



<https://www.biodiversitylibrary.org/>

Rhodora

[Cambridge, Mass., etc.], New England Botanical Club [etc.],
<https://www.biodiversitylibrary.org/bibliography/721>

v.40 (1938): <https://www.biodiversitylibrary.org/item/14510>

Article/Chapter Title: Noteworthy Plants of Southwestern Virginia, 1938

Author(s): Fernald

Subject(s): *Lactuca hirsuta*

Page(s): Page 477, Page 478, Page 479, Page 480, Page 481, Page 482

Holding Institution: Missouri Botanical Garden, Peter H. Raven Library

Sponsored by: Missouri Botanical Garden

Generated 21 April 2024 1:28 PM

<https://www.biodiversitylibrary.org/pdf4/1693517i00014510.pdf>

This page intentionally left blank.

nearly linear-filiform), outer narrow involucre bracts appressed-ascending to maturity (FIG. 10), pales at most 7 mm. long and achenes (FIG. 11) up to 2.5 mm. long, with narrow wing.

C. AURICULATA L. GREENSVILLE COUNTY: rich deciduous woods by Metcalf Branch, east of Emporia, nos. 7982, 8507; rich deciduous woods by Three Creek, north of Emporia, no. 8509. SURRY COUNTY: calcareous, fossiliferous bushy slope near head of Sunken Meadow Creek, south of Claremont, no. 8508.

The only definite region of Virginia for this species cited by Sherff is Bedford County.

HELENIUM NUDIFLORUM Nutt. GREENSVILLE COUNTY: peaty and argillaceous clearing about 4 miles southeast of Emporia, no. 8511.

**ANTHEMIS ARVENSIS* L., var. *AGRESTIS* (Wallr.) DC. SUSSEX COUNTY: roadside south of Stony Creek, no. 8513. GREENSVILLE COUNTY: cultivated field, 1 mile south of Emporia, no. 7983; seen rather generally through the region.

**CIRSIUM REPANDUM* Michx. SOUTHAMPTON COUNTY: dry sandy open pine and oak woods 6 to 7 miles south of Franklin, no. 8516.

First from north of North Carolina.

**CNICUS BENEDICTUS* L. DINWIDDIE COUNTY: in and about a newly seeded clover-field, southwest of Petersburg, no. 7986.

**SERINIA OPPOSITIFOLIA* (Raf.) Ktze. SOUTHAMPTON COUNTY: roadside-ditch bordering alluvial woods, bottomland of Meherrin River, near Haley's Bridge, no. 8517.

Extension north from South Carolina.

**LACTUCA HIRSUTA* Muhl. SOUTHAMPTON COUNTY: border of dry pine woods west of Adams Grove, no. 7720; dry white sand in woods, Terrapin Ridge, east of Drewryville, no. 9226. SUSSEX COUNTY: border of dry woods near Assamoosick Swamp, about 2 miles northeast of Homeville, no. 9227.

Typical *Lactuca hirsuta* is apparently rare. Familiar with the wide-ranging northern plant (Prince Edward Island to Virginia and less commonly to Louisiana and Texas), in which the stem is quite glabrous, the leaves glabrous or mostly so except for the midrib villous beneath, and the panicle commonly broad and subcorymbiform, we were at once struck by the great disparity of no. 7720, which attracted us, while we were driving past it, by its slender cylindrical or racemiform panicle. We were further struck, when collecting it, by its stem densely villous on the lower fourth and the leaf-surfaces copiously pilose (almost velvety to the touch). In the Gray Herbarium this highly pubescent plant can be matched only by an old sheet

from Louisiana (*Hale*) which Torrey & Gray had cited under their *L. elongata*, γ . *sanguinea* (Bigel.) Torr. & Gray, Fl. N. Am. ii. 496 (1843). Torrey & Gray cited only four collections, two of which (from Massachusetts and Louisiana) are before me. The Massachusetts plant (type or isotype of *L. sanguinea* Bigelow) is the common extreme with glabrous stem and glabrous leaf-surfaces. One of Hale's Louisiana specimens is quite glabrous throughout (*L. hirsuta*, forma *calvifolia* Fernald in RHODORA, xxii. 156 (1920)), the other is the rare extreme with villous lower internodes, pilose leaf-surfaces and slender racemiform panicle (4 dm. long, 7 cm. in diameter). Torrey & Gray's description was all-inclusive: leaves "mostly hirsute-pubescent (as well as the stem) either throughout or on the midrib beneath." In the Synoptical Flora, Gray gave a similar inclusive account but, judging from the material in the Gray Herbarium, even at that late date he had only 5 specimens before him (2 from Massachusetts, 2 from Louisiana and 1 from Texas) and he gave its northeastern limit as "E. Massachusetts." Today, with 90 specimens in the Gray Herbarium and that of the New England Botanical Club, showing a range northeastward to Nova Scotia and Prince Edward Island, we can better evaluate the characters.

