

## ATLAS OF THE FLORA OF NEW ENGLAND: FABACEAE

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### ABSTRACT

Dot maps are provided to depict the distribution at the county level of the taxa of Magnoliophyta: Fabaceae growing outside of cultivation in the six New England states of the northeastern United States. The maps treat 172 taxa (species, subspecies, varieties, and hybrids, but not forms) based primarily on specimens in the major herbaria of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut, with most data derived from the holdings of the New England Botanical Club Herbarium (NEBC). Brief synonymy (to account for names used in standard manuals and floras for the area and on herbarium specimens), habitat, chromosome information, and common names are also provided.

**KEY WORDS:** flora, New England, atlas, distribution, Fabaceae

This article is the eleventh in a series (Angelo & Boufford 1996, 1998, 2000, 2007, 2010, 2011a, 2011b, 2012a, 2012b, 2012c) that presents the distributions of the vascular flora of New England in the form of dot distribution maps at the county level (Figure 1). Seven more articles are planned. The atlas is posted on the internet at <http://neatlas.org>, where it will be updated as new information becomes available.

This project encompasses all vascular plants (lycophytes, pteridophytes and spermatophytes) at the rank of species, subspecies, and variety growing independent of cultivation in the six New England states. Hybrids are also included, but forms and other ranks below the level of variety are not. The dots are based on voucher specimens primarily in New England herbaria (of colleges, universities, botanical gardens, and public museums) representing reproducing populations outside of cultivated habitats. This eleventh installment includes the family Fabaceae (Magnoliophyta). Of the 172 taxa treated, 106 are not native to the region. Future accounts will treat the distribution of additional non-monocot angiosperms.

The habitat data are distillations from a variety of sources augmented by our own field observations. An attempt was made to indicate habitat information as it applies to a particular taxon in New England rather than to the entire range of the taxon. Habitat information is not provided for hybrid taxa.

It is our hope that these articles will stimulate additional field work to supplement the distributions portrayed in the maps. The New England Botanical Club herbarium has proven to be the most important resource for this project. We are eager to receive information on voucher specimens in public herbaria documenting range extensions and filling county gaps in distributions. Similarly, because the atlas of the New England flora will be continuously updated as new information becomes available, we are eager to receive notification of published corrections of cytological information and new, documented chromosome counts for taxa in the New England flora.

## MATERIALS AND METHODS

Materials and methods are as outlined in Angelo and Boufford (1996) and in a web version (Angelo & Boufford 2011c) and are not repeated here.

## TAXONOMY AND FORMAT

The taxonomy and nomenclature adopted for this work follow that of draft treatments for the Flora of North America project, except that families, genera, and species are arranged alphabetically. The families and their circumscription do not necessarily reflect current views on relationships or composition. The Angiosperm Phylogeny Website (Stevens 2001 onwards) should be consulted for a continuously updated treatment of families and their inclusive genera. Named and unnamed hybrid taxa are placed alphabetically at the end of the genus in which they occur. Unnamed hybrids combine the names of the progenitors alphabetically by epithet. Taxa that are not native to New England are indicated by uppercase text. Unpublished names are not used, even if publication is pending.

Chromosome numbers are taken primarily from draft treatments for the Flora of North America project and from Goldblatt and Johnson (1979–).

Synonymy is provided primarily with respect to names accepted in standard manuals covering New England published from 1950 onward, including Fernald (1950), Gleason and Cronquist (1991), and Seymour (1982) and on herbarium labels in New England herbaria. Synonyms have not been provided where the distribution for the synonymized name does not include New England.

The following list (which includes excluded taxa) will aid readers in finding familiar names that have been transferred to other taxa:

<i>Cassia</i> (in part)	=>	<i>Chamachrista</i>
<i>Cassia</i> (in part)	=>	<i>Senna</i>
<i>Coronilla</i> (in part)	=>	<i>Securigera</i>
<i>Desmodium</i> (in part)	=>	<i>Hylodesmum</i>
<i>Lespedeza</i> (in part)	=>	<i>Kummerowia</i>
<i>Lotus</i> (in part)	=>	<i>Acmispon</i>
<i>Trigonella</i> (in part)	=>	<i>Medicago</i>

The following species have been reported from our area but are excluded for the reasons noted:

*CYTISUS × PRAECOX* Bean (*C. MULTIFLORUS* (L'Héritier) Sweet × ?) [no voucher found; reported from Plymouth County, Massachusetts]

*LABLAB PURPUREUS* (Linnaeus) Sweet (*DOLICHOS LABLAB* Linnaeus) [no voucher found; reported from Worcester County, Massachusetts]

*LATHYRUS APHACA* Linnaeus [no voucher found; reported from Berkshire County, Massachusetts]

*LATHYRUS PANNONICUS* (Jacquin) Garcke subsp. *PANNONICUS* [no voucher found; reported from Massachusetts]

*LATHYRUS SATIVUS* Linnaeus [no voucher found; reported from Middlesex County, Massachusetts]

*LESPEDEZA THUNBERGII* (de Candolle) Nakai [no voucher found; reported from Plymouth County, Massachusetts]

*LOTUS TENUIS* Waldstein & Kitaibel ex Willdenow [no voucher found; reported as collected from Newport County, Rhode Island]

*LUPINUS ANGUSTIFLORUS* Eastwood [mistakenly listed in Maine checklist for *L. ANGUSTIFOLIUS* Linnaeus]

*LUPINUS ANGUSTIFOLIUS* Linnaeus [no voucher found; reported from Penobscot County, Maine]

*LUPINUS NOOTKATENSIS* Donn ex Sims var. *NOOTKATENSIS* [no voucher found; reported from northern New England]

*MEDICAGO DISCIFORMIS* de Candolle [no voucher found; reported from Worcester County, Massachusetts]

*MELILOTUS ALTISSIMUS* Thuillier [no voucher found; reported from Maine]

*ONOBRYCHIS VICIIFOLIA* Scopoli [no voucher found; reported from Massachusetts and Vermont]

*SENNA CORYMBOSA* (Lamarck) H.S. Irwin & Barneby [no voucher found; reported from Massachusetts]

*THERMOPSIS MOLLIS* (Michaux) M.A. Curtis [New England herbarium specimens with this name are misidentified *THERMOPSIS VILLOSA* (Walter) Fernald & B.G. Schubert]

*THERMOPSIS MONTANA* Nuttall var. *MONTANA* [Voucher specimen from Maine is misidentified *THERMOPSIS VILLOSA* (Walter) Fernald & B.G. Schubert]

*TRIFOLIUM CAROLINIANUM* Michaux [no voucher found; reported from Chittenden County, Vermont]

*TRIFOLIUM FRAGIFERUM* Linnaeus [no voucher found; reported from Lamoille County, Vermont]

*TRIFOLIUM GLOMERATUM* Linnaeus [no voucher found; reported from Worcester County, Massachusetts]

*VICIA SEPIUM* Linnaeus var. *MONTANA* W.D.J. Koch [no voucher found; reported from York County, Maine]

#### **ANGIOSPERMAE (MAGNOLIOPHYTA) - ANGIOSPERMS**

#### **FABACEAE**

*ACMISPON AMERICANUS* (Nuttall) Rydberg var. *AMERICANUS*—Prairie Trefoil (Figure 2).  $2n = 14$ . Railroads, waste places. From farther west. [*HOSACKIA AMERICANA* (Nuttall) Piper;

*LOTUS AMERICANUS* — misapplied; *L. PURSHIANUS* Clements & E.G. Clements; *L. UNIFOLIOLATUS* (Hooker) Bentham]

*ALBIZIA JULIBRISSIN* Durazzini—Silk-tree (Figure 2).  $2n = 26$ . Waste places. From Asia.

*AMORPHA FRUTICOSA* Linnaeus—False Indigo (Figure 2).  $2n = 40$ . Roadsides, thickets, waste places. From farther south and west. [*A. FRUTICOSA* var. *OBLONGIFOLIA* E.J. Palmer]

*Amphicarpa bracteata* (Linnaeus) Fernald var. *bracteata*—Hog-peanut (Figure 2).  $2n = 40$ . Rich woods, thickets. [*A. monoica* Elliott]

*Amphicarpa bracteata* (Linnaeus) Fernald var. *comosa* (Linnaeus) Fernald—Pitcher's Hog-peanut (Figure 2).  $2n = ?$  Rich woods, thickets.

*ANTHYLLIS VULNERARIA* Linnaeus—Kidney-vetch (Figure 2).  $2n = 12$  (Europe). Roadsides, waste places, fields. From Eurasia, northern Africa.

*Aplos americana* Medikus—Groundnut (Figure 2).  $2n = 22$ ,  $3n = 33$ . Riverbanks, rich, moist thickets, primarily along streams and lakes.

*ARACHIS HYPOGAEA* Linnaeus—Common Peanut (Figure 2).  $2n = 40$ . Roadsides, waste places, fields. From South America.

*Astragalus alpinus* Linnaeus var. *brunetianus* Fernald—Northern Milk-vetch (Figure 2).  $2n = ?$  Calcareous river ledges and gravels.

*Astragalus canadensis* Linnaeus var. *canadensis*—(Figure 3).  $2n = 16$ . Shores.

*ASTRAGALUS CONTORTUPPLICATUS* Linnaeus—Hungarian Milk-vetch (Figure 3).  $2n = 16$ . Wool waste. From Eurasia.

*Astragalus eucosmus* B.L. Robinson—(Figure 3).  $2n = 32$ . Calcareous, rocky or gravelly shores of streams.

*ASTRAGALUS GLYCYPHYLLOS* Linnaeus—Liquorice Milk-vetch (Figure 3).  $2n = 16$ . Roadsides, waste places. From Eurasia.

*Astragalus robbinsii* (Oakes) A. Gray var. *robbinsii*—(Figure 3).  $2n = ?$  Dry, calcareous ledges above water. [considered to be extinct since 1894]

*Astragalus robbinsii* (Oakes) A. Gray var. *jesupii* Eggleston & E. Sheldon—(Figure 3).  $2n = ?$  Rocky stream banks. [*A. jesupii* (Eggleston & E. Sheldon) Britton]

*Astragalus robbinsii* (Oakes) A. Gray var. *minor* (Hooker) Barneby—(Figure 3).  $2n = ?$  Calcareous, ledges, cliffs and talus. [*A. blakei* Eggleston]

*BAPTISIA AUSTRALIS* (Linnaeus) R. Brown var. *AUSTRALIS*—Blue False Indigo (Figure 3).  $2n = ?$  Roadsides, fields, thickets, shores. From farther south and west.

*BAPTISIA LEUCOPHAEA* Nuttall—(Figure 3).  $2n = ?$  Railroads in dry sand. From farther west. [*B. LEUCOPHAEA* var. *GLABRESCENS* Larisey; *B. BRACTEATA* Muhlenberg *ex* Elliott var. *GLABRESCENS* (Larisey) Isely; *B. BRACTEATA* var. *LEUCOPHAEA* (Nuttall) Kartesz & Gandhi]

*Baptisia tinctoria* (Linnaeus) R. Brown—Wild Indigo (Figure 4).  $2n = 18$ . Dry fields, dry, open woods and clearings, in sterile or sandy soil. [*B. tinctoria* var. *crebra* Fernald]

*CARAGANA ARBORESCENS* Lamarck—Siberian Peatree (Figure 4).  $2n = 16, 20, 24$ . Rich thickets, fields, roadsides, waste places. From central and eastern Asia.

*Cercis canadensis* Linnaeus var. *canadensis*—Redbud (Figure 4).  $2n = 14$ . Rocky woods.

*Chamaecrista fasciculata* (Michaux) Greene var. *fasciculata*—Partridge-pea (Figure 4).  $2n = 16$ . Sandy, open fields and clearings, usually dry, roadsides. [*Cassia fasciculata* Michaux; *C. chamaecrista* — misapplied]

*Chamaecrista nictitans* (Linnaeus) Moench subsp. *nictitans*—Wild Sensitive Plant (Figure 4).  $2n = 16$ . Gravelly or sandy, open soil, fields, roadsides. [*Cassia nictitans* Linnaeus]

*CICER ARIETINUM* Linnaeus—Chick-pea (Figure 4).  $2n = 16$ . Waste places. From Turkey (and long in cultivation).

*CLADRASTIS KENTUKEA* (Dumont de Courset) Rudd—American Yellowwood (Figure 4).  $2n = 28$ . Rich woods, near parks or cemeteries. From farther south and west. [*C. LUTEA* (F. Michaux) K. Koch]

*COLUTEA ARBORESCENS* Linnaeus—Bladder-senna (Figure 4).  $2n = 16$  (Europe). Roadsides, railroads, waste areas, hillsides. From Europe, northern Africa.

*CORONILLA SCORPIOIDES* (Linnaeus) W.D.J. Koch—Annual Scorpion Vetch (Figure 4).  $2n = 12$ . Roadsides. From Eurasia, northern Africa.

*Crotalaria sagittalis* Linnaeus var. *sagittalis*—Common Rattlebox (Figure 5).  $2n = 32$ . Sandy or gravelly, often dry, open soil, shores, waste areas, railroads, roadsides.

*CYTISUS SCOPARIUS* (Linnaeus) Link var. *SCOPARIUS*—Scot's Broom (Figure 5).  $2n = 46, 48$ . Sandy fields, openings and roadsides, dunes, beaches. From Europe.

*DALEA CANDIDA* Willdenow var. *CANDIDA*—White Prairie-clover (Figure 5).  $2n = 14$ . Railroads. From farther west.

*DALEA LEPORINA* (Aiton) Bullock—Foxtail Prairie-clover (Figure 5).  $2n = 14$ . Rich, open soil, waste places. From farther west, Mexico, Central and South America.

*DALEA PURPUREA* Ventenat var. *PURPUREA*—Purple Prairie-clover (Figure 5).  $2n = 14$ . Sandy waste areas. From farther west.

