white changing to deep rose-red; styles bifid to below the middle; capsules pubescent, angled; seeds light ash colored, short oblong, acutely 4 angled, transversely rugose.

Canons of the San Francisco Mountains, Arizona, September 1880.

Very closely related to *E. setiloba*, Engelm, but a larger plant, (forming mats often more than 2 feet across) less leafy, (the internodes an inch long) and less closely appressed to the earth; the seeds also are of a different color, those of *E. setiloba* being more of a reddish gray; but the most obvious distinction is in the appendages of the glands, which, in the species last named, are divided into three setiform lobes; whereas in *E. versicolor* they are nearly always entire, rarely retuse or erose. These appendages in both species undergo a change of color; but that change is most marked in the new one.

TRADESCANTIA TUBEROSA. — Stems solitary from a horizontal, jointed, tuberiferous rhizome, 6 to 12 inches high, simple, slender, retroversely puberulent; leaves narrowly linear, rather fleshy, not open; sheaths ciliate; umbels terminal few or many flowered; pedicels and sepals glandular hairy; corolla purple.

Pinos Altos Mountains, New Mexico, in flower August 23, 1880.

The plant would readily pass for a form of *T. Virginica*, which is also common in the same region, but for its entirely different root and habit of growth. The yellow tubers, borne singly or by twos and threes, at the joints of the rhizome, are oblong, an inch or more in length, and obtuse at both ends. My correspondents have received specimens of this plant under another name, which I hereby beg them to erase; substituting the one here given.—EDWARD LEE GREENE.

The British Moss-Flora, By R. Braithwaite, M. D., F. L. S. &c. — So large a proportion of the North American Mosses are identical with those of Great Britain that the present work may well be commended to American botanists. It is issued in parts, as was Schimper's *Bryologia Europæa*, and it apparently yields in no respect to that great work in the character and completeness both of the letter press and the plates. But it promises to be of moderate extent, the price is certainly moderate, and the text is entirely in English. The mosses are taken up monographically, family by family in a natural arrangement, this arrangement being essentially that recently proposed by Lindberg. Parts 1 and 2 have only two plates each; but the third, a monograph of the *Polytrichaceæ*, has four, which illustrate fifteen species. It is intended to go on with four plates to each fasciculus, and to charge at the rate of a shilling a plate, including all letter press, and this runs at the rate of a page or two to each species. At this price remitted to the author, at 303 Clapham Road, the work will be sent post paid to subscribers in the United States. Publishers do not like to meddle with works like this, of limited sale and occasional issue in detached parts, so the author, to whom this is a labor of love, acts as his own publisher, and is glad to receive subscriptions directly. Certainly he spares neither pains nor expense. The work is as beautiful as it is excellent and thorough. It is in imperial octavo, descrip-

tions, references and synonymy full; the drawings, all by the author's own hand, may challenge comparison with those of Sullivant, and the lithography does them justice. This moss-flora is appropriately dedicated: "To the memory of the late William Wilson, the greatest of British Bryologists."—A. GRAY.

Botanical Charts.—For the benefit of any readers of the *Gazette* who are teachers of Botany I wish to give a brief description of a method of preparing botanical charts which may be of great service in illustration of the subject. While recognizing the fact that the only proper way to teach the science is by actual dissection and demonstration under the microscope I also know the fact that many have to teach botany in the best way they can without microscopes. Even to those whose departments are well supplied these charts may be helpful in illustrating a course of lectures, in the class room or to popular audiences. I have never seen anything similar in use and believe that they are here first described.

Prof. L. S. Thompson in charge of the Department of Industrial Art of Purdue University after considerable experimenting to find a cheap, easily-made and convenient chart for use in his class-room has determined upon this form as being in every way the best. Seeing them there I have constructed a number for use in botanical instruction. By his permission I here describe them hoping they may be of use in the sciences as well as in art.

Sheets of strong smooth manilla paper (the quality used for genus covers is the best but a little more expensive than necessary) 40×48 inches are to be had at any book store or paper house. These cut along the fold make a convenient size 24×40 or if larger is wanted a sheet 36×48 left uncut is most suitable. On these the illustrations to be used may first be sketched in pencil and then completed in India ink. Crayon may be used and if it shows any tendency to blur (as it usually does when handled) may be sprayed with a solution of shellac in alcohol by means of an atomizer. As this is troublesome India ink is preferable. Very frequently students with time and talent enough can either do the whole of the work or the preliminary sketching. Experience will dictate the best illustrations, such as Figs. 123, 219, 224 and 565 in Gray's Structural Botany; 18 a, 26 and 77 from Sachs and 53, 73 and 302 from Bessey are easily put on and serve a good turn in demonstration.

Having completed a sufficient number of charts procure the round pine sticks used for curtain rollers, a shoemaker's eyelet punch and fastener, a few eyelets and a few small screws. Along the top edge of a series of charts (twenty five is a convenient number) punch four or five holes, insert and fasten the eyelets and you have them securely bound together. It is well, to prevent the tearing off of the outer chart, to fasten in the holes small bits of tin thus giving greater bearing surface to the rim of the eyelet. Now with the small screws fasten the bunch to the roller and the work is done.

For supporting these charts a light frame tripod with a cross piece at the top furnished with hooks at suitable distances to catch into corres-