All material from eastern Canada and New England is consistent in having glabrous or very rarely sparsely hirsute lower internodes, glabrous or at most (and very exceptionally) sparsely pilose leaf-surfaces, with the midribs of the lower leaves villous (or in forma *calvifolia* glabrous), and the inflorescence, when well developed, corymbiform-paniculate, 1.5-6 dm. long by 0.5-5 dm. broad. The material in the Gray Herbarium from west and south of New England is too scanty for generalization. Most of it (from New Jersey, Virginia, Louisiana and Texas) is like the essentially uniform plant of New England. Our specimens above cited from southeastern Virginia, and one of the Hale sheets from Louisiana, as already noted, stand apart in having the lower internodes densely villous, both leaf-surfaces copiously pilose and the inflorescences racemiform (3-4.5 dm. long, by 7-10 cm. in diameter).

So accustomed are we to considering the plant of wide range (common in much of New England) as typical *Lactuca hirsuta* Muhl. that the original diagnosis published by Nuttall is a bit startling:

2. **hirsuta* Muhl. Catal. Lower part of stem and leaves hirsutely pilose, radical ones lyrate, segments truncate, subdentate, the upper leaves

partly runcinate-pinnatifid; flowers racemose, squamae subulate. HAB. in Pennsylvania. Pappus stipitate. *v. s.* In Herb. Muhl.—Nutt. Gen. ii. 124 (1818).

In his Catalogue (1813) Muhlenberg's description had been altogether too vague, he merely noting the "*Calix. Corolla*" as "lut-purp" (obviously referring to the yellow flowers and the purple involucre), with the only other character of the plant "hairy." In the 2-volume manuscript of Muhlenberg's unpublished *Florula Lancastriensis* (i. 552) in the library of the Gray Herbarium he gave a detailed characterization of the plant, under an unpublished name more appropriate than the published *L. hirsuta*. The pertinent phrases, which show what Muhlenberg had in mind, are as follows: "caule erecto (infra) hirsuto, supra glabro . . . foliis . . . subtus pilosis margine ciliatis, caulinis, sessilibus simplicibus raris." Muhlenberg's unpublished "foliis subtus pilosis" and Nuttall's published "leaves hirsutely pilose" (without restricting the pilosity to the midrib or the *lower* surface) have made it most important to see exactly what Muhlenberg had before him and what Nuttall had seen in Muhlenberg's herbarium. Dr. Pennell has most kindly sent me for examination all the material of *L. hirsuta* in the herbarium of the Academy of Natural Sciences of Philadelphia. This includes Muhlenberg's original sheet and another which Nuttall had labeled. The Muhlenberg type from the Lancaster region (although the label gives no clue to locality) is quite like our no. 7720, except that the inflorescence is extremely young and undeveloped, with only very young heads and the branches not yet elongated. A second sheet, erroneously labeled by Thomas Nuttall "*Galathenium Floridanum. Mulgedium Floridanum*" (presumably through transfer of labels¹) has two specimens. One is essentially like the Muhlenberg type of *L. hirsuta*, but more complete and with better-developed heads. The other, more sparsely pubescent (or subglabrous) except the villous midrib beneath, has the slenderest of racemiform young panicles and is transitional between the extreme *L. hirsuta* (the type) and the smooth-stemmed *L. sanguinea* Bigel. This sheet was presumably part of the original collection of Muhlenberg's from near Lancaster.