*Desmodium canadense* (Linnaeus) de Candolle—Showy Tick-trefoil (Figure 5).  $2n = 22$ . Thickets, fields, open woods, meadows, riverbanks, sandy, open soil, roadsides, railroads, waste places.

*Desmodium canescens* (Linnaeus) de Candolle—(Figure 5).  $2n = ?$  Dry, sandy woods, fields, thickets, roadsides and waste areas.

*Desmodium ciliare* (Muhlenberg ex Willdenow) de Candolle var. *ciliare*—(Figure 5).  $2n = ?$  Dry, often sandy, woods and clearings.

*Desmodium cuspidatum* (Muhlenberg ex Willdenow) de Candolle ex G. Don var. *cuspidatum*—(Figure 5).  $2n = ?$  Rocky, rich, open woods.

*Desmodium glabellum* (Michaux) de Candolle—(Figure 6).  $2n = 22$ . Dry, sandy woods, clearings, roadsides. [D. *dillenii* Darlington – in part, ambiguous name]

*Desmodium marilandicum* (Linnaeus) de Candolle—(Figure 6).  $2n = ?$  Dry, open, rocky or sandy woods, fields, roadsides.

*Desmodium obtusum* (Muhlenberg ex Willdenow) de Candolle—(Figure 6).  $2n = ?$  Dry, sandy or rocky, open woods. [D. *rigidum* (Elliott) de Candolle]

*Desmodium paniculatum* (Linnaeus) de Candolle var. *paniculatum*—(Figure 6).  $2n = 22$ . Dry, open, often rocky or sandy woods, dry, woodland borders, thickets, clearings, fields, roadsides.

*Desmodium perplexum* B.G. Schubert—(Figure 6).  $2n = ?$  Dry, sandy woods, dry, woodland borders, roadsides. [D. *dillenii* Darlington – in part, ambiguous name]

*Desmodium rotundifolium* de Candolle—(Figure 6).  $2n = 22$ . Dr, often rocky, woods, clearings, fields, woodland margins, fields, roadsides.

*Desmodium sessilifolium* Torrey & A. Gray—(Figure 6).  $2n = ?$  Dry, sandy soils, roadsides, railroads.

— *Desmodium* hybrid —

*Desmodium × humifusum* (Muhlenberg ex Bigelow) Beck—(Figure 6). [D. *paniculatum* (Linnaeus) de Candolle var. *paniculatum* × D. *rotundifolium* de Candolle]

*GALEGA OFFICINALIS* Linnaeus—Professor-weed (Figure 6).  $2n = 16$ . Roadsides, waste areas, wet, salt meadow borders. From Eurasia, northern Africa.

*GENISTA TINCTORIA* Linnaeus—Dyer's Greenweed (Figure 7).  $2n = 48$ . Dry fields, woodland margins, roadsides, waste places, usually in dry, sterile, sandy or rocky soil. From Eurasia.

*GLEBITSIA TRIACANTHOS* Linnaeus—Honey-locust (Figure 7).  $2n = 28$ . Roadsides, riverbanks, shores, moist woods, waste areas. From farther west and south.

*GLYCINE MAX* (Linnaeus) Merrill—Soybean (Figure 7).  $2n = 40$ . Fields, railroads, roadsides. From eastern Asia.

*GLYCYRRHIZA LEPIDOTA* Pursh—Wild Licorice (Figure 7).  $2n = 16$ . Waste places, fields. From farther west.

*GYMNOCLADUS DIOICUS* (Linnaeus) K. Koch—Kentucky Coffeetree (Figure 7).  $2n = 28$ . Waste places, woodland margins, dry hillsides. From farther west and south.

*Hedysarum alpinum* Linnaeus—(Figure 7).  $2n = 14$ . Calcareous river-shores, ledges. [*H. alpinum* var. *americanum* Michaux]

*Hylodesmum glutinosum* (Muhlenberg ex Willdenow) H. Ohashi & R.R. Mill—(Figure 7).  $2n = ?$  Rich, dry or rocky woods. [*Desmodium glutinosum* (Muhlenberg ex Willdenow) Alph. Wood; *D. acuminatum* (Michaux) de Candolle]

*Hylodesmum nudiflorum* (Linnaeus) H. Ohashi & R.R. Mill—(Figure 7).  $2n = ?$  Rich, dry or rocky woods. [*Desmodium nudiflorum* (Linnaeus) de Candolle]

*KUMMEROWIA STRIATA* (Thunberg) Schindler—Japanese Clover (Figure 7).  $2n = 22$ . Sandy roadsides, gravel pits. From eastern Asia. [*Lespedeza striata* (Thunberg) Hooker & Arnott]

*LABURNUM ANAGYROIDES* Medikus—Golden Chain-tree (Figure 8).  $2n = 42, 50$ . Woodland margins. From Europe.

— *Laburnum* hybrid —

*LABURNUM × WATERERI* (Wettstein) Dippel—(Figure 8). [*L. ALPINUM* (Miller) J. Presl × *L. ANAGYROIDES* Medikus]

*Lathyrus japonicus* Willdenow var. *maritimus* (Linnaeus) Kartesz & Gandhi—Beach Pea (Figure 8).  $2n = 14$ . Sea beaches, gravelly sea shores, sandy or gravelly shores of Lake Champlain. [*L. japonicus* var. *glaber* (Seringe) Fernald; *L. maritimus* Bigelow var. *maritimus*; *L. maritimus* var. *glaber* (Seringe) Eames]

*Lathyrus japonicus* Willdenow var. *pellitus* Fernald—(Figure 8).  $2n = 14$ . Sea beaches, gravelly sea shores, sandy or gravelly shores of Lake Champlain. [*L. maritimus* Bigelow var. *pellitus* (Fernald) Gleason]

*LATHYRUS LATIFOLIUS* Linnaeus—Everlasting Pea (Figure 8).  $2n = 14$ . Roadsides, waste places, fields, thickets. From Europe, northern Africa.

*Lathyrus ochroleucus* Hooker—Pale Vetchling (Figure 8).  $2n = 14$ . Dry or rocky banks and bluffs.

*LATHYRUS ODORATUS* Linnaeus—Sweet Pea (Figure 8).  $2n = 14$ . Waste places. From southern Italy.

*Lathyrus palustris* Linnaeus—Marsh Vetchling (Figure 8).  $2n = 14, 42$ . Riverbanks, salt marshes, shores, meadows, swamps, damp thickets, beach bluffs. [*L. palustris* var. *linearifolius* Seringe; *L. palustris* var. *macranthus* (T.G. White) Fernald; *L. palustris* var. *myrtifolius* (Muhlenberg ex Willdenow) A. Gray; *L. palustris* var. *pilosus* (Chamisso) Ledebour]

*LATHYRUS PRATENSIS* Linnaeus—Yellow Vetchling (Figure 8).  $2n = 9, 14, 16, 28, 42$ . Fields, roadsides, railroads, waste places, meadows, shores. From Eurasia, northern Africa.

*LATHYRUS SYLVESTRIS* Linnaeus—Flat Pea (Figure 9).  $2n = 14$ . Field borders, thickets, roadsides, waste places. From Eurasia, northern Africa.

*LATHYRUS TUBEROSUS* Linnaeus—Earthnut Pea (Figure 9).  $2n = 14$ . Fields, meadows, roadsides, railroads. From Eurasia.

*LENS CULINARIS* Medikus—Lentil (Figure 9).  $2n = 14, 21, 26$ . Roadsides, waste places. Origin unknown (long in cultivation).

*Lespedeza angustifolia* (Pursh) Elliott—(Figure 9).  $2n = 20$ . Dry, open, sandy soil, sandy, pond shores.

*LESPEDEZA BICOLOR* Turczaninow—Shrubby Bush-clover (Figure 9).  $2n = 18, 22, 42$ . Waste places, disturbed, open, sandy or gravelly soil, roadsides. From eastern Asia.

*Lespedeza capitata* Michaux—(Figure 9).  $2n = 20$ . Dry, open, sandy soil, roadsides, railroads, fields, dry, rocky or sandy woods, waste places. [*L. capitata* var. *stenophylla* Bissell & Fernald; *L. capitata* var. *velutina* Fernald; *L. capitata* var. *vulgaris* Torrey & A. Gray]

*LESPEDEZA CUNEATA* (Dumont de Courset) G. Don—Chinese Bush-clover (Figure 9).  $2n = 20$ . Dry roadsides, fields, waste places. From eastern Asia, Australia.

*LESPEDEZA CYRTOBOTRYA* Miquel—(Figure 9).  $2n = 22$ . Fields. From eastern Asia.

*Lespedeza frutescens* (Linnaeus) Hornemann—(Figure 9).  $2n = 20$ . Dry, rocky woods. [*L. violacea* – misapplied]

*Lespedeza hirta* (Linnaeus) Hornemann subsp. *hirta*—(Figure 10).  $2n = 20$ . Dry, open woods and other dry soils, often sandy or rocky.

*Lespedeza procumbens* Michaux—Trailing Bush-clover (Figure 10).  $2n = 20$ . Dry, sandy or rocky, open woods and clearings.

*Lespedeza repens* (Linnaeus) W.P.C. Barton—Creeping Bush-clover (Figure 10).  $2n = 20$ . Sandy or rocky, open woods, dry ledges, dry, rocky fields.

*Lespedeza stuevei* Nuttall—(Figure 10).  $2n = 20$ . Dry woods, dry, sandy, rocky or sterile, open soil, roadsides.

*Lespedeza violacea* (Linnaeus) Persoon—(Figure 10).  $2n = 20$ . Dry, open, often rocky woods, dry, open, rocky soil, thickets, roadsides. [*L. intermedia* – misapplied; see *L. frutescens* for traditional, misapplied use of name “*L. violacea*” (Reveal & Barrie 1991)]

*Lespedeza virginica* (Linnaeus) Britton—Slender Bush-clover (Figure 10).  $2n = 20$ . Dry, open, usually sandy or rocky soil, dry, open, often rocky woods, fields, roadsides.

— *Lespedeza* hybrids —

*Lespedeza × acuticarpa* Mackenzie & Bush (*pro species*)—(Figure 10). [*L. frutescens* (Linnaeus) Hornemann × *L. virginica* (Linnaeus) Britton; *L. violacea* – misapplied × *L. virginica* (Linnaeus) Britton]

*Lespedeza angustifolia* (Pursh) Elliott × *L. capitata* Michaux—(Figure 10).

*Lespedeza × brittonii* E.P. Bicknell (*pro species*)—(Figure 10). [*L. procumbens* Michaux × *L. virginica* (Linnaeus) Britton; *L. procumbens* var. *elliptica* S.F. Blake]

*Lespedeza capitata* Michaux × *L. violacea* (Linnaeus) Persoon—(Figure 11). [*L. capitata* Michaux × *L. intermedia* – misapplied]

*Lespedeza frutescens* (Linnaeus) Hornemann × *L. procumbens* Michaux—(Figure 11). [*L. violacea* – misapplied × *L. procumbens* Michaux]

*Lespedeza frutescens* (Linnaeus) Hornemann × *L. violacea* (Linnaeus) Persoon—(Figure 11). [*L. violacea* – misapplied × *L. intermedia* – misapplied]

*Lespedeza hirta* (Linnaeus) Hornemann subsp. *hirta* × *L. procumbens* Michaux—(Figure 11).

*Lespedeza hirta* (Linnaeus) Hornemann subsp. *hirta* × *L. stuevei* Nuttall—(Figure 11).

*Lespedeza hirta* (Linnaeus) Hornemann subsp. *hirta* × *L. violacea* (Linnaeus) Persoon—(Figure 11). [*L. hirta* (Linnaeus) Hornemann subsp. *hirta* × *L. intermedia* – misapplied]

*Lespedeza hirta* (Linnaeus) Hornemann subsp. *hirta* × *L. virginica* (Linnaeus) Britton—(Figure 11).

*Lespedeza × longifolia* de Candolle (*pro species*)—(Figure 11). [*L. capitata* Michaux × *L. hirta* (Linnaeus) Hornemann subsp. *hirta*; *L. hirta* var. *dissimilans* Fernald]

*Lespedeza × neglecta* Mackenzie & Bush (*pro species*)—(Figure 11). [*L. stuevei* Nuttall × *L. virginica* (Linnaeus) Britton]

*Lespedeza × nuttallii* Darlington (*pro species*)—(Figure 12). [*L. frutescens* (Linnaeus) Hornemann × *L. hirta* (Linnaeus) Hornemann subsp. *hirta*; *L. violacea* – misapplied × *L. hirta* subsp. *hirta*]

*Lespedeza procumbens* Michaux × *L. stuevei* Nuttall—(Figure 12).

*Lespedeza × simulata* Mackenzie & Bush (*pro species*)—(Figure 12). [*L. capitata* Michaux × *L. virginica* (Linnaeus) Britton]

*Lespedeza stuevei* Nuttall × *L. violacea* (Linnaeus) Persoon—(Figure 12). [*L. stuevei* Nuttall × *L. intermedia* – misapplied]

*LOTUS CORNICULATUS* Linnaeus—Bird's-foot Trefoil (Figure 12).  $2n = 12, 24, 28, 36$ . Roadsides, fields, waste places, meadows. From Eurasia, Africa.

*Lupinus perennis* Linnaeus var. *perennis*—Wild Lupine (Figure 12).  $2n = 48, 96$ . Dry, sandy or gravelly soil, roadsides, railroads, dry, open woods, clearings, fields.

*Lupinus perennis* Linnaeus var. *occidentalis* S. Watson—(Figure 12).  $2n = ?$  Dry, sandy or gravelly soil, roadsides, railroads, dry, open woods, clearings, fields.

