

be investigated, is how and when such seeds of serotinous cones are eventually liberated and made available, and whether not a great many of them at last perish, the cones never opening.—G. ENGELMANN.

FRAXINUS QUADRANGULATA has, at least about Allenton, in St. Louis county, Missouri, hermaphrodite flowers. Mr. G. W. Letterman finds it there common on rocky hills where it is a small tree or shrub with blunt angles of the branchlets, and in rich bottom lands, where the tree is large, and the angles of the branchlets sharp and even winged. Leaves are sometimes in threes when the branchlets show six angles. The terminal buds are gray-downy. In both localities the flowers are hermaphrodite. The calyx is practically absent, or indicated only by two obscure knobs or two minute scales, alternating with the stamens; the anthers are sessile and (before opening) reniform, their two cells being united above; stamens somewhat persistent at least to the beginning of May, when the young obovate-oblong fruits, already somewhat twisted (which twist is more marked in the mature fruit), have reached about half their full size. How does the species behave in other parts of the country? The style of *Fraxinus Americana* is very slender—much longer than the ovary; that of *F. viridis* does not much exceed the ovary.—G. ENGELMANN.

NOTULÆ EXIGUÆ.—THREE-FLOWERED BLOODROOT.—Among the anomalies occasionally met with, the most unexpected is a scape of *Sanguinaria Canadensis*, found by Mr. E. N. Wheeler, in the vicinity of Boston, bearing a pair of opposite bracts about half an inch below the terminal flower, each bract with a well-formed flower in its axil!

TRILLIUM SESSILE, as we learn from Mr. Lehman, of Salem, North Carolina, and from a specimen sent by him, abundantly occurs in the neighborhood of Kingston, Tenn., with bright yellow petals; and I have recently heard of this form from other western sources. Specimens, and especially living roots, taken up in autumn, are desired.

PERULARIA VIRESCENS is the proper name for *Habenaria* (*Perularia*) *virescens* of Gray's Manual. The examination of fresh specimens shows the "cuculli bivalves" of Lindley, the two lips of the base of the anther-cell which fairly cover the gland. In Florida specimens just received from Miss Reynolds, of Florida, the outer lip is the larger, or the one which principally protects the gland. How is it in the northern plant? It has long since been announced by me in Am. Jour. Sci., that *Orchis rotundifolia*, Pursh, is a true Orchis.—A. GRAY.

PLATANThERA BRACTEATA, Torr.—This is usually regarded as a summer flowering species. In my garden, where it has bloomed for the first time this season, it is the earliest of many that I have. The first flowers were open on the 26th of April, and half of the spike had opened by the 1st of May. Hitherto *Orchis spectabilis* has been the



Engelmann, George. 1880. "Fraxinus quadrangulata." *Botanical gazette* 5(6), 63–63. <https://doi.org/10.1086/325368>.

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