A most important sheet is one from Porter's herbarium, a plant

¹ *Galathenium floridanum* (L.) Nutt. was based on *Sonchus floridanus* L. and *Mulgedium floridanum* (L.) DC.; and Nuttall correctly placed it in the group (*Galathenium* Nutt. being merely a renaming of *Lactuca* L.) with blue flowers. *Lactuca hirsuta* has yellow flowers.

collected in September, 1868, by McMinn in Elk County, in northwestern Pennsylvania, at the northern margin of the Allegheny Plateau; for the Elk County plant has the lower internodes of the stem and the leaf-surfaces as strongly pubescent as in the Muhlenberg type and the similar plants of Virginia and Louisiana, but the large and strongly branching panicle as corymbiform as in extreme *L. sanguinea*. In involucre and achenes the McMinn material is likewise inseparable from the latter.

From New York state the very few specimens seen are characteristic *Lactuca sanguinea*. At least the plant from near Cayuga Lake is clearly described as having the "leaves sparingly and coarsely setose along the midrib";¹ and Dr. House, who has most kindly sent me for study the series in the New York State Museum, can find only two sheets properly referable to the inclusive *L. hirsuta*. These are very characteristic *L. sanguinea* and both from the Champlain and upper Hudson drainage in the northeastern corner of the state.

Returning to Pennsylvania and New Jersey, the sheets at the Philadelphia Academy, including those of the Philadelphia Botanical Club, are all (except the Muhlenberg type and the Nuttall counterpart of it) characteristic *Lactuca sanguinea*, and all from the southern half of New Jersey.

As a result of the present study I am unable to keep apart as species *Lactuca hirsuta* and the usually very different *L. sanguinea*; but, whereas typical villous-stemmed and pilose-leaved *L. hirsuta* is very rare anywhere and not known north of Pennsylvania nor recently collected in the type-region, the smoother variety (*L. sanguinea*) is wide-ranging over much of the eastern portion of the United States and the Maritime Provinces and often frequent or common, as in most of New England, though as often absent from or very rare in adjacent areas, like New York, Pennsylvania and northern New Jersey. Much herbarium-material is erroneously identified, for, as pointed out by Wiegand and me in 1910, the key-character (villosity of the midrib) relied upon both in Gray's Manual and in Britton's is quite misleading. We then gave the significant differences between *L. hirsuta* and *L. canadensis* L.,² both of which may have the midrib

¹ Wiegand & Eames, Fl. Cayuga L. Basin, 427 (as *L. hirsuta*).

² In 1920 (RHODORA, xxii. 9-11) Wiegand published his very usable revision of the variations of *Lactuca canadensis* L. He did not, however, personally investigate the type of the species but deduced from the earlier treatment of Gray that "it is to be presumed that the Kalm specimen [the type] had divided leaves." Wiegand, conse-

either pubescent or glabrous beneath. The diagnostic characters of *L. hirsuta* then worked out are here repeated:

L. HIRSUTA. Lateral leaf-divisions oblong-obovate, commonly broadest above the base, often more or less truncate, usually dentate; involucre, when fully developed, 16–22 mm. long: mature achenes 7–9 mm. long from base to tip of beak: pappus 9–12 mm. long.

The bibliography of the three variations of *Lactuca hirsuta* follows:

LACTUCA HIRSUTA Muhl., var. **genuina**. Lower internodes of stem densely villous: leaves copiously pilose on both surfaces.—*L. hirsuta* Muhl. Cat. (1813); Nutt. Gen. ii. 124 (1818); Gray, Syn. Fl. N. Am. i². 442 (1884), in part only; Fernald & Wiegand in RHODORA, xii. 145 (1910), in part only. "*L. villosa* Muhl. fl. Lancastr. ined." ex Torr. & Gray, Fl. N. Am. ii. 497 (1843) as synonym, not Jacq. (1798).—Dry woods and openings, very local, Pennsylvania to Virginia and Louisiana.

Var. **sanguinea** (Bigel.), comb. nov. Stem glabrous or essentially so throughout: lower leaves with midrib villous beneath, the surfaces glabrous or only sparsely pilose.—*L. sanguinea* Bigel. Fl. Bost. ed. 2: 287 (1824). *Galathenium sanguineum* (Bigel.) Nutt. Trans. Am. Phil. Soc. vii. 444 (1841). *L. elongata*, γ . *sanguinea* (Bigel.) Torr. & Gray, l. c. 496 (1843).—Dry open woods and clearings, Prince Edward Island to western New York (presumably beyond), south to Virginia and less commonly to Louisiana and Texas.