*LUPINUS POLYPHYLLUS* Lindley subsp. *POLYPHYLLUS*—Garden Lupine (Figure 12).  $2n = 48$ , 96. Roadsides, fields. From farther west.

*MEDICAGO ARABICA* (Linnaeus) Hudson—Spotted Medick (Figure 12).  $2n = 16$ . Waste places. From Eurasia, northern Africa.

*MEDICAGO LACINIATA* Miller—(Figure 13).  $2n = 16$ . Wool waste, waste places. From south central and southwestern Asia, Africa. [*TRIGONELLA LACINIATA* – misapplied]

*MEDICAGO LUPULINA* Linnaeus—Black Medick (Figure 13).  $2n = 16$ , 32. Roadsides, waste places, fields. From Eurasia, northern Africa. [*M. LUPULINA* var. *GLANDULOSA* Neilreich]

*MEDICAGO MINIMA* (Linnaeus) Bartalini—Bur Medick (Figure 13).  $2n = 16$ . Wool waste, waste places, fields, dry, open soil. From Eurasia, northern Africa. [*M. MINIMA* var. *COMPACTA* Neyraut; *M. MINIMA* var. *LONGISETA* de Candolle]

*MEDICAGO MONANTHA* (C.A. Meyer) Trautvetter—(Figure 13).  $2n = ?$  Waste places. From south central and southwestern Asia.

*MEDICAGO POLYMORPHA* Linnaeus—Toothed Medick (Figure 13).  $2n = 14$ , 16. Wool waste, waste places. From Eurasia, northern Africa. [*M. POLYMORPHA* var. *VULGARIS* superfluous name]

*MEDICAGO PRAECOX* de Candolle—Mediterranean Medick (Figure 13).  $2n = 14$ , 16. Wool waste. From northern and eastern Mediterranean.

*MEDICAGO RIGIDULA* (Linnaeus) Allioni—Tifton Medick (Figure 13).  $2n = 14$ , 16. Wool waste. From Eurasia, northern Africa. [*M. AGRESTIS* Tenore]

*MEDICAGO SATIVA* Linnaeus subsp. *SATIVA*—Alfalfa (Figure 13).  $2n = 16$ , 32. Roadsides, fields, waste places, meadows. From southwestern Asia.

*MEDICAGO SATIVA* Linnaeus subsp. *FALCATA* (Linnaeus) Arcangeli—Yellow Alfalfa (Figure 13).  $2n = 16$ , 32. Roadsides, waste places, wool waste. From Eurasia, northern Africa. [*MEDICAGO FALCATA* Linnaeus]

*MEDICAGO SATIVA* Linnaeus subsp. *VARIA* (Martyn) Arcangeli—Bastard Medick (Figure 14).  $2n = ?$  Roadsides, fields, waste places. From Eurasia. [*M. SATIVA* subsp. *SATIVA* × *M. SATIVA* subsp. *FALCATA* (Linnaeus) Arcangeli; *M. SYLVESTRIS* Fries]

*MELILOTUS ALBUS* Medikus—White Sweet-clover (Figure 14).  $2n = 16$ . Roadsides, waste places, fields, rich woods. From farther Eurasia.

*MELILOTUS INDICUS* (Linnaeus) Allioni—(Figure 14).  $2n = 16$ , 18. Waste places, roadsides, fields, riverbanks. From Eurasia, northern Africa.

*MELILOTUS OFFICINALIS* (Linnaeus) Lamarck—Yellow Sweet-clover (Figure 14).  $2n = 16$ . Roadsides, waste places, fields, railroads. From Eurasia.

*ORNITHOPUS SATIVUS* Brotero subsp. *SATIVUS*—Serradella (Figure 14).  $2n = 14$ . Sandy, open, disturbed soil. From southwestern Europe, northern Africa.

*Oxytropis campestris* (Linnaeus) de Candolle var. *johannensis* Fernald—(Figure 14).  $2n = 32, 48$ . Rocky or gravelly river shores. [*O. johannensis* (Fernald) Fernald]

*PHASEOLUS COCCINEUS* Linnaeus—Scarlet Runner (Figure 14).  $2n = 22$ . Roadsides, waste places. From Mexico, Central America. [*P. MULTIFLORUS* Lamarck]

*Phaseolus polystachios* (Linnaeus) Britton, Sterns & Poggenburg var. *polystachios*—Wild Bean (Figure 14).  $2n = 22$ . Rocky woods, dry, wooded ledges, roadsides. [*P. polystachios* var. *aquilonius* Fernald]

*PHASEOLUS VULGARIS* Linnaeus—Common Bean (Figure 14).  $2n = 22$ . Waste places, roadsides. From Mexico, Central and South America. [*P. VULGARIS* var. *HUMILIS* Alefeld]

*PISUM SATIVUM* Linnaeus var. *SATIVUM*—Garden Pea (Figure 15).  $2n = 14$ . Roadsides, waste places, fields, railroads. From Eurasia, northern Africa.

*PUERARIA MONTANA* (Loureiro) Merrill var. *LOBATA* (Willdenow) Maesen & S. M. Almeida ex Sanjappa & Predeep—Kudzu (Figure 15).  $2n = 22, 24$ . Roadsides, waste places. From eastern Asia, southwestern Pacific. [*P. LOBATA* (Willdenow) Ohwi]

*ROBINIA HISPIDA* Linnaeus var. *HISPIDA*—Bristly Locust (Figure 15).  $2n = 30$ . Roadsides, fields, sandy hills, rocky woodland margins, waste places. From farther south.

*ROBINIA HISPIDA* Linnaeus var. *FERTILIS* (Ashe) R.T. Clausen—(Figure 15).  $2n = 20$ . Roadsides. From farther south.

*ROBINIA PSEUDOACACIA* Linnaeus—Black Locust (Figure 15).  $2n = 20$ . Roadsides, fields, thickets, woodland margins, waste places. From farther west and south.

*ROBINIA VISCOSA* Ventenat var. *VISCOSA*—Clammy Locust (Figure 15).  $2n = 20$ . Roadsides, fields, waste places, thickets, often in sandy soil. From farther south.

*ROBINIA VISCOSA* Ventenat var. *HARTWIGII* (Koehne) Ashe—(Figure 15).  $2n = ?$  Roadsides. From farther south. [*R. HARTWIGII* Koehne]

—*Robinia* hybrid—

*ROBINIA × MARGARETTA* Ashe (*pro species*)—(Figure 15). [*R. HISPIDA* Linnaeus var. *HISPIDA* × *R. PSEUDOACACIA* Linnaeus]

*SCORPIURUS MURICATUS* Linnaeus—Caterpillar-plant (Figure 15).  $2n = 28$ . Wool waste. From the Mediterranean.

*SECURIGERA VARIA* (Linnaeus) Lassen—Crown-vetch (Figure 16).  $2n = 16, 24$ . Roadsides, fields, waste places. From Eurasia. [*CORONILLA VARIA* Linnaeus]

*Senna hebecarpa* (Fernald) H.S. Irwin & Barneby—Wild Senna (Figure 16).  $2n = ?$  Streambanks, thickets, roadsides, fields. [*C. hebecarpa* Fernald]

*SENNA OBTUSIFOLIA* (Linnaeus) H.S. Irwin & Barneby—Java-bean (Figure 16).  $2n = 28$ . Waste places. From farther south.

*SESBANIA HERBACEA* (Miller) McVaugh—(Figure 16).  $2n = 12$ . Waste places. From farther south. [*S. EXALTATA* (Rafinesque) Cory]

*Strophostyles helvola* (Linnaeus) Elliott—Trailing Wild Bean (Figure 16).  $2n = 22$ . Sandy or gravelly soil, usually near coast, shores, marsh margins, railroads, fields, roadsides.

*STROPHOSTYLES LEIOSPERMA* (Torrey & A. Gray) Piper—(Figure 16).  $2n = ?$  Old gravel or sand pits. From farther west.

*Strophostyles umbellata* (Muhlenberg ex Willdenow) Britton—Perennial Wild Bean (Figure 16).  $2n = 22$ . Beaches.

*Tephrosia virginiana* (Linnaeus) Persoon—Goat's-rue (Figure 16).  $2n = 22$ . Dry, sandy, clearings and open woods, ledges, fields, roadsides, railroads.

*THERMOPSIS VILLOSA* (Walter) Fernald & B.G. Schubert—(Figure 16).  $2n = ?$  Roadsides, fields. From farther south.

*TRIFOLIUM ARVENSE* Linnaeus—Rabbit's-foot Clover (Figure 17).  $2n = 14$ . Dry roadsides, fields, waste places. From Eurasia, northern Africa.

*TRIFOLIUM AUREUM* Pollich—Yellow Clover (Figure 17).  $2n = 14, 16$ . Roadsides, dry fields, waste places. From Eurasia. [*T. AGRARIUM* Linnaeus]

*TRIFOLIUM CAMPESTRE* Schreber—Low Hop Clover (Figure 17).  $2n = 14, 16$ . Roadsides, dry fields, waste places. From Eurasia, northern Africa. [*T. PROCUMBENS* Linnaeus]

*TRIFOLIUM DALMATICUM* Visiani—(Figure 17).  $2n = 10$ . Waste places. From southeastern Europe.

*TRIFOLIUM DICHOTOMUM* Hooker & Arnott—(Figure 17).  $2n = ?$  Wool waste. From farther west.

*TRIFOLIUM DUBIUM* Sibthorp—Small Hop Clover (Figure 17).  $2n = 16, 28, 32$ . Dry roadsides and fields, waste places. From Eurasia, northern Africa.

*TRIFOLIUM ECHINATUM* M. Bieberstein—Hedgehog Clover (Figure 17).  $2n = 16$ . Wool waste. From Eurasia, northern Africa.

*TRIFOLIUM HYBRIDUM* Linnaeus—Alsike Clover (Figure 17).  $2n = 16, 32$ . Roadsides, fields, meadows, clearings. From Eurasia, northern Africa. [*T. HYBRIDUM* var. *ELEGANS* (Savi) Boissier]

*TRIFOLIUM INCARNATUM* Linnaeus—Crimson Clover (Figure 17).  $2n = 14$ . Fields, waste places, roadsides. From Eurasia. [*T. INCARNATUM* var. *ELATIUS* Gibelli & Belli]

*TRIFOLIUM MEDIUM* Linnaeus—Zigzag Clover (Figure 18).  $2n = 48, 80$ . Oak woods, fields, roadsides, hillsides. From Eurasia.

*TRIFOLIUM OLIVACEUM* Greene—(Figure 18).  $2n = ?$  Wool waste. From farther west.

*TRIFOLIUM PRATENSE* Linnaeus—Red Clover (Figure 18).  $2n = 14$ . Fields, meadows, waste places, roadsides, clearings. From Eurasia, northern Africa. [*T. PRATENSE* var. *SATIVUM* Crépin]

*TRIFOLIUM PURPUREUM* Loiseleur-Deslongchamps—Purple Clover (Figure 18).  $2n = 14$ . Wool waste. From Eurasia, northern Africa.

*TRIFOLIUM REPENS* Linnaeus—White Clover (Figure 18).  $2n = 16, 28, 30, 32$ . Meadows, waste places, fields, roadsides. From Eurasia, northern Africa.

*TRIFOLIUM RESUPINATUM* Linnaeus—Persian Clover (Figure 18).  $2n = 16$ . Waste areas. From Eurasia, northern Africa.

*TRIFOLIUM STRIATUM* Linnaeus—Knotted Clover (Figure 18).  $2n = 14, 16$ . Sandy fields. From Eurasia, northern Africa.

*TRIFOLIUM SUBTERRANEUM* Linnaeus—(Figure 18).  $2n = 16$ . Wool waste. From Eurasia, northern Africa.

*TRIFOLIUM TOMENTOSUM* Linnaeus—(Figure 18).  $2n = 16$ . Wool waste. From Eurasia, northern Africa.

*TRIGONELLA CORNICULATA* (Linnaeus) Linnaeus—(Figure 19).  $2n = 16$ . Ballast waste. From Eurasia.

*ULEX EUROPAEUS* Linnaeus—Common Gorse (Figure 19).  $2n = 32, 64, 96$ . Rocky headland turf, dry slopes, pine woods, usually in sandy soil. From Europe.

*ULEX MINOR* Roth—Dwarf Gorse (Figure 19).  $2n = 32$ . Sand plains. From Europe. [*U. NANUS* T.F. Forster ex Symons]

*VICIA CRACCA* Linnaeus—Cow Vetch (Figure 19).  $2n = 12, 14, 21, 22, 24, 28$ . Fields, meadows, roadsides, waste areas, thickets, shores. From Eurasia.

*VICIA ERVILIA* (Linnaeus) Willdenow—Bitter Vetch (Figure 19).  $2n = 14$ . Ballast waste. From Eurasia, northern Africa.

*VICIA FABA* Linnaeus—Broad Bean (Figure 19).  $2n = 12, 14$ . Fields, waste places. Origin unknown (long in cultivation).

*VICIA GRANDIFLORA* Scopoli—(Figure 19).  $2n = 14$ . Fields. From Eurasia.

*VICIA HIRSUTA* (Linnaeus) Gray—Tiny Vetch (Figure 19).  $2n = 12, 14$ . Waste places, roadsides, fields. From Eurasia, Africa.

*VICIA LATHYROIDES* Linnaeus—Spring Vetch (Figure 19).  $2n = 10, 12$ . Roadsides, fields, usually sandy. From Eurasia, northern Africa.

*VICIA PANNONICA* Crantz—Hungarian Vetch (Figure 20).  $2n = 12, 14$ . Roadsides. From Eurasia.

*VICIA SATIVA* Linnaeus var. *SATIVA*—Common Vetch (Figure 20).  $2n = 10, 12$ . Fields, roadsides, waste places. Origin unknown.

