 cm. long, once-geniculate".

Returning to the actual *Andropogon divaricatum* L., the simple fact remains that its TYPE does not have a panicle. The photograph of it, kindly sent me by Mr. S. Savage (our PLATE 761, FIGS. 3 and 4), shows the summit of a culm with an oblong spike, the spikelets lanate, remote and divergent, the flexuous awn naked (spica oblonga, floribus lanatis remotis divaricatis: arista flexuosa nuda—*Linnaeus*). That it is not *Erianthus alopecuroides* (our PLATE 761, FIGS. 1 and 2) or any member of that genus is obvious. I have tried in vain to place it with anything Virginian or eastern American. The truncated pedicels of some of the spikelets suggest *Andropogon*, as does the spiraling awn; but no *Andropogon* which I know. It is not impossible that its source was far from Virginia. The photograph, poor as it is and showing the spikelets heavily impregnated with glue, may lead to its proper identification. It should be noted that the long-exserted peduncle is quite naked, with a prolonged and divergent blade at base. All eastern American species of *Andropogon* which have to be considered have close sheaths with appressed-ascending tips extending nearly or quite to the inflorescence. It should further be noted that one spikelet (FIG. 4) bears 2 or 3 spiraling awns, suggestive of *Danthomia*, but not of that genus. It is hoped that those who know the grasses will clarify the identity.

As to the type of *Andropogon nutans* L. I have no satisfactory information. The panicle of the wide-ranging species with short awns and pale spikelets is not nodding (*nutans*); but there is no doubt that the plants of Elliott, basis of *S. Elliottii*, and of Chapman were the latter very definite species. Since the identities of types throughout the group have been so discouragingly misunderstood, it is not at all improbable that the type of *A.*

nutans, when critically compared, may lead to some alterations of our ideas. At least, it is probable that somewhere amongst the many names placed by Hitchcock in the reputed synonymy of his *S. nutans* others may be found earlier than *Chrysopogon Elliottii* Mohr (1897).

From the situation in *Erianthus* and in *Muhlenbergia* (see pt. I) it is evident that the TYPES of our eastern North American grasses need much further and closer study.

PLATE 758. *ERIANTHUS COARCTATUS* Fern.: FIG. 1, TYPE, $\times \frac{2}{5}$; FIG. 2, panicle, $\times 1$; FIG. 3, summit of rachis of raceme, $\times 3$; FIG. 4, spikelet, $\times 3$; FIG. 5, spikelet, $\times 6$.

PLATE 759. *E. BREVIBARBIS* Michx., kindness of Professor Humbert: FIG. 1, TYPE, $\times \frac{1}{2}$; FIG. 2, spikelets of TYPE, $\times 1\frac{1}{2}$; FIG. 3, spikelet, $\times 6$, from *Demaree*, no. 8228.

PLATE 760. *E. BREVIBARBIS* Michx.: FIG. 1, plant, $\times \frac{1}{2}$, from Pulaski County, Arkansas, *Demaree*, no. 8228; FIG. 2, summit of rachis of raceme, $\times 3$, from no. 8228; FIG. 3, spikelet, $\times 3$, from no. 8228.

PLATE 761. FIG. 1, TYPE of *ANDROPOGON ALOPECUROIDES* L. and of *ERIANTHUS ALOPECUROIDES* (L.) Ell., $\times \frac{1}{2}$, kindness of Dr. John Ramsbottom; FIG. 2, spikelets of same, $\times 3$, to show twisted awns. FIG. 3, TYPE of *ANDROPOGON DIVARICATUM* L. and of *ERIANTHUS DIVARICATUS* (L.) Hitchc., $\times \frac{3}{5}$, kindness of Mr. S. Savage; FIG. 4, summit of inflorescence, $\times 2$. FIG. 5, *Clayton*, no. 600, paratype of *A. DIVARICATUM*, i. e. *SORGHASTRUM ELLIOTTII* (Mohr) Nash, $\times \frac{1}{2}$, kindness of Dr. Ramsbottom.