Forma **CALVIFOLIA** Fernald. Leaves and stems glabrous through-

quently treated as var. *typica* a plant with "Leaves with linear-falcate. . . lobes." The Linnean description indicated no such leaf, he saying "foliis lanceolato-ensiformibus dentatis," nor does the photograph of the type which Mr. Savage has kindly supplied me. The Kalm plant (type of *L. canadensis*) is characteristic *L. integrifolia* Bigel. or *L. canadensis*, var. *integrifolia* (Bigel.) Gray. Wiegand's *L. canadensis*, var. *typica*, taking for it the first name used varietally (and incidentally as a species) is

L. CANADENSIS L., var. **LONGIFOLIA** (Michx.) Farwell in Papers Mich. Acad. Sci. ii. 45 (1923). *L. longifolia* Michx. Fl. Bor.-Am. ii. 85 (1803). *L. elongata* Muhl. in Willd. Sp. Pl. iii. 1525 (1804). *L. elongata*, α . *longifolia* (Michx.) Torr. & Gray, Fl. N. Am. ii. 498 (1843). *L. canadensis*, var. *typica* Wiegand in RHODORA, xxii. 10 (1920). *L. canadensis*, var. *elongata* (Muhl.) Farwell in Pap. Mich. Acad. Sci. ii. 46 (1923).

In 1903 I examined Michaux's type of his *Lactuca longifolia* in Paris and made the memorandum that it had the middle and lower leaves as defined by Michaux: "Folia interdum versus medietatem laciniis 2–4-subbruncinata, margine integerrima" and "foliis . . . amplexicaulibus."

In ordering up the material of *Lactuca*, the following combinations are required.

LACTUCA CANADENSIS L., var. **OBOVATA** Wieg., forma **Steelei** (Britton), comb. nov. *L. Steelei* Britton, Man. 899 (1901).

Forma *Steelei* seems to differ in no way from var. *obovata* except in having the stem quite villous nearly to the top and the midribs of the leaves villous; whereas var. *obovata* has the stem glabrous, except sometimes at base, and the leaves commonly glabrous.

L. LUDOVICIANA (Nutt.) Riddell, forma **campestris** (Greene), comb. nov. *L. campestris* Greene, Pittonia, iv. 37 (1899).

Differing from the yellow-flowered *Lactuca ludoviciana* only in having bluish flowers and occurring through essentially the same range.

out.—RHODORA, xxii. 156 (1920).—Scattered through the range of var. *sanguinea*.

*HIERACIUM FLORENTINUM All. PRINCE GEORGE COUNTY: roadsides and fields, Camp Lee, no. 8519.

A most undesirable weed, one of the worst pests of hay-fields in southern Canada and the northeastern states.

EXPLANATION OF PLATES 509-535

PLATE 509. PASPALUM BIFIDUM (Bertol.) Nash, var. PROJECTUM, n. var.: FIG. 1, plant, $\times \frac{2}{5}$, from east of Burt, Virginia, *Fernald & Long*, no. 7239 (TYPE); FIG. 2, sheath, $\times 4$, from TYPE; FIG. 3, spikelet, showing 1st glume, $\times 10$, from TYPE.

PLATE 510. BULBOSTYLIS CAPILLARIS (L.) C. B. Clarke: FIG. 1, TYPE of *Scirpus capillaris* L., $\times 1$, courtesy of Mr. S. SAVAGE; FIG. 2, base, $\times 2$, of TYPE of *Stenophyllus capillaris* (L.) Britton, var. *cryptostachys* Fernald; FIG. 4, inflorescences, $\times 1$, of the latter.

Var. CREBRA, n. var.: FIG. 4, TYPE, $\times 1$; FIG. 5, base of TYPE, $\times 2$.

Var. ISOPODA, n. var.: FIG. 6, inflorescences, $\times 1$, of TYPE.

PLATE 511. CAREX DIGITALIS Willd.: FIG. 1, inflorescence, $\times 1$, from Brookland, District of Columbia, May 23, 1912, *Holm*; FIG. 2, inflorescence, $\times 1$, from Lake Chautauqua, New York, June 5, 1893, *Churchill*.