*VICIA SATIVA* Linnaeus subsp. *NIGRA* (Linnaeus) Ehrhart—Smaller Common Vetch (Figure 20).  $2n = 12, 14$ . Waste places, railroads, roadsides, fields, meadows, sea beaches, shores. From Europe, Asia, Africa. [*V. ANGUSTIFOLIA* Linnaeus var. *ANGUSTIFOLIA*; *V. ANGUSTIFOLIA* var. *SEGETALIS* (Thuillier) W.D.J. Koch; *V. ANGUSTIFOLIA* var. *UNCINATA* (Desvaux) Rouy]

*VICIA SEPIUM* Linnaeus var. *SEPIUM*—Bush Vetch (Figure 20).  $2n = 12, 14$ . Roadsides, railroads, fields. From Europe, Asia.

*VICIA TETRASPERMA* (Linnaeus) Schreber—Sparrow Vetch (Figure 20).  $2n = 14$ . Fields, railroads, roadsides, waste places. From Europe, Asia, northern Africa. [*V. TETRASPERMA* var. *TENUISSIMA* (Druce) Druce]

*VICIA VILLOSA* Roth var. *VILLOSA*—Winter Vetch (Figure 20).  $2n = 14, 28$ . Fields, roadsides, waste places. From Eurasia, northern Africa.

*VICIA VILLOSA* Roth var. *GLABRESCENS* W.D.J. Koch—(Figure 20).  $2n = 14, 28$ . Fields, roadsides, waste places. From Eurasia, northern Africa. [*V. VILLOSA* subsp. *VARIA* (Host) Corbièr; *V. DASCYCARPA* Tenore]

*WISTERIA FLORIBUNDA* (Willdenow) de Candolle—Japanese Wisteria (Figure 20).  $2n = 16$ . Woodland margins, fields, thickets. From Japan, Korea.

*WISTERIA FRUTESCENS* (Linnaeus) Poiret—American Wisteria (Figure 20).  $2n = 16$ . Woodland margins, roadsides. From farther south. [*W. MACROSTACHYA* (Torrey & A. Gray) Nuttall ex B.L. Robinson & Fernald]

*WISTERIA SINENSIS* (Sims) de Candolle—Chinese Wisteria (Figure 21).  $2n = 16, 32$ . Woods, woodland margins, roadsides. From China.

#### ACKNOWLEDGMENTS

We thank the curators and directors of the herbaria of the New England Botanical Club, the Harvard University Herbaria, the University of Massachusetts, and the University of Vermont for

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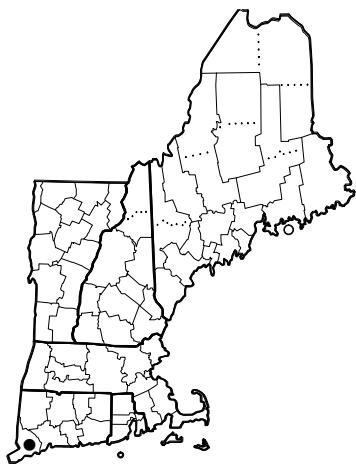
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(general references listed in our previous articles are not repeated here)

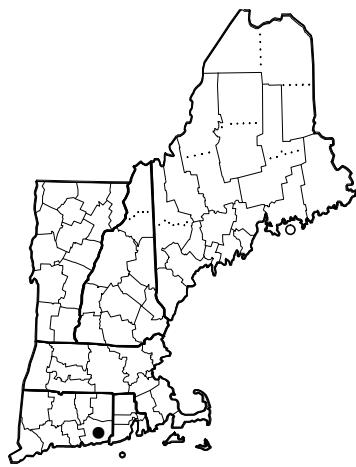
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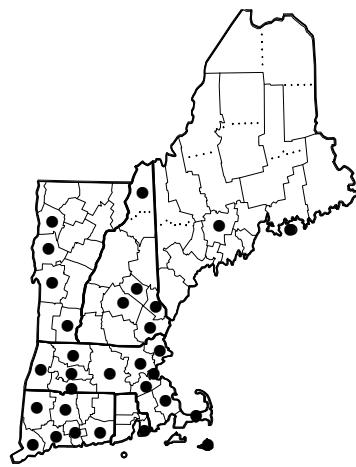
Figure 1. Key map for counties of the New England states (and Mt. Desert Island, Maine; Block Island, Rhode Island; arbitrary divisions of larger Maine counties and of Coös County, New Hampshire).



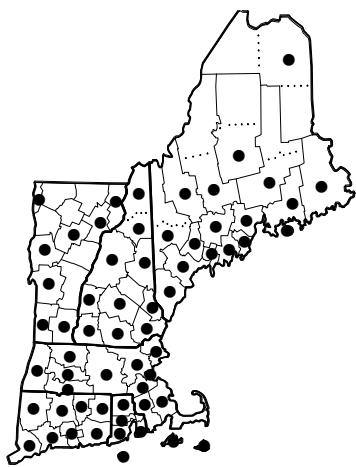
*ACMISPON AMERICANUS*  
var. *AMERICANUS*



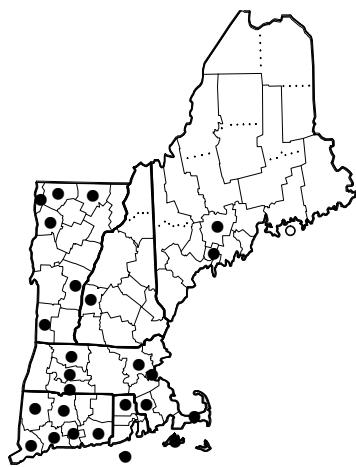
*ALBIZIA JULIBRISSIN*



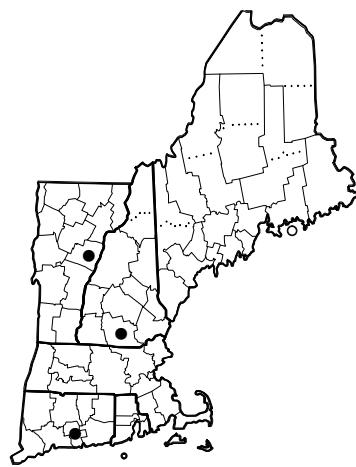
*AMORPHA FRUTICOSA*



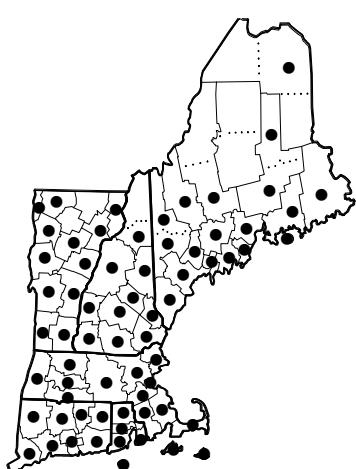
*Amphicarpaea bracteata*  
var. *bracteata*



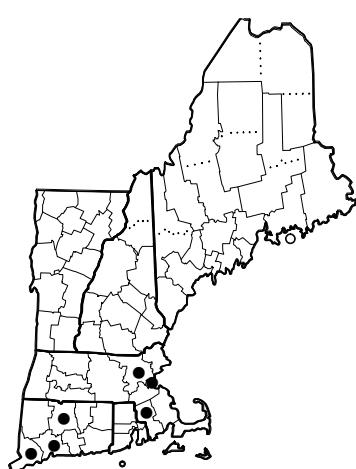
*Amphicarpaea bracteata*  
var. *comosa*



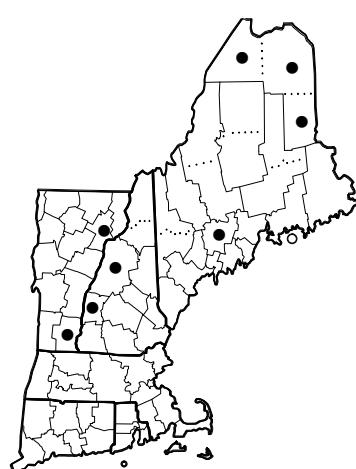
*ANTHYLLIS VULNERARIA*



*Apios americana*

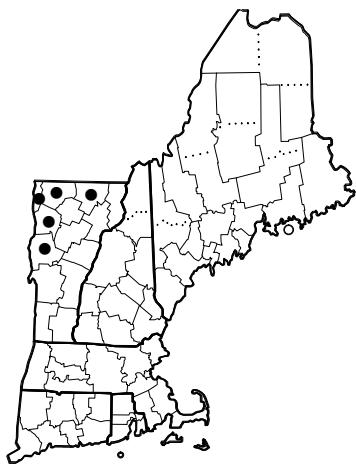


*ARACHIS HYPOGAEA*

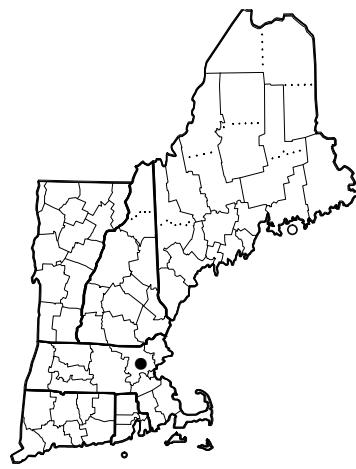


*Astragalus alpinus*  
var. *brunonianus*

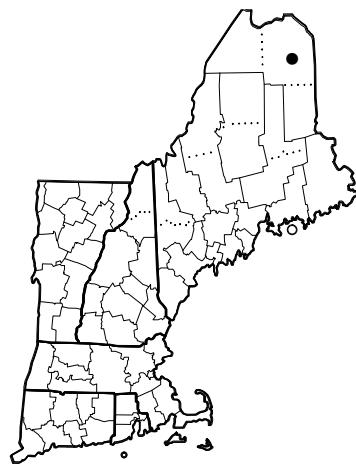
Figure 2. Distribution maps.



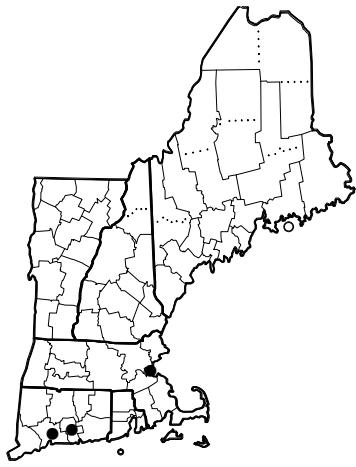
*Astragalus canadensis*  
var. *canadensis*



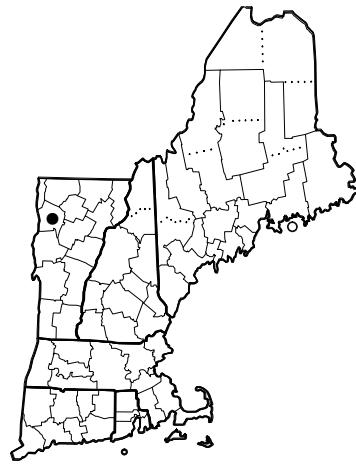
*ASTRAGALUS CONTORTUPPLICATUS*



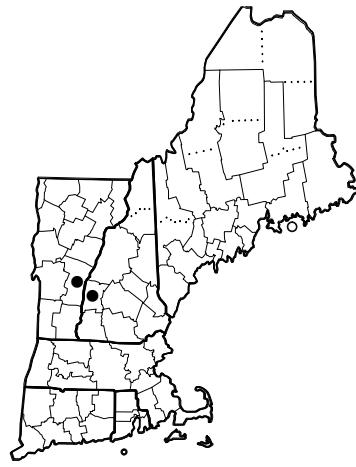
*Astragalus eucosmus*



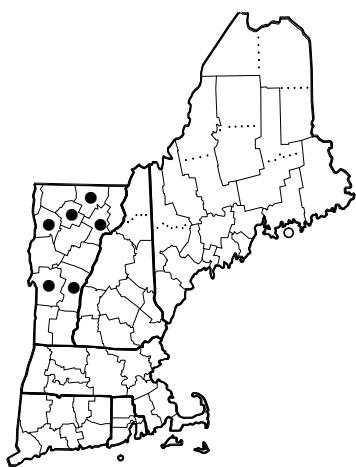
*ASTRAGALUS GLYCYPHYLLOS*



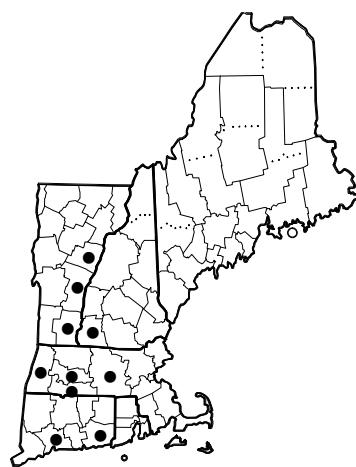
*Astragalus robbinsii*  
var. *robbinsii*



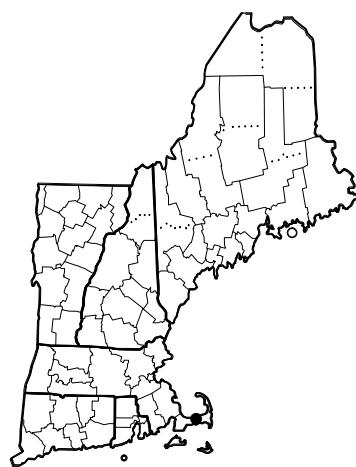
*Astragalus robbinsii*  
var. *jesupii*



*Astragalus robbinsii*  
var. *minor*



*BAPTISIA AUSTRALIS*  
var. *AUSTRALIS*



*BAPTISIA LEUCOPHAEA*

Figure 3. Distribution maps.