IV. WHY NOT ANDROPOGON GERARDI?

As early as 1700 the common plant of eastern North America, known either as *Andropogon provincialis* Lam. Encycl. i. 376 (1785) or as *A. furcatus* Muhl. ex Willd. Sp. Pl. iv. 919 (1806), was cultivated and perhaps escaped in Provence, in southern France. Tournefort, Inst. i. 521 (1700) had it as his *Gramen dactylon*, villosum, ramosum, altissimum, Gallo-Provinciale; but it was not until 1761 that the cultivated plant of Provence was beautifully described and illustrated by a figure as *Andropogon spica digitatis, flosculis alternatim geminis, hermaphrodito aristato, sessili; masculo mutico, pedunculato* by Gérard in his *Flora Gallo-Provincialis*, 106 (fig. 4) and 107 (1761), a plant which grew in southern Provence (*Oritur in gallopr. australi*. Perenne). Gérard's description was so detailed and so lucid that it is here given in full:

Des. *Radix numerosâ fibrarum multifariam implicatarum prole luxurians. Culmi tripedales & ultra, glabri, striati. Folia radicalia multa, lata, glabra, cespites constituentia; caulina quinque vel sex, admodum vaginantia, inferne ad margines pilis raris vestita. Membrana ex apice vaginarum*

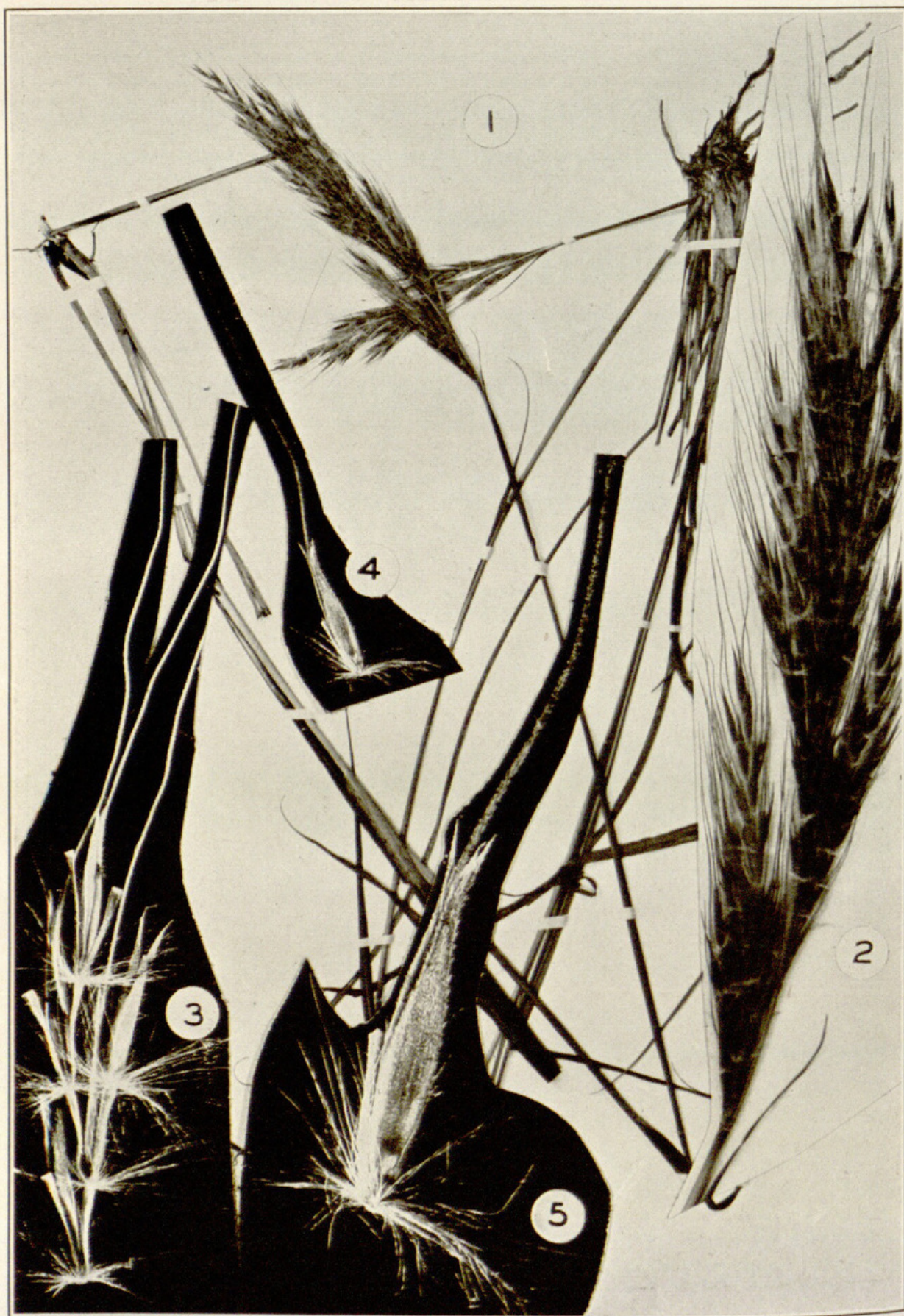


Photo. B. G. Schubert.