Var. MACROPODA, n. var.: FIG. 3, plant, $\times \frac{2}{5}$, of the TYPE; FIG. 4, summit of inflorescence, $\times 1$, from Wilmington, North Carolina, *M. A. Curtis*.

PLATE 512. SMILACINA RACEMOSA (L.) Desf.: summit of one of the TYPE specimens, $\times 1$, of *Convallaria racemosa*, L. in Hortus Cliffortianus (Herb. Clifford). Kindness of Mr. JOHN RAMSBOTTOM.

PLATE 513. SMILACINA RACEMOSA (L.) Desf., var. CYLINDRATA, n. var.: FIG. 1, portion of flowering plant, $\times 1$, from campus of University of Richmond, Westhampton, Virginia, May 12, 1927, *F. H. W.*; FIG. 2, fruit of the TYPE.

PLATE 514. COMPTONIA PEREGRINA (L.) Coulter: FIG. 7, young (autumnal) staminate aments, $\times 1$, from Jaffrey, New Hampshire, *Robinson*, no. 397; FIG. 8, fruiting aments, $\times 1$, from Pembroke, Maine, *Fernald*, no. 1698; FIG. 9, portion of branchlet, $\times 10$, to show pubescence, from no. 1698; FIG. 10, lower surface of leaf, $\times 10$, from no. 1698.

Var. ASPLENIFOLIA (L.) Fernald FIGS. 1 and 2, drawings of staminate (his fig. 7) and pistillate (his fig. 6) branches, $\times 1$, from Plukenet's illustration of his *Myrti brabanticae affinis americana, foliorum laciniis asplenii modo divisis*, basis of *Myrica asplenifolia* L.; FIG. 3, young (mid-summer) staminate aments $\times 1$, from south of Franklin, Virginia, *Fernald & Long*, no. 8229; FIG. 4, pistillate (fruiting) aments, $\times 1$, from no. 8229; FIG. 5, portion of branchlet, $\times 10$, to show puberulence, from no. 8229; FIG. 6, lower surface of leaf, $\times 10$, from no. 8229.

PLATE 515. POLYGONUM SETACEUM Baldwin, var. TYPICUM: FIG. 1, lower surface of leaf, $\times 10$, from north of Blackwater River, Princess Anne County, Virginia, *Fernald & Long*, no. 3916; FIG. 2, upper surface of leaf, $\times 10$, from no. 3916.

The following text is generated from uncorrected OCR or manual transcriptions.

[Begin Page: Page 477]

*LACTUCA HIRSUTA Muhl. SovrHAMPTON County: border of dry pine woods west of Adams Grove, no. 7720; dry white sand in woods, Terrapin Ridge, east of Drewryville, no. 9226. Sussex County: border of dry woods near Assamoosick Swamp, about 2 miles north-east of Homeville, no. 9227.

Typical *Lactuca hirsuta* is apparently rare. Familiar with the wide-ranging northern plant (Prince Edward Island to Virginia and less commonly to Louisiana and Texas), in which the stem is quite glabrous, the leaves glabrous or mostly so except for the midrib villous beneath, and the panicle commonly broad and subcorymbiform, we were at once struck by the great disparity of no. 7720, which attracted us, while we were driving past it, by its slender cylindric or racemi-form panicle. We were further struck, when collecting it, by its stem densely villous on the lower fourth and the leaf-surfaces copiously pilose (almost velvety to the touch). In the Gray Herbarium this highly pubescent plant can be matched only by an old sheet

[Begin Page: Page 478]

478 *Rhodora* [DECEMBER
from Louisiana (Hale) which Torrey & Gray had cited under their
L. elongata, *y. sanguinea* (Bigel.) Torr. & Gray, . N. Am. ii. 496
(1843). Torrey & Gray cited only four collections, two of which

(from Massachusetts and Louisiana) are before me. The Massachusetts plant (type or isotype of *L. sanguinea* Bigelow) is the common extreme with glabrous stem and glabrous leaf-surfaces. One of Hale's Louisiana specimens is quite glabrous throughout (*L. hirsuta*, forma *calvifolia* Fernald in Ruopora, xxii. 156 (1920)), the other is the rare extreme with villous lower internodes, pilose leaf-surfaces and slender racemiform panicle (4 dm. long, 7 cm. in diameter). Torrey & Gray's description was all-inclusive: leaves "mostly hirsute-pubescent (as well as the stem) either throughout or on the midrib beneath." In the Synoptical Flora, Gray gave a similar inclusive account but, judging from the material in the Gray Herbarium, even at that late date he had only 5 specimens before him (2 from Massachusetts, 2 from Louisiana and 1 from Texas) and he gave its north-eastern limit as ". Massachusetts." Today, with 90 specimens in the Gray Herbarium and that of the New England Botanical Club, showing a range northeastward to Nova Scotia and Prince Edward Island, we can better evaluate the characters.

