A NEW SPECIES OF GLYCERIA FROM THE GREAT SMOKY MOUNTAINS[1]

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ON July 21, 1929, the writer was one of a party which made a trip to Clingman's Dome, one of the highest elevations of the Great Smoky Mountain ridge which divides North Carolina from Tennessee. Another member of the party was Professor H. M. Jennison of the Department of Botany, University of Tennessee, others were members of the Smoky Mountains Hiking Club. On this occasion the hikers took to horseback, an opportunity not often afforded in the Great Smokies, where most of the trails are too steep for horses.

We took off early in the morning from an inn near Gatlinburg, Tennessee, where we had spent the preceding night. We followed the old Indian Gap trail up to the Stateline ridge, a trail which is reputed to have been travelled since long before the Civil War, perhaps since the days when the Cherokees owned all of that country. It is not much travelled now, but is clearly marked, and offered no difficulty to our horses. For the most part the path follows a stream, one of the numerous tributaries of the Little Pigeon River, and passes through forests of enormous sugar maples, buckeyes, and yellow poplars, with the everpresent underbrush of rhododendrons. Occasionally there are openings in the forest, and on that day they were full of *Monarda didyma* and *Rudbeckia laciniata*, in full bloom. Indian Gap is a low place in the divide, a true wind-gap, with a mountain meadow of several acres in it. In this case the meadow was made up of an almost pure stand of timothy, which gives substance to the story that Indian Gap Trail is an old one.

It was near Indian Gap that we collected *Senecio Rugelia* Gray, one of the rare endemic plants of the region, and one so unlike most *Senecios* of the eastern United States that we were puzzled for some time as to its identity.

From Indian Gap we proceded southwestward along the Stateline ridge, passing through groves of conifers and innumerable openings, almost constantly going up, until we reached Clingman's Dome itself, a broad, rounded top, covered with the characteristic evergreen forest of the region, with *Abies Fraseri* dominant, and a dense growth of ferns, mostly *Thelypteris spinulosa*, var. *americana*, in the thick

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cushion of mosses on the forest floor. *Oxalis montana* Raf. is also abundant and conspicuous. The trees were so dense that there was no view from the Dome, and we were glad to climb the tower recently erected by the U. S. Coast and Geodetic Survey, from which we not only saw the view, but also managed to reach a few cones of the Fraser's fir.

On these crests the dense growth of mosses and the leaf-mould of ages hold water like a sponge. Our horses were constantly miring, and though the grades along the ridge are comparatively gentle, this was really the most trying part of the journey. The soggy ground is not confined to the forest, but extends into many of the openings along the ridge, making what in New England would be called swales, although there is a two- or three-mile slope on either side. It was in one of these miry openings that we collected a large grass, which we later identified as *Glyceria grandis*, according to Gray's Manual a range extension of three or four hundred miles. We were of course quite well pleased with this find.

Subsequent study has shown that this grass differs from *G. grandis* in several respects, though the two are clearly related. It is not referable to any other species of *Glyceria*, so is proposed as a new species.

GLYCERIA **nubigena**, sp. nov. *G. grandi* similis; culmis 15 dm. altis laevibus; nodis contractis; vaginis laevibus, nervis transversis prominentibus; ligulis membranaceis 2 mm. longis; laminis 3–5 dm. longis 5–10 mm. latis, supra minute scabris; paniculis amplis; spiculis

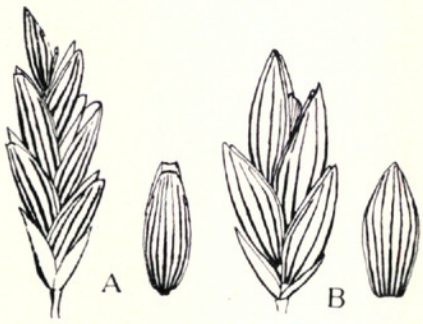

FIG. A. GLYCERIA GRANDIS: spikelet and lemma, × 5.
FIG. B. G. NUBIGENA: spikelet and lemma, × 5.

4–5 mm. longis; floribus 3–5, supremo abortivo truncato; glumis lanceolatis acutis purpureis, prima 1.5 mm. longa, secunda 2 mm. longa; lemmatibus 2.6–3 mm. longis acutis prominente septemnervosis purpureis; paleis coriaceis lemmata aequantibus.

G. grandis Wats. has ligules which are 4–5 mm. long, translucent glumes, larger spikelets but smaller lemmas which are blunt or erose

at the tip, instead of acute as in the species here described; the uppermost floret reduced to a mere scale.

It is a familiar story that many plants of the Canadian forest are found southward along the Alleghanies and reach their southern limits in the mountains of Tennessee, the Carolinas and Georgia. *Picea rubra, Clintonia borealis, Streptopus roseus, Thelypteris spinulosa,* var. *americana, Oxalis montana, Pyrus americana* are familiar examples. A few genera have a species widely distributed in the north, and a closely related endemic species in the southern Alleghanies. To such belong *Abies balsamea* and *A. Fraseri. Glyceria grandis* and the species here described constitute another such pair, with the former growing from "Quebec to Alaska, s. to Pa. and westw.," and the latter endemic in the Great Smoky Mountains.

Duplicates of the type collection, *Anderson and Jennison,* no. 1418, have been placed in the herbarium of the University of Tennessee and in the Gray Herbarium.

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A THIRD STATION FOR WALDSTEINIA FRAGARIOIDES IN MAINE.—On May 14, 1933 the writer and Mr. H. M. W. Haven, of Portland, discovered a station for this local plant, in Monmouth, Maine. The plants, which were just coming into flower, occupy an area along both sides of the road from Sabattus to Monmouth, at a place about two miles south of the depot at Monmouth. They extend from the edge of the ditch to some distance into the hardwood growth which covers this level section, and are abundant over a stretch of upwards of two hundred feet in length.

The Benton station, reported by Mr. John C. Parlin[1] in 1922 also appears to be sizable.

The station in the vicinity of Bethel[2] reported by Dr. N. T. True over seventy years ago seems to have been lost to view, though it is to be hoped that it may be rediscovered or reported in the near future by some local or visiting collector.—ARTHUR H. NORTON, Museum of Natural History, Portland, Maine.

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[1] 1922, Parlin, Rhodora **24**: 124.
[2] 1862, Goodale, Proc. Portland Soc. Nat. Hist. **1**: 46.