

the Gaspé region of eastern Quebec by Fernald, and is reported by C. K. Dodge⁴ from Keweenaw County, in the upper peninsula of Michigan, upon specimens collected by O. A. Farwell. Klugh⁵ lists two Ontario localities, of Burgess and Macoun, respectively, but apparently had not seen the specimens. There are probably not many other records that are dependable. That *L. sabinaefolium* is commoner than indicated in the range mentioned seems very likely; also that it occurs, at least sparingly, throughout a wider area. It must for the present, nevertheless, be regarded as one of the rarer species of this genus.

[Since submitting this article for publication the writer has learned from Dr. H. D. House that the new station for *L. sabinaefolium*, based upon Dr. Haberer's specimens, is given also in the forthcoming Annual Report of the State Botanist, Albany, New York, together with other notes on *Lycopodium* and the description of a new species allied to *L. tristachyum* Pursh.]

Notholaena Aschenborniana and a Related New Species¹

WILLIAM R. MAXON

In a recent article² the writer referred incidentally to an undescribed species of *Notholaena* from Mexico that had been confused with *N. Aschenborniana* Klotzsch, which is perhaps its nearest ally. A description of this new species is presented herewith:

Notholaena hyalina Maxon, sp. nov.

Plants 20 to 45 cm. high, with several rigidly erect

⁴ Fern Bull. 20: 18. 1912.

⁵ Fern Bull. 14: 73. 1906.

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² Amer. Fern Journ. 3: 115. 1913.

fronds, their stipes and primary rachises very stout. Rhizome multicipital, the divisions stout, decumbent, or ascending, 1 to 3 cm. long, coarsely radiceous, densely covered with closely impacted scales, these 2 to 3 mm. long, narrowly deltoid-lanceolate, long-attenuate, coal-black and opaque (or, at first, with a short broad yellowish-brown median stripe at the base), rigid, unevenly ciliate throughout, the cilia 18 to 25 on each side, rigid, unicellular, dark brown, irregularly divergent, fragile; stipes straight or nearly so, 4 to 15 cm. long, 1 to 2.2 mm. in diameter, purplish-black and sublustrous beneath a dense subfurfuraceous covering of scales, these mostly brownish-ferruginous and closely appressed, a few of them darker-margined and divergent, all conspicuously long-ciliate; lamina linear to narrowly oblanceolate-oblong, 10 to 35 cm. long, 3 to 6.5 cm. broad, acuminate, slightly narrowed at the base, subbipinnate nearly throughout, the primary rachis stout and squamulose-paleaceous like the stipe; pinnae 10 to 25 pairs below the simply pinnate apex, subopposite to alternate, the lowermost ones deltoid, 1.5 to 2 cm. long, 1 to 1.5 cm. broad, opposite, distant, those above gradually longer and closer, mostly 2 to 3.5 cm. long, 7 to 10 mm. broad, elongate-deltoid to very narrowly deltoid-oblong, with about 8 to 14 pairs of approximate to subdistant, narrowly oblong segments below the lobate acutish apex; segments crenate to crenately lobed, adnate, joined by a very narrow wing (or the large basal ones semiadnate or sessile, pinnately lobed or deeply pinnatifid), the lobes or crenations (3 to 5 pairs) of all the segments rounded, broadest at or near the base, close, subentire. Leaf tissue thick, rigidly herbaceous, the lower surface densely tomentose-paleaceous (the scales flaccid, with thin-walled cells, and with few, very long, distant, capillary teeth), the upper side dull dark green, minutely glandular, conspicuously hispid by numerous spreading

hyaline simple hairs, these few-celled, flattish, and somewhat twisted in drying; margins unaltered, the narrow line of sporangia almost wholly concealed by the dense paleaceous covering of the under surface.

Type in the United States National Herbarium, No. 50931, collected from shaded ledges at San José Pass, State of San Luis Potosí, Mexico, October 11, 1890, by C. G. Pringle (No. 3297); distributed as *Notholaena Aschenborniana* Klotzsch.

The following additional specimens of *N. hyalina* are in the United States National Herbarium:

MEXICO: A second sheet of the type collection, *Pringle* 3297. Minas de San Rafael, State of San Luis Potosí, *Purpus* 5486 (2 sheets). Puebla, State of Oaxaca, *Purpus* 4018. Las Sedas, State of Oaxaca, alt. 1800 meters, *C. L. Smith* 2012. La Palma, Jalisco, *Jones* 533.

Notholaena hyalina is related to *N. Aschenborniana* of more northerly range, with which it has been confounded on account of its general similarity. *Notholaena Aschenborniana*, however, is easily distinct, among other characters, in its strongly ascending pinnae (the basal ones never of a pronounced deltoid form), its simpler and closer segments, and particularly in the widely different, subintricate hairy covering of the upper side of the lamina, the hairs being stellate with spreading, subequal, capillary divisions. The contrast to the large simple hairs upon the upper side of the lamina of *N. hyalina* is very great.

Notholaena Aschenborniana is represented in the National Herbarium by the following specimens:

MEXICO: San Lorenzo Canyon, 6 miles southeast of Saltillo, Coahuila, *Edw. Palmer* 402, in 1904. Sierra Mojada, Coahuila, *Jones* 531. Santa Eulalia Mountains, Chihuahua, *Wilkinson*; *Pringle* 466, 469.

TEXAS: Vicinity of Van Horn, June, 1905, *G. H. Girty*.

ARIZONA: Santa Rita Mountains, under shelter of dry rocks, May 20, 1884, *Pringle*. Exposed south slope of Mule Mountains, January 1, 1913, *Goodding* 1387.

Fern Hats and Fern Cigar Cases

R. C. BENEDICT.

The title and illustration answer nearly all the purposes of description. It only remains to inform any one interested where these articles may be obtained, the proper circumstances for wearing them, and the kind of fern used and method of manufacture. I am mainly indebted for my information to Mr. Percy Wilson of the staff of the New York Botanical Garden who brought back the specimens from a collecting trip in the East Indies made over ten years ago.

The fern used is a member of the family *Gleicheniaceae*, the first record for the occurrence of which in the United States was made by Mr. Maxon in the *JOURNAL* last year (Vol. 4: No. 1.). The particular species used is *Dicranopteris linearis* (Burm.) Underw. The illustration shows at the left some of the long leaf stalks of this species before anything has been done with them. A little to the right of the stalks, leaning against the background (a native Javan sleeping mat made from *Pandanus*) is a coil of the fibers which have been extracted from the leafstalks preparatory to weaving them into hats, etc. The machinery used in this operation of preparing the fibers for weaving is to be seen at the left front, and consists of part of the top of a tin tomato can, with numerous holes of various sizes. The fibers are prepared for weaving by drawing them through successively smaller holes in the tin instrument until they are of a satisfactory size for weaving.

The cigar cases are designed to hold cigars, but are made mainly to sell to tourists. They would seem to