material from eastern Canada and New England is consistent in having glabrous or very rarely sparsely hirsute lower internodes, glabrous or at most (and very exceptionally) sparsely pilose leaf-surfaces, with the midribs of the lower leaves villous (or in forma *calvifolia* glabrous), and the inflorescence, when well developed, corymbiform-paniculate, 1.5-6 dm. long by 0.5-5 dm. broad. The material in the Gray Herbarium from west and south of New England is too scanty for generalization. Most of it (from New Jersey, Virginia, Louisiana and Texas) is like the essentially uniform plant of New England. Our specimens above cited from southeastern Virginia, and one of the Hale sheets from Louisiana, as already noted, stand apart in having the lower internodes densely villous, both leaf-surfaces copiously pilose and the inflorescences racemiform (3-4.5 dm. long, by 7-10 cm. in diameter).

So accustomed are we to considering the plant of wide range (common in much of New England) as typical *Lactuca hirsuta* Muhl. that the original diagnosis published by Nuttall is a bit startling:

.2. "*hirsuta* Muhl. Catal. Lower part of stem and leaves hirsutely pilose, radical ones lyrate, segments truncate, subdentate, the upper leaves

[Begin Page: Page 479]

1938] Fernald,—Noteworthy Plants of Southeastern Virginia 479 partly runcinate-pinnatifid; flowers racemose, squamulae subulate. . in Pennsylvania. Pappus stipitate. v. s. In Herb. Muhl.—Nutt. Gen. ii. 124 (1818).

In his Catalogue (1813) Muhlenberg's description had been altogether too vague, he merely noting the "Calix. Corolla" as "lut-purp" (obviously referring to the yellow flowers and the purple involucre), with the only other character of the plant ". In the 2-volume manuscript of Muhlenberg's unpublished Florula Lancastriensis (i. 552) in the library of the Gray Herbarium he gave a detailed characterization of the plant, under an unpublished name more appropriate than the published *L. hirsuta*. The pertinent phrases, which show what Muhlenberg had in mind, are as follows: "caule erecto (infra) hirsuto, supra glabro . . . foliis subtus pilosis margine ciliatis, caulinis, sessilibus simplicibus raris." Muhlenberg's unpublished "foliis subtus pilosis" and Nuttall's

published "leaves hirsutely pilose" (without restricting the pilosity to the midrib or the lower surface) have made it most important to see exactly what Muhlenberg had before him and what Nuttall had seen in Muhlenberg's herbarium. Dr. Pennell has most kindly sent me for examination all the material of *L. hirsuta* in the herbarium of the Academy of Natural Sciences of Philadelphia. This includes Muhlenberg's original sheet and another which Nuttall had labeled. The Muhlenberg type from the Lancaster region (although the label gives no clue to locality) is quite like our no. 7720, except that the inflorescence is extremely young and undeveloped, with only very young heads and the branches not yet elongated. A second sheet, erroneously labeled by Thomas Nuttall "Galathenium Floridanum. Mulgedium | Floridanum" (presumably through transfer of labels!) has two specimens. One is essentially like the Muhlenberg type of *L. hirsuta*, but more complete and with better-developed heads. The other, more sparsely pubescent (or subglabrous) except the villous midrib beneath, has the slenderest of racemiform young panicles and is transitional between the extreme *L. hirsuta* (the type) and the smooth-stemmed *L. sanguinea* Bigel. This sheet was presumably part of the original collection of Muhlenberg's from near Lancaster. A most important sheet is one from Porter's herbarium, a plant

1 *Galathenium floridanum* (L.) Nutt. was based on *Sonchus floridanus* L. and *Mulgedium floridanum* (L.) DC.; and Nuttall correctly placed it in the group (*Galathenium* Nutt. being merely a renaming of *Lactuca* L.) with blue flowers. *Lactuca hirsuta* has yellow flowers.

