pinnatis, segmentis ultimis linearibus vel lineari-lanceolatis plerumque distantibus; soris 0.3-0.8 mm. diametro submarginalibus.—Northern region of the Table-top Range, Gaspé County, Quebec: crevices of granitic rock, altitude 750-1050 m., easterly and northerly slopes of Table-top Mountain, August 9, 1906, Fernald & Collins, no. 151 (small plants of exposed situation); forming extensive areas in alluvium of alpine brooks, easterly and northerly slopes of Table-top Mountain, August 9, 1906, Fernald & Collins, no. 151a (large plants up to 9 dm. high)—nos. 151 and 151a distributed as *Phegopteris alpestris* and cited by Butters as *A. alpestre*, var. *americanum*; alpine and subalpine meadows and brooksides at about 1100 m. alt., northeastern slope of Mt. Dunraven, August 2, 1923, Fernald, Dodge & Smith, no. 25,385 (type in Gray Herb.); brooksides and meadows at about 975 m. alt., above the cascades, head of Gorge of Northeast Branch of Rivière Ste. Anne des Monts, August 5, 1923, Fernald, Dodge & Smith, no. 25,386; nos. 25,384-25,386 distributed as var. *americanum*.

The type-specimen, photographed by Professor Collins, is illustrated in pl. 168.


The type-specimen is illustrated in pl. 167; other specimens in pl. 163 and 164.

**Explanation of Plates 161 to 168**

(Photographs by J. F. Collins)


*(To be continued.)*

**THE GRASS GENUS DIGITARIA**

KENNETH K. MACKENZIE

In the June 1927 number of Rhodora Dr. A. S. Hitchcock has an article concerning "The Validity of the Grass Genus Digitaria." This genus originated with Heister, and was successively taken up by various authors, namely by Fabricius in 1759, Adanson in 1763,
Haller in 1768 and Scopoli in 1772. Each and every one of these authors attributed the genus to Heister. In going into this matter Prof. Hitchcock kindly gave full information concerning what these other authors stated concerning this genus, but he entirely ignored Heister, the universally recognized author of the genus.

Following a procedure common in those days of few botanical works the authors who cited Heister did not give a definite reference. This fortunately was supplied by Ludwig (Def. Gen. Pl. 417. 1760), who gave the reference “Dactylis Royen 56. Linn. Ed. V. n. 80. Digitaria Heist. Syst. 12. Fabric. p. 207.” Heister’s Systema plantarum generale, published in 1748, is a rare work, and neither the New York Botanical Garden nor my own library possessed it. However, Dr. B. D. Jackson kindly sent me the necessary extract from the copy of the work which once belonged to Linnaeus in the library of the Linnean Society of London. This reads as follows:

“Plantae monocotyledones apetalae sive gramineae
Ordo I Monoeciniae

* * * *

3. Digitatae
Digitaria, H. (= Heister)
Dactylis Royen
Mannaria (pro gramine mannae)”¹

In other words it was evident that Digitaria Heist. was merely a change in name for Dactylis Royen. Consulting Royen (Fl. Leyd. Prodr. 56-7. 1740) one finds that he devoted over a page to a full treatment of his genus Dactylis.² After a long description he gave four species, as follows:

1. Dactylis spicis numerosis alternis patentibus, calycibus unifloris.
   Gramen dactylon majus, panicula longa, spicis plurimis nudis crassis. Sloan, flor. 34. hist. 1. p. 112. t. 69. f. 1.
2. Dactylis spicis saepius quaternis alternis patulis, calycibus unifloris.
   Gramen paniceum minus, spica divulsa, insulae barbadensis.
   Pluk. alm. 174. t. 189. f. 5.

¹ The Gramen Mannae of Matthiolus (1583 ed. p. 348; Camerarius Epitome p. 742, 1586) was Syntherisma sanguinale (Haller Hist. Stirp. Helv. 2: 244, 1768). Although there is doubt whether this was the correct use of this name (Haller l. c. 244, 220), it is probable that this was the plant to which Heister referred when he used the name Mannaria “pro gramine mannae.”

² It may be here remarked that, while Linnaeus took up Royen’s genus Dactylis, yet he radically changed his generic description, and gave entirely different species than those given by Royen. In other words Dactylis L. is really an entirely different thing than Dactylis Royen (Linnaeus Gen. Pl. (Ed. 5) 80. 1754; Sp. Pl. 71. 1753).
3. Dactylis spicis binis terminatricibus linearibus, calycibus unifloris.
4. Dactylis spicis numerosis alternis culmo appressis, longitudine internodiorum, calycibus bifloris.
Gramen palustre, locustis erucaeformibus. Bar. rar. 105. t. 2.

No. 1 is *Paspalum virgatum* L. (Hitchcock *Rhodora* 29: 114; Linnaeus Sp. Pl. Ed. 2, 81. 1762). This Sloane species was at first erroneously referred by Linnaeus to his *Panicum dissectum* (Sp. Pl. 57. 1753).

No. 2 is referred to *Panicum colonum* L. (Syst. Ed. 10, 870. 1759) by Linnaeus (Sp. Pl. Ed. 2, 84. 1762). This is now known as *Echinochloa colona* (L.) Link.

No. 3 I have not identified.

No. 4 is cited under *Phalaris erucaeformis* L. (Sp. Pl. 55. 1753) by Linnaeus. This is now known as *Beckmannia erucaeformis* (L.) Host.

It will be seen from the above that Fabricius, the first author after Linnaeus to take up the name used it with absolute correctness, (except possibly the reference to Ray) when he wrote “Digitaria Heist. Dactylis Rai. Gramen dactylon majus panicula longa, spicis pluribus nudis crassis. Sloane.” He took the first species given by Royen and specifically cited it, and he specifically cited Heister the author of the genus, who in turn had specifically cited Royen. The remaining species of Royen he did not cite, but it is to be noted that none of them belong to the genus to which Prof. Hitchcock wishes to apply the name Digitaria.

Following Fabricius, the name Digitaria as used by Adanson (Fam. Pl. 2: 38, 550. 1763) represents the genus of Heister and Fabricius plus three references, all of which represent *Tripsacum dactyloides* L. (Sp. Pl. 972. 1753).

Haller's use of the name (Hist. Stirp. Helv. 2: 244. 1768) represents the genus of Heister and Fabricius as added to by Adanson, plus *Syntherisma sanguinale* (L.) Dulac and *Capriola Dactylon* (L.) Kuntze. And Scopoli's use of the name (Fl. Carn. Ed. 2, 1: 52. 1772) represents the genus of Heister and Fabricius, as added to by Adanson and Haller.

Prof. Hitchcock says “Since Adanson does not propose a new genus but credits the name to Heister his use of Digitaria should be regarded as a misapplication, not the publication of a new genus.” This is
quite correct, but Scopoli did exactly the same thing, and yet our Washington agrostologist insists that Scopoli's publication must be treated as a publication. I must confess that I cannot follow such logic.

Under all codes of nomenclature the name Digitaria is a synonym of Paspalum L. and it is typified by *Paspalum virgatum* L.

MAPLEWOOD, NEW JERSEY.

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