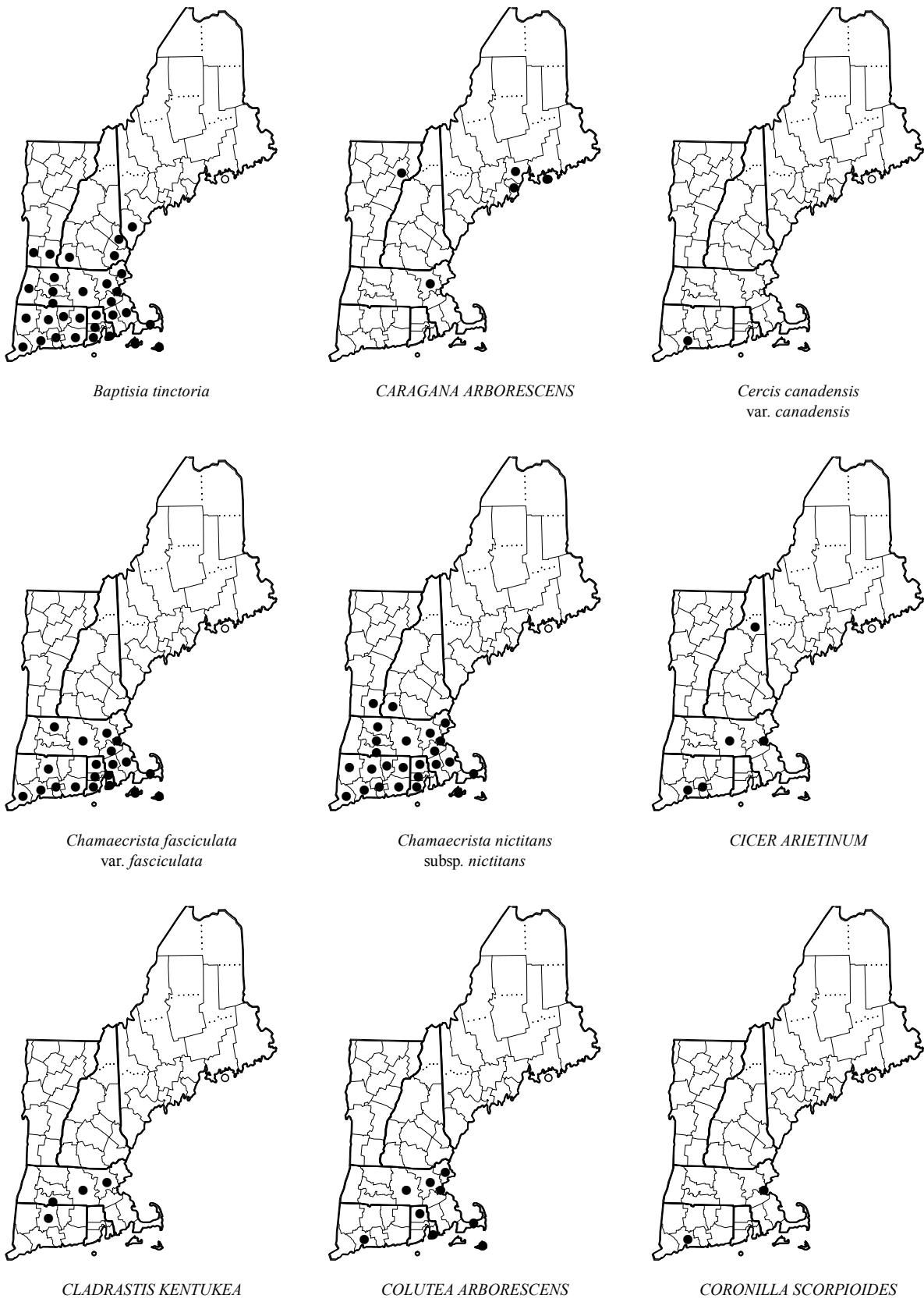


Figure 4. Distribution maps.

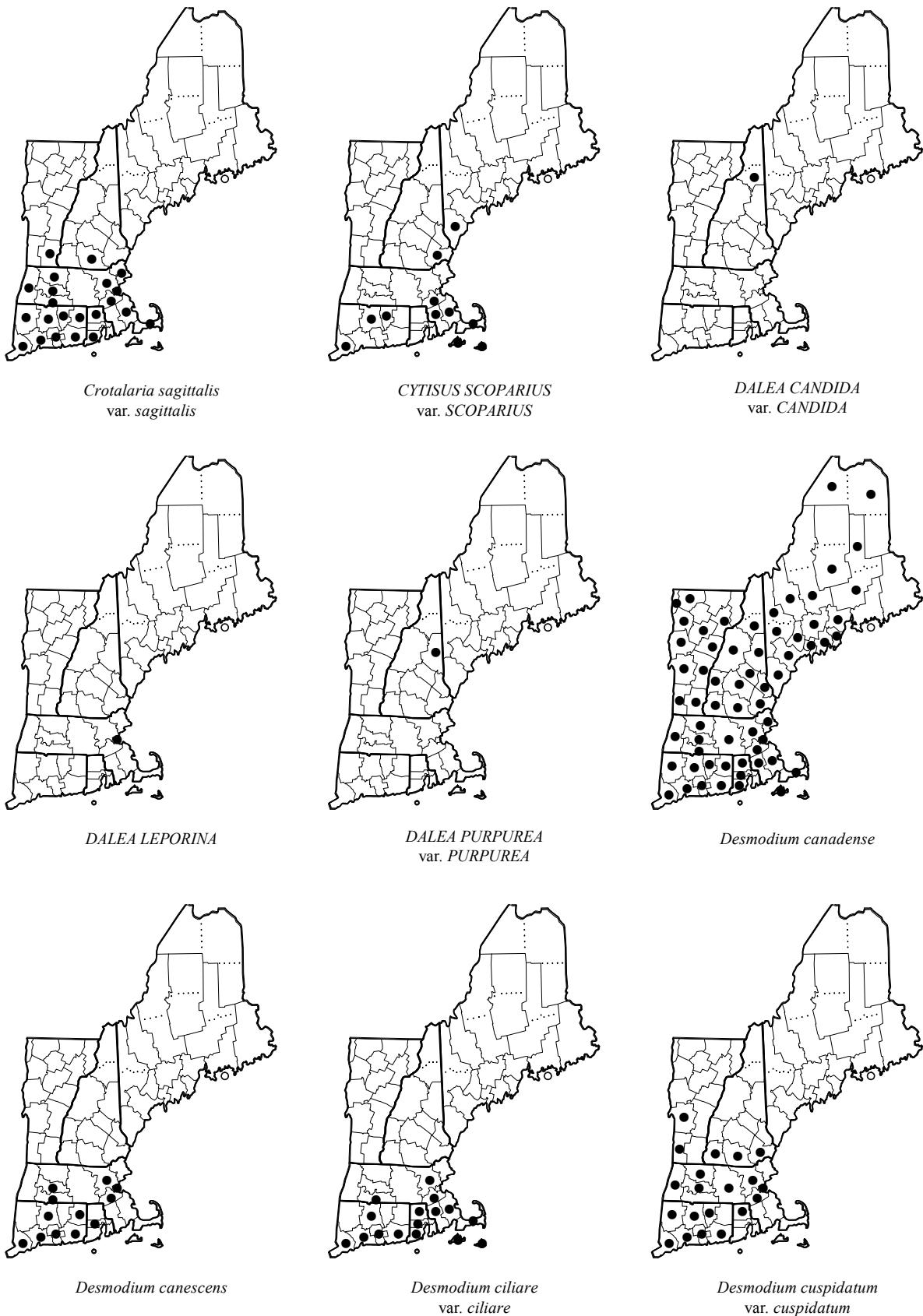


Figure 5. Distribution maps.

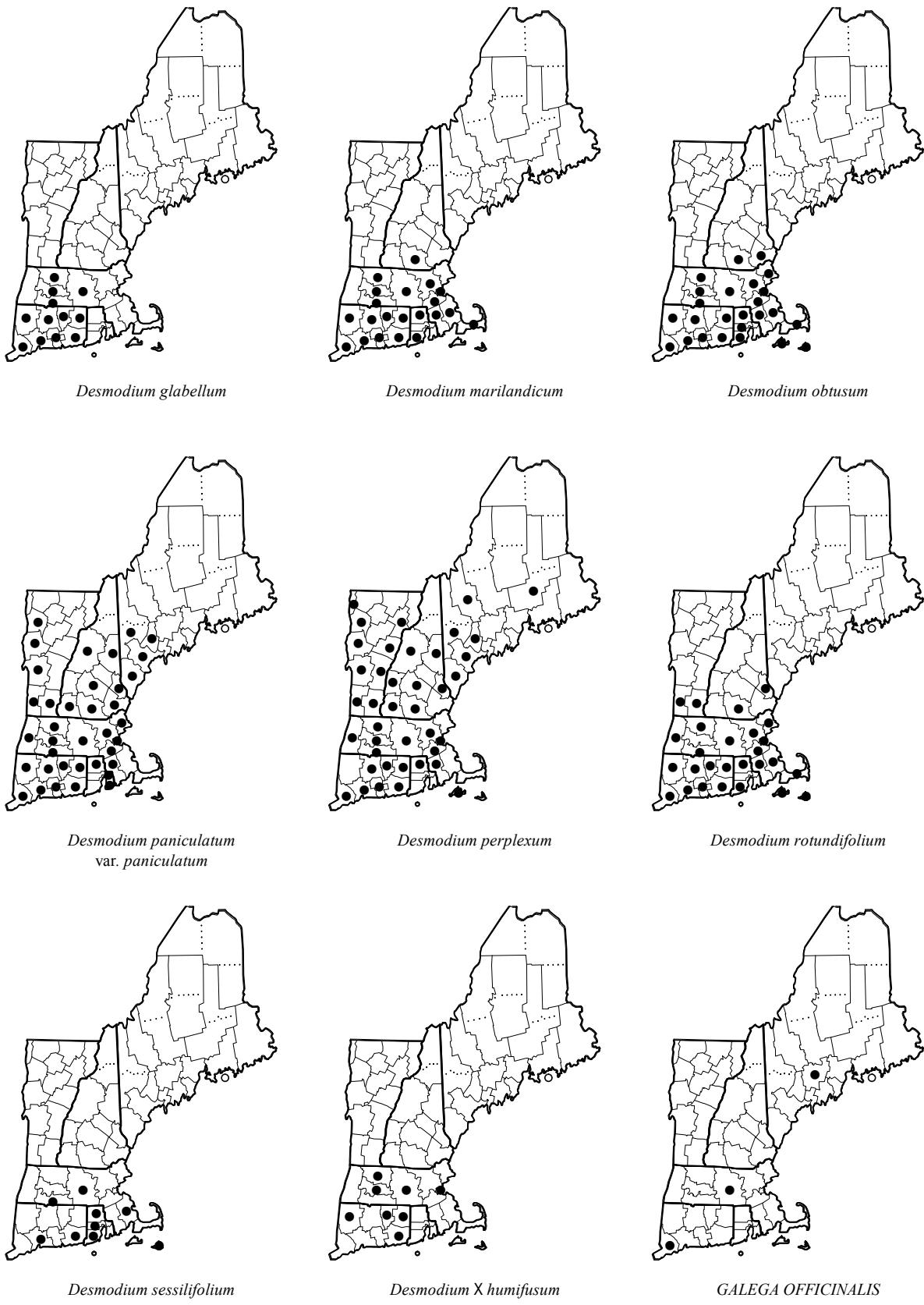


Figure 6. Distribution maps.

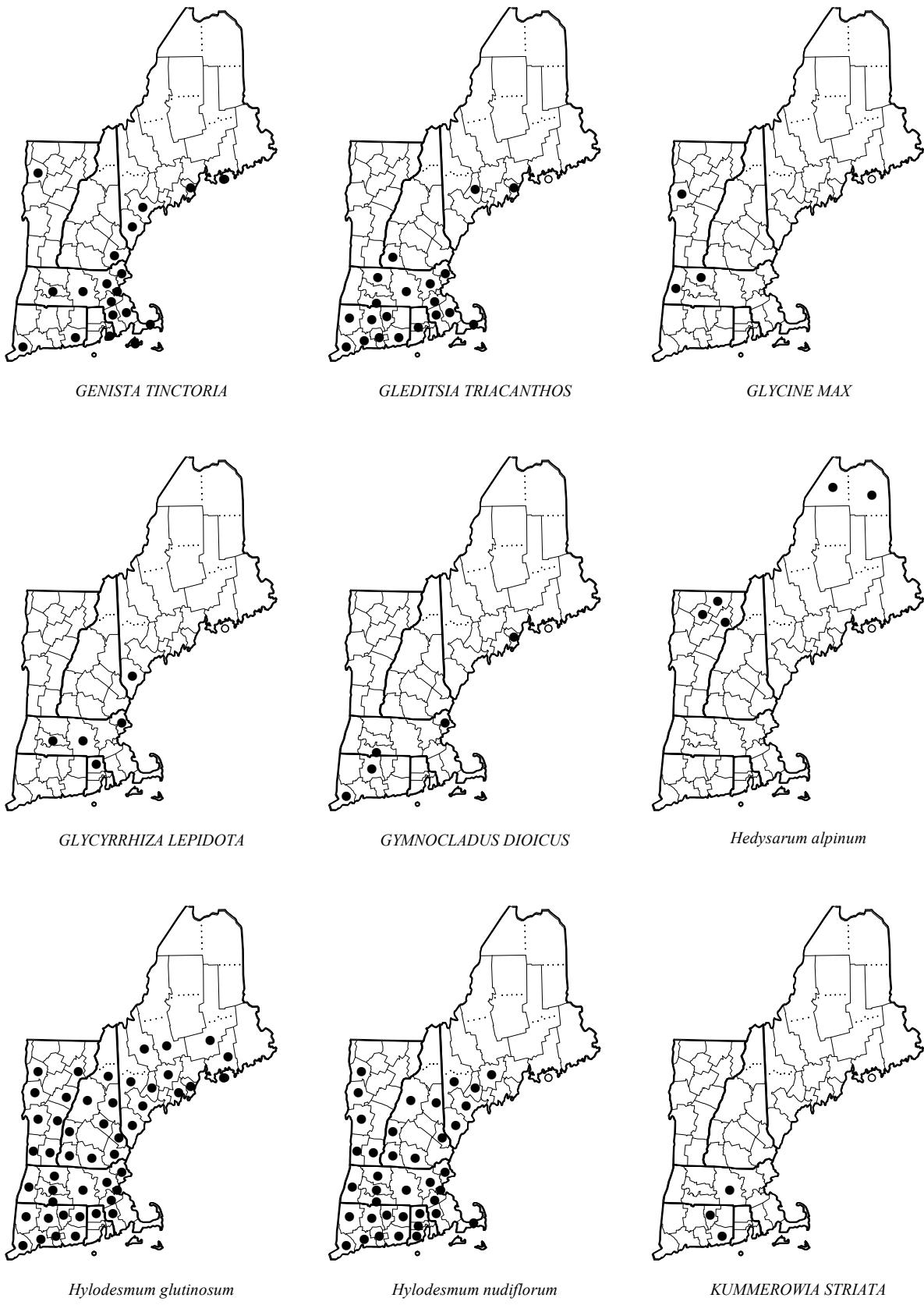


Figure 7. Distribution maps.