[Begin Page: Page 480]

480 *Rhodora* [DECEMBER

collected in September, 1868, by McMinn in Elk County, in north-western Pennsylvania, at the northern margin of the Allegheny Plateau; for the Elk County plant has the lower internodes of the stem and the leaf-surfaces as strongly pubescent as in the Muhlenberg type and the similar plants of Virginia and Louisiana, but the large and strongly branching panicle as corymbiform as in extreme *L. sanguinea*. In involucre and achenes the McMinn material is likewise inseparable from the latter.

From New York state the very few specimens seen are characteristic *Lactuca sanguinea*. At least the plant from near Cayuga Lake is clearly described as having the "leaves sparingly and coarsely setose along the midrib"; and Dr. House, who has most kindly sent me for study the series in the New York State Museum, can find only two sheets properly referable to the inclusive *L. hirsuta*. These are very characteristic *L. sanguinea* and both from the Champlain and upper Hudson drainage in the northeastern corner of the state.

Returning to Pennsylvania and New Jersey, the sheets at the Philadelphia Academy, including those of the Philadelphia Botanical Club, are all (except the Muhlenberg type and the Nuttall counterpart of it) characteristic *Lactuca sanguinea*, and all from the southern half of New Jersey.

As a result of the present study I am unable to keep apart as species *Lactuca hirsuta* and the usually very different *L. sanguinea*; but, whereas typical villous-stemmed and pilose-leaved *L. hirsuta* is very rare anywhere and not known north of Pennsylvania nor recently collected in the type-region, the smoother variety (*L. sanguinea*) is

wide-ranging over much of the eastern portion of the United States and the Maritime Provinces and often frequent or common, as in most of New England, though as often absent from or very rare in adjacent areas, like New York, Pennsylvania and northern New Jersey. Much herbarium-material is erroneously identified, for, as pointed out by Wiegand and me in 1910, the key-character (villosity of the midrib) relied upon both in Gray's Manual and in Britton's is quite misleading. We then gave the significant differences between *L. hirsuta* and *L. canadensis* L.,? both of which may have the midrib

[Begin Page: Page 481]

1938] Fernald,—Noteworthy Plants of Southeastern Virginia 481
either pubescent or glabrous beneath. The diagnostic characters of *L. hirsuta* then worked out are here repeated:

. migsuTA. Lateral leaf-divisions oblong-obovate, commonly broadest above the base, often more or less truncate, usually dentate; involucre, when fully developed, 16-22 mm. long: mature achenes 7-9 mm. long from base to tip of beak: pappus 9-12 mm. long.

The bibliography of the three variations of *Lactuca hirsuta* follows:
LACTUCA HIRSUTA Muhl., var. *genuina*. Lower internodes of stem densely villous: leaves copiously pilose on both surfaces.—*L. hirsuta* Muhl. Cat. (1813); Nutt. Gen. ii. 124 (1818); Gray, Syn. Fl. N. Am. 12. 442 (1884), in part only; Fernald & Wiegand in , xii. 145 (1910), in part only. “. *villosa* Muhl. fl. Lancastr. ined.” ex Torr. & Gray, Fl. . Am. ii. 497 (1843) as synonym, not Jacq. (1798).—Dry woods and openings, very local, Pennsylvania to Virginia and Louisiana.

Var. *sanguinea* (Bigel.), comb. nov. Stem glabrous or essentially so throughout: lower leaves with midrib villous beneath, the surfaces glabrous or only sparsely pilose.—*L. sanguinea* Bigel. Fl. Bost. ed. 2: 287 (1824). *Galathenium sanguineum* (Bigel.) Nutt. Trans. Am. Phil. Soc. vii. 444 (1841). *L. elongata*, y. *sanguinea* (Bigel.) Torr. & Gray, 1. . 496 (1843).—Dry open woods and clearings, Prince Edward Island to western New York (presumably beyond), south to Virginia and less commonly to Louisiana and Texas.

Forma *CALVIFOLIA* Fernald. Leaves and stems glabrous through-

[Begin Page: Page 482]

482 *Rhodora* [DECEMBER
out.—HRuopona, xxii. 156 (1920).—Scattered through the range of var. *sanguinea*.