ERIANTHUS COARCTATUS: FIG. 1, type, $\times \frac{2}{5}$; FIG. 2, panicle, $\times 1$; FIG. 3, summit of rachis of raceme, $\times 3$; FIG. 4, spikelet, $\times 3$; FIG. 5, spikelet, $\times 6$.

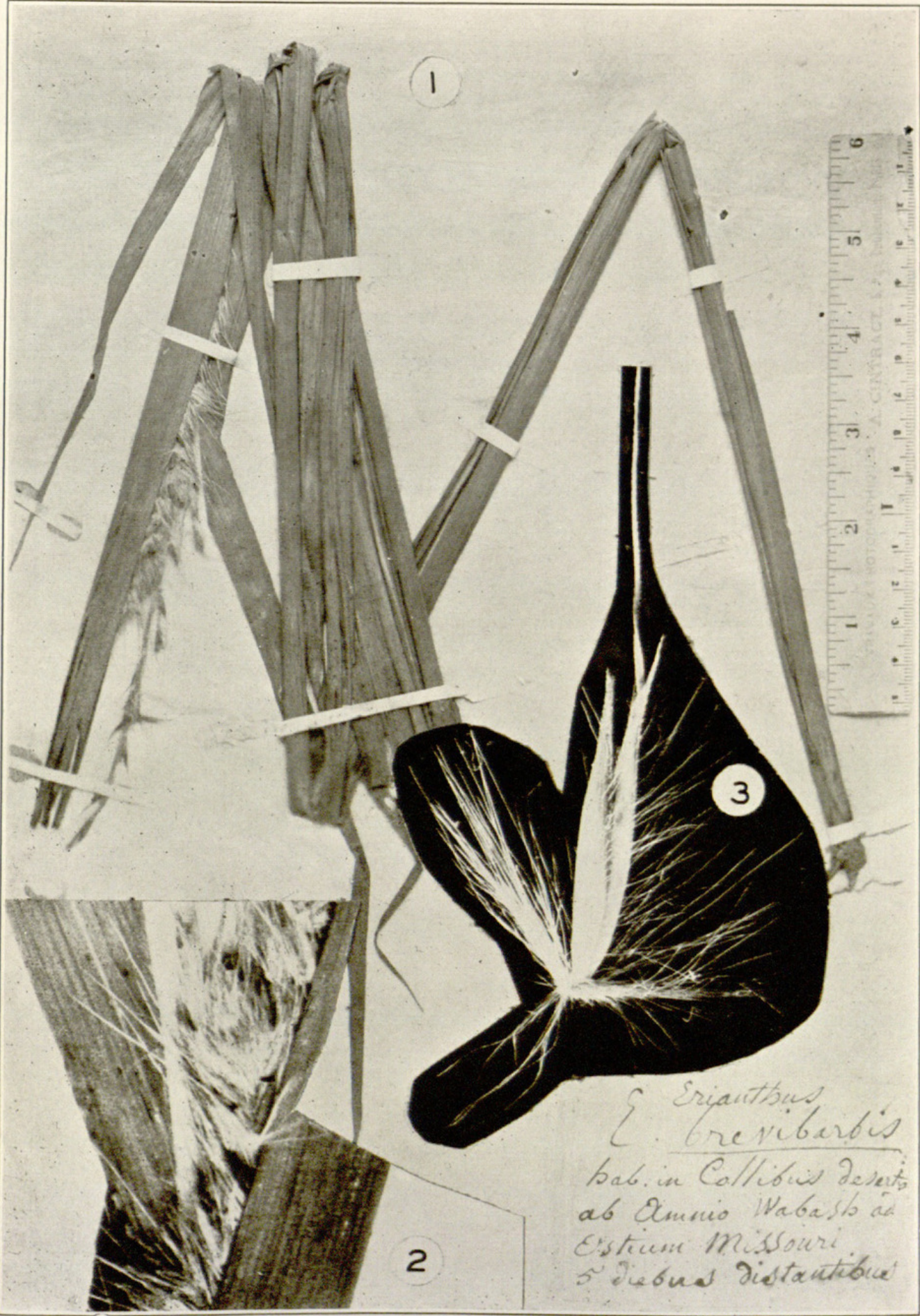


Photo. B. G. Schubert.

ERIANTHUS BREVIBARBIS: FIG. 1, type, $\times \frac{1}{2}$; FIG. 2, spikelets of type, $\times 1\frac{1}{2}$; FIG. 3, spikelet, $\times 6$, from Arkansas.