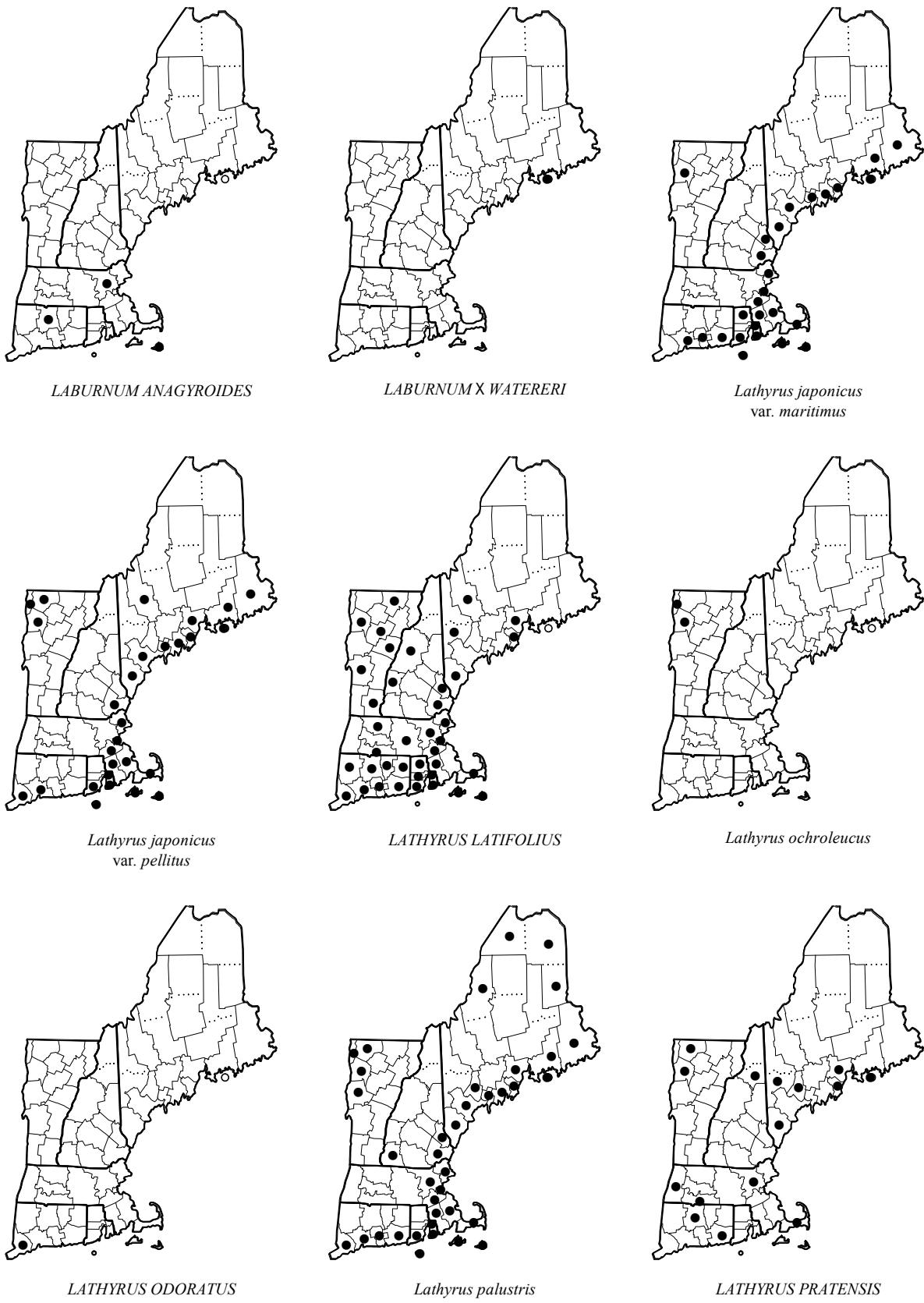
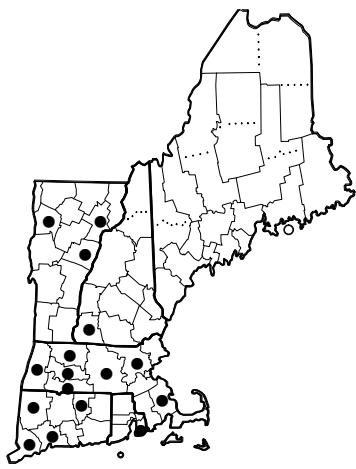
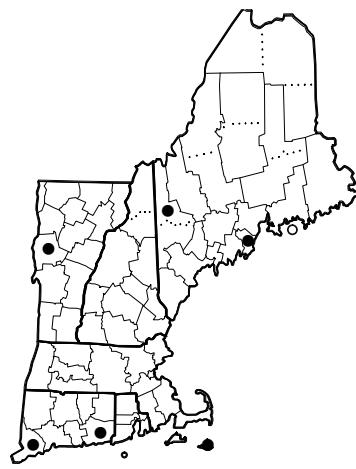


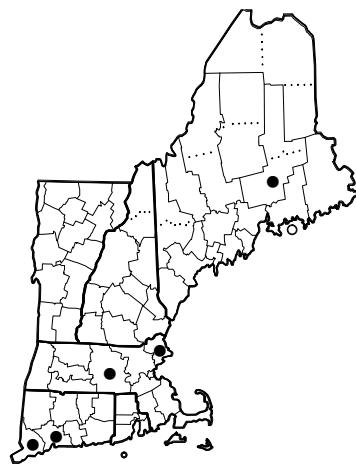
Figure 8. Distribution maps.



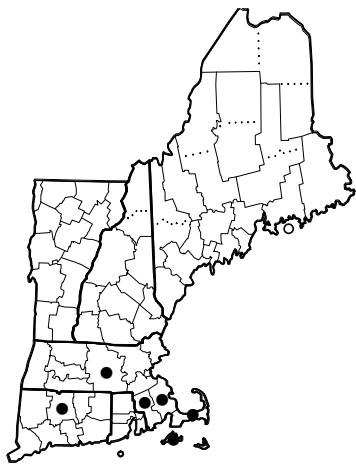
*LATHYRUS SYLVESTRIS*



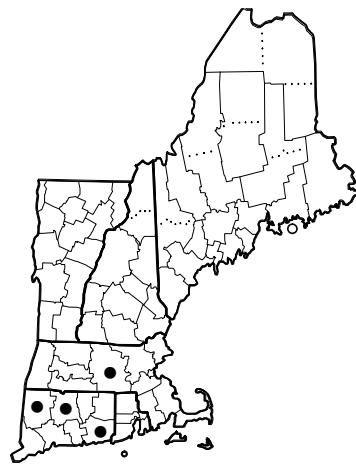
*LATHYRUS TUBEROSUS*



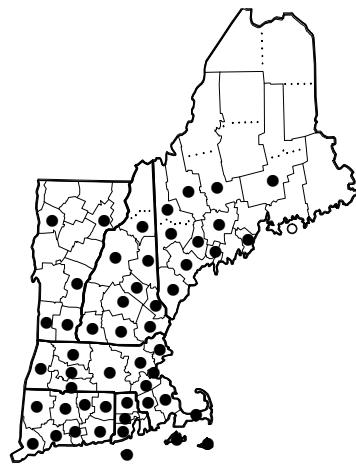
*LENS CULINARIS*



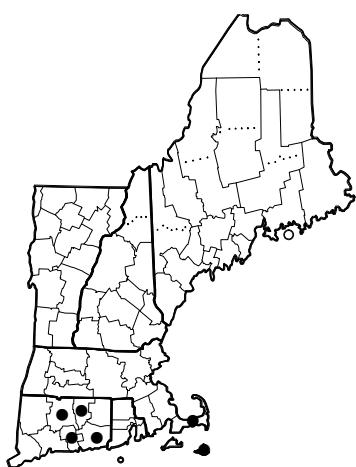
*Lespedeza angustifolia*



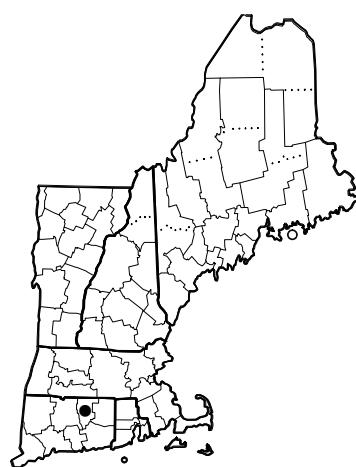
*LESPEDEZA BICOLOR*



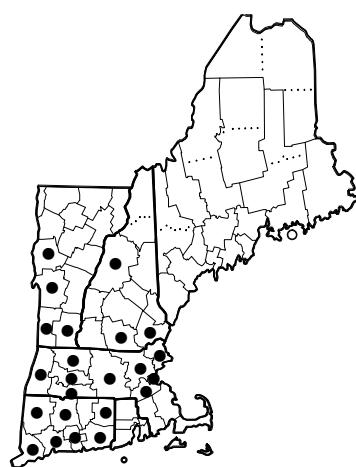
*Lespedeza capitata*



*LESPEDEZA CUNEATA*



*LESPEDEZA CYRTOBOTRYA*



*Lespedeza frutescens*

Figure 9. Distribution maps.

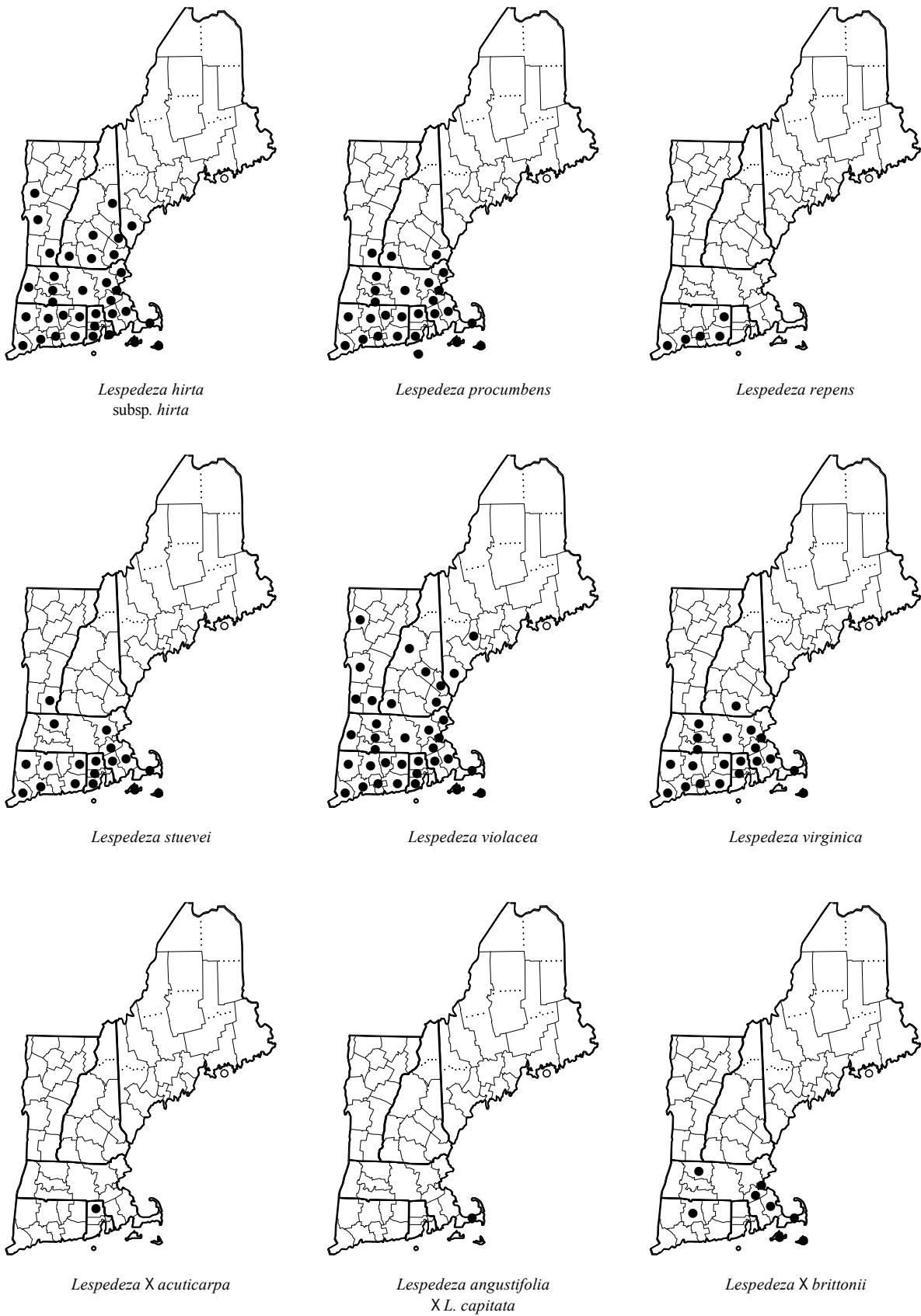


Figure 10. Distribution maps.

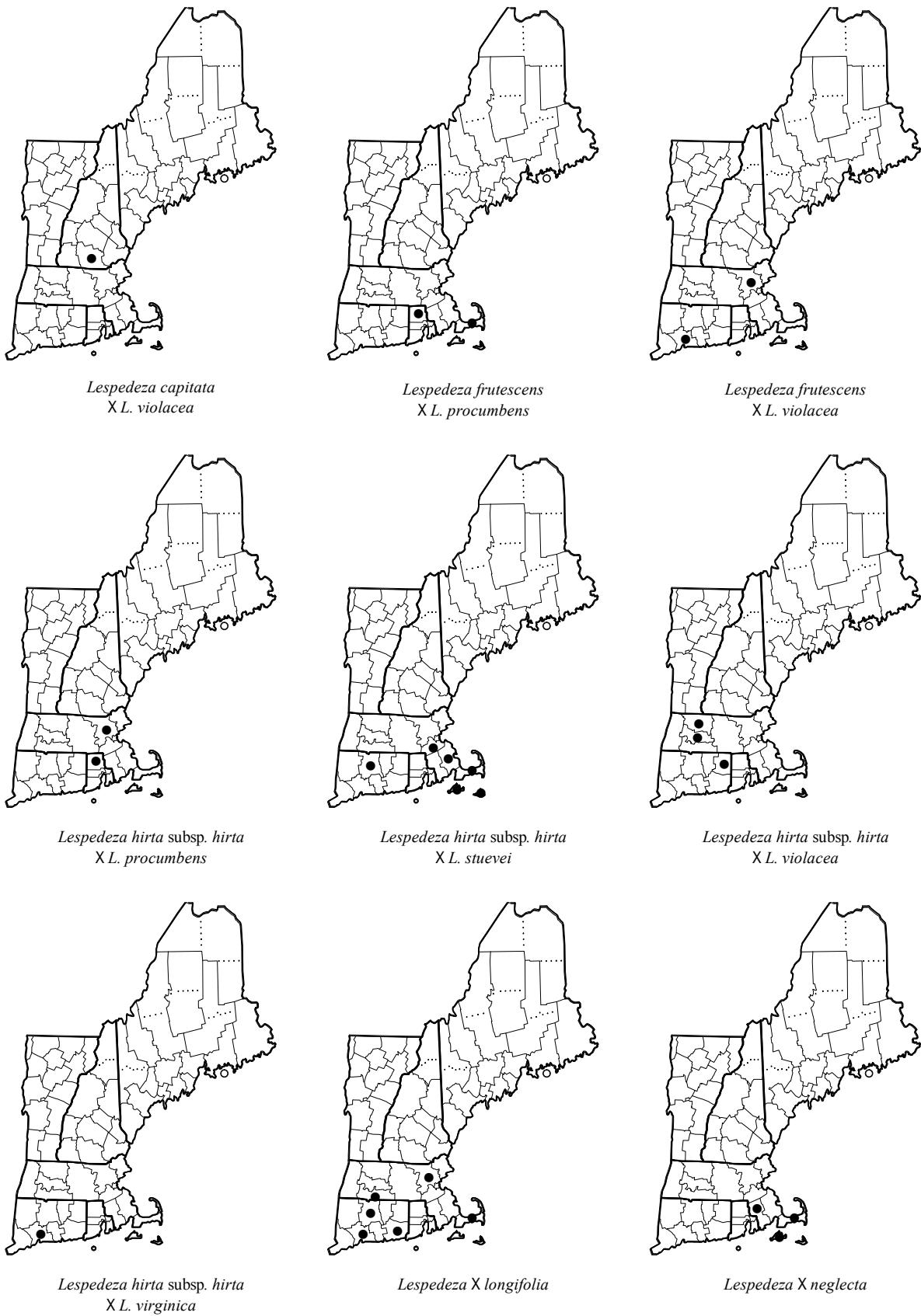


Figure 11. Distribution maps.

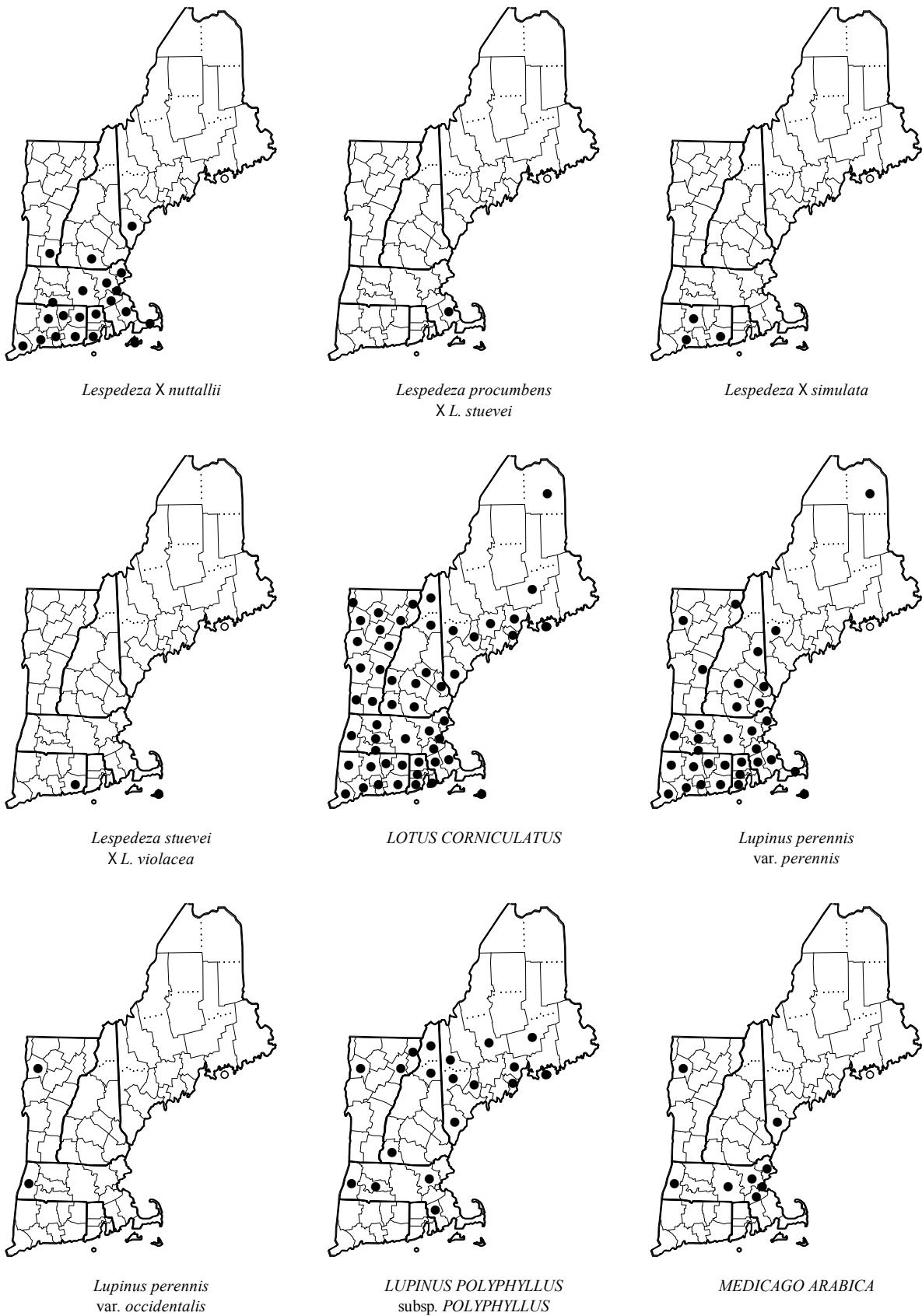


Figure 12. Distribution maps.

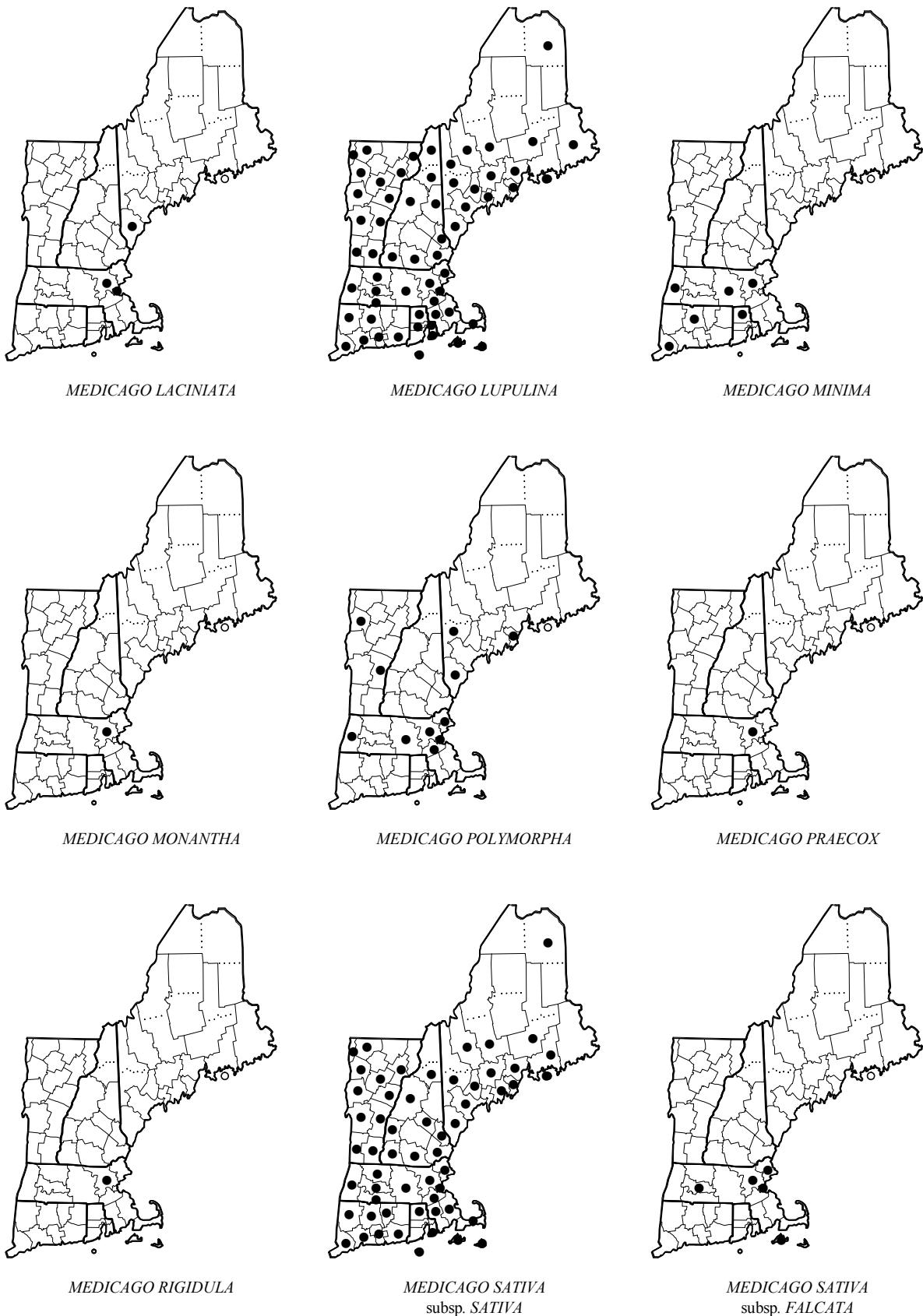


Figure 13. Distribution maps.

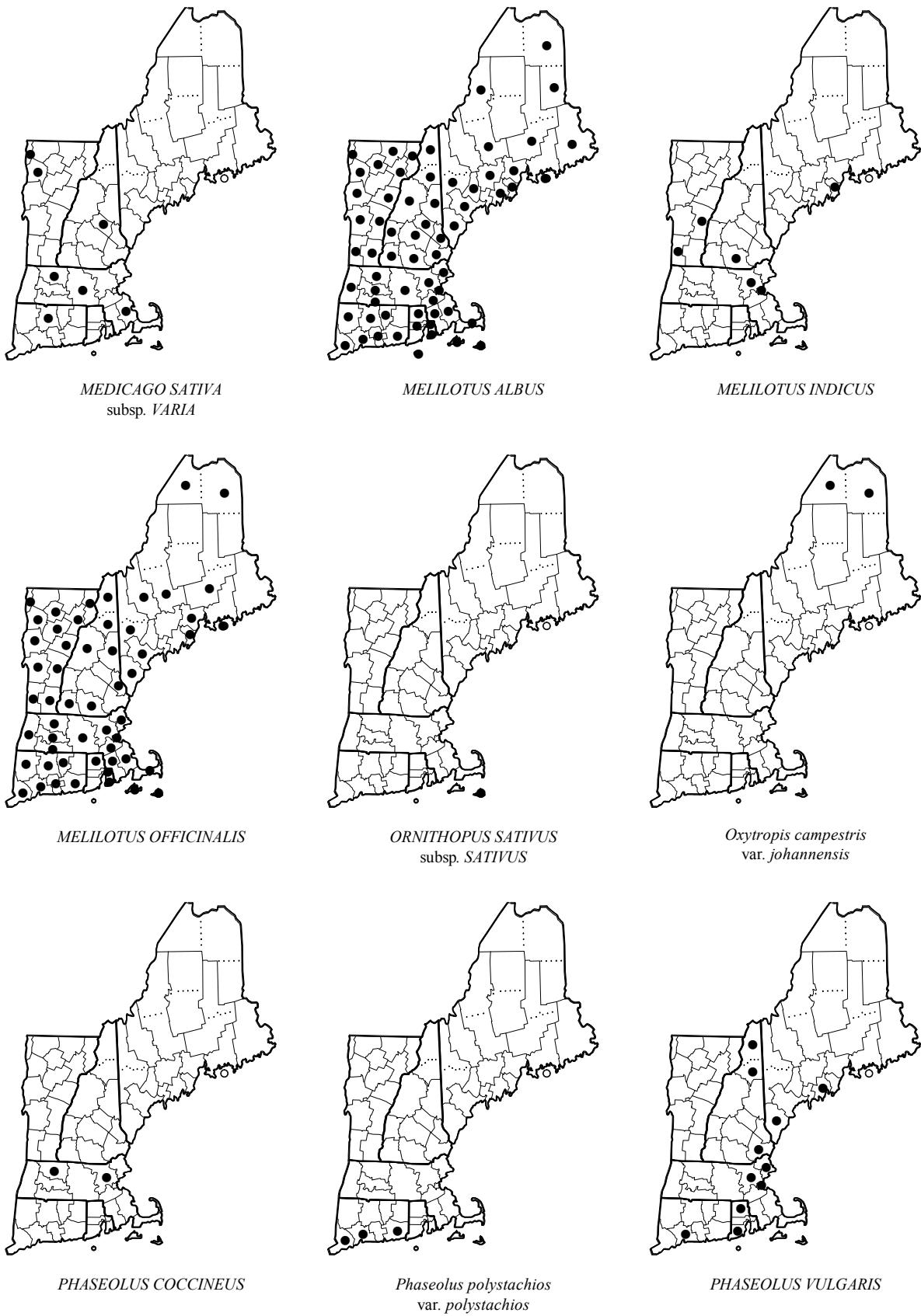


Figure 14. Distribution maps.

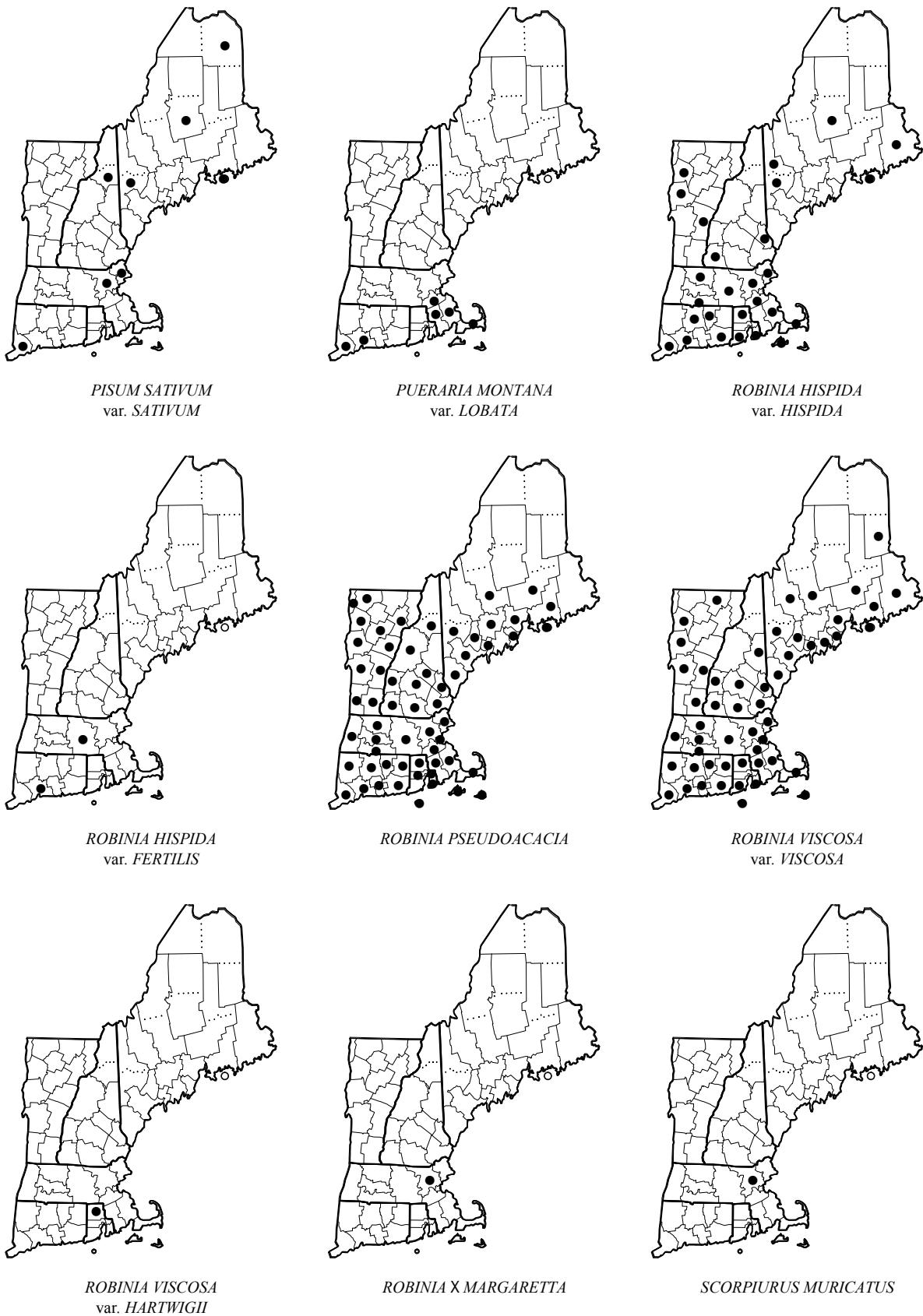


Figure 15. Distribution maps.

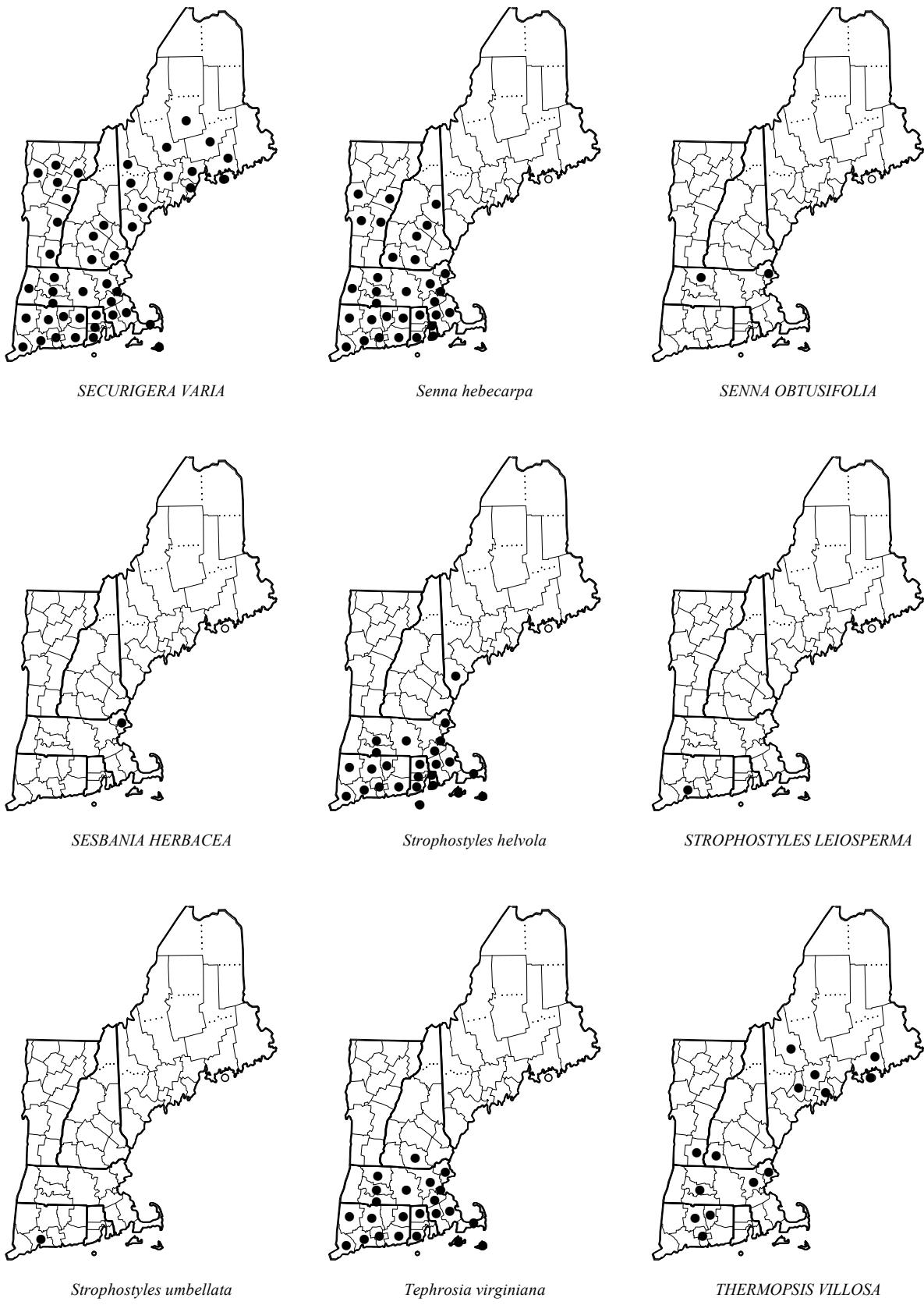


Figure 16. Distribution maps.

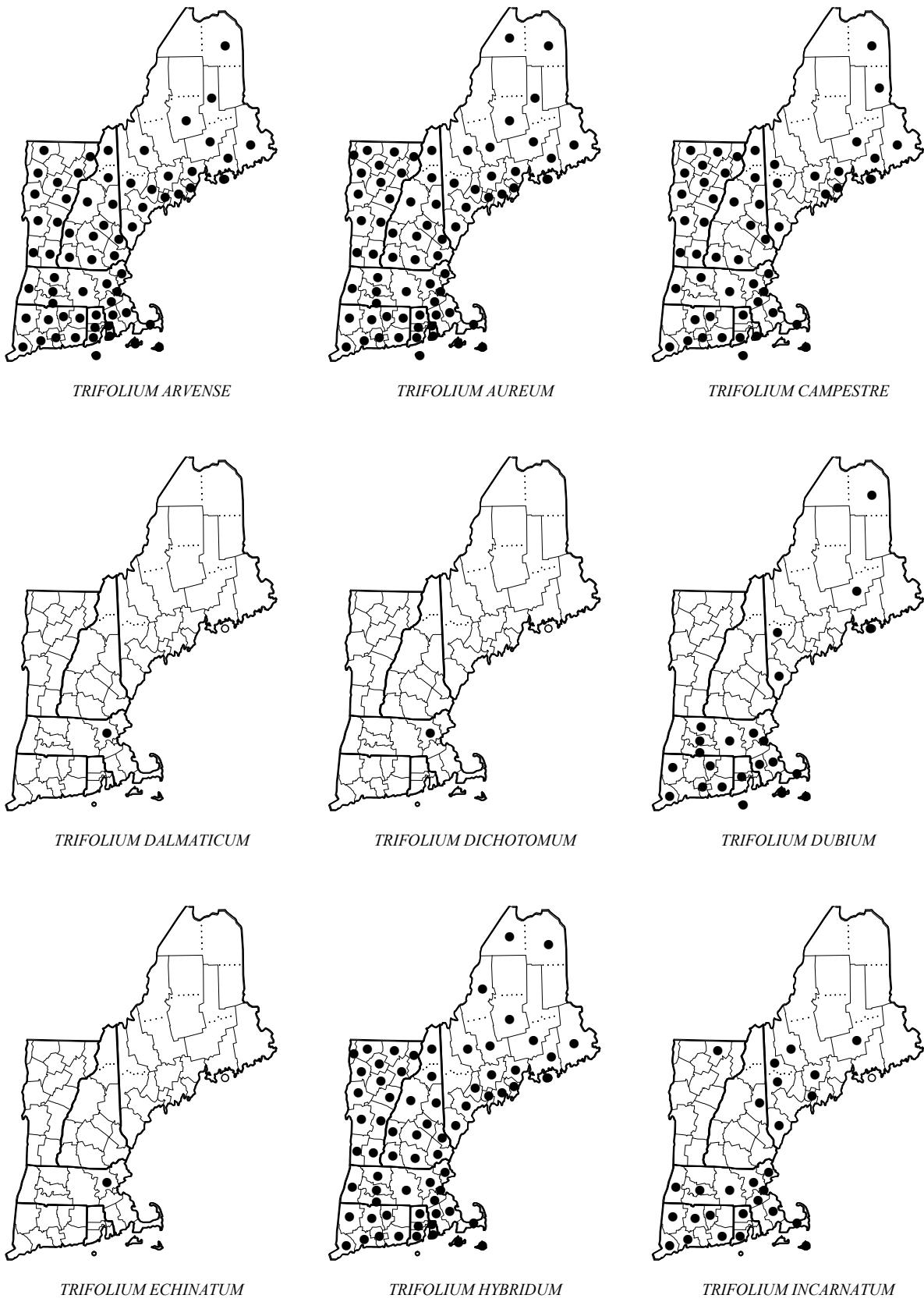


Figure 17. Distribution maps.