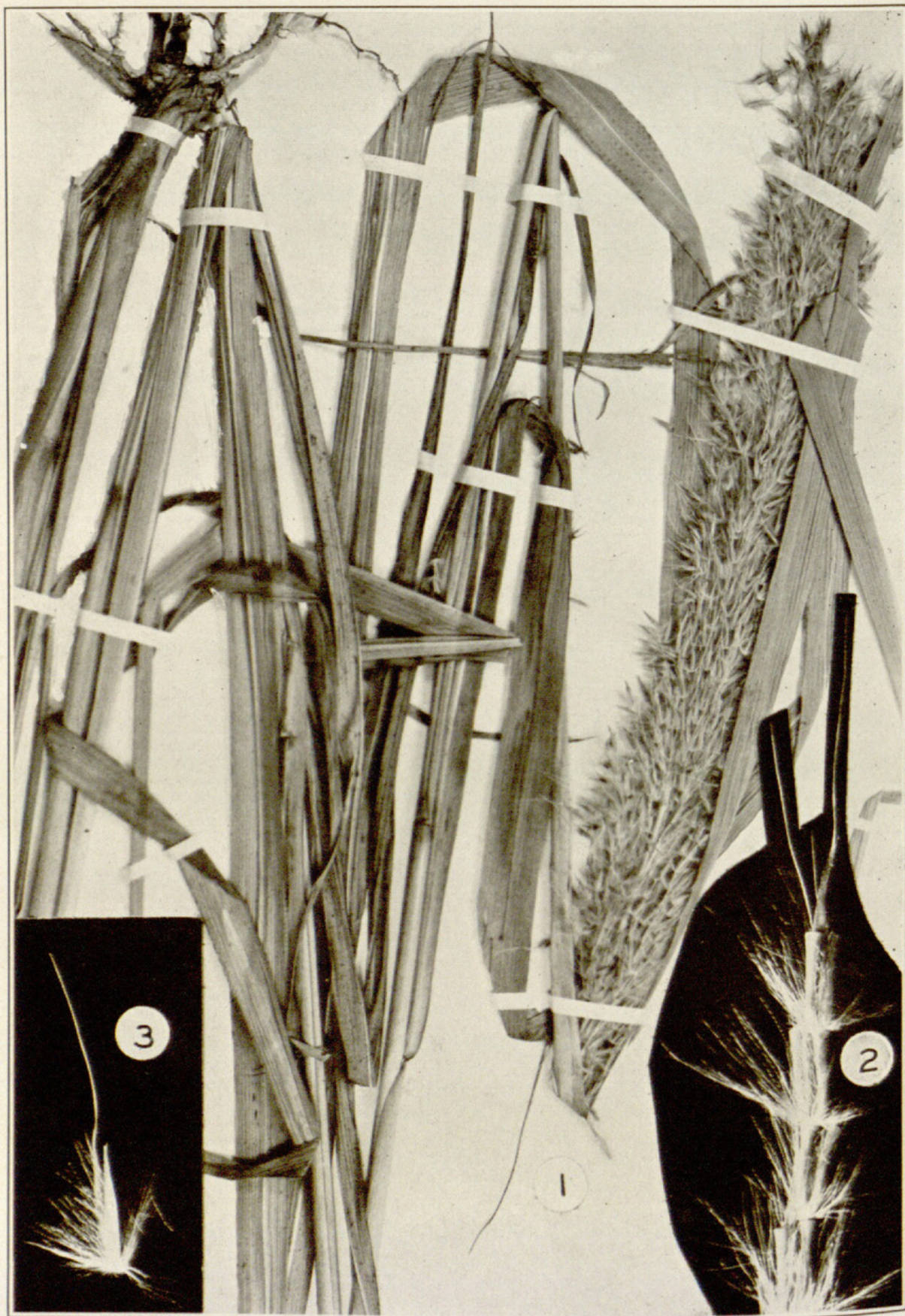


Photo. B. G. Schubert.

ERIANTHUS BREVIBARBIS: FIG. 1, plant, $\times \frac{1}{2}$, from Arkansas; FIG. 2, summit of rachis of raceme, $\times 3$; FIG. 3, spikelet, $\times 3$.



Photo. B. G. Schubert.

ERIANTHUS ALOPECUROIDES: FIG. 1, type of ANDROPOGON ALOPECUROIDES, $\times \frac{1}{2}$; FIG. 2, tip of same, $\times 3$.
ANDROPOGON DIVARICATUM: FIG. 3, type, $\times \frac{3}{5}$; FIG. 4, portion of same, $\times 2$; FIG. 5, paratype, Clayton, no. 600, $\times \frac{1}{2}$.



Fernald, Merritt Lyndon. 1943. "Erianthus brevibarbis and other species." *Contributions from the Gray Herbarium of Harvard University* (148), 246–255.
<https://doi.org/10.5962/p.336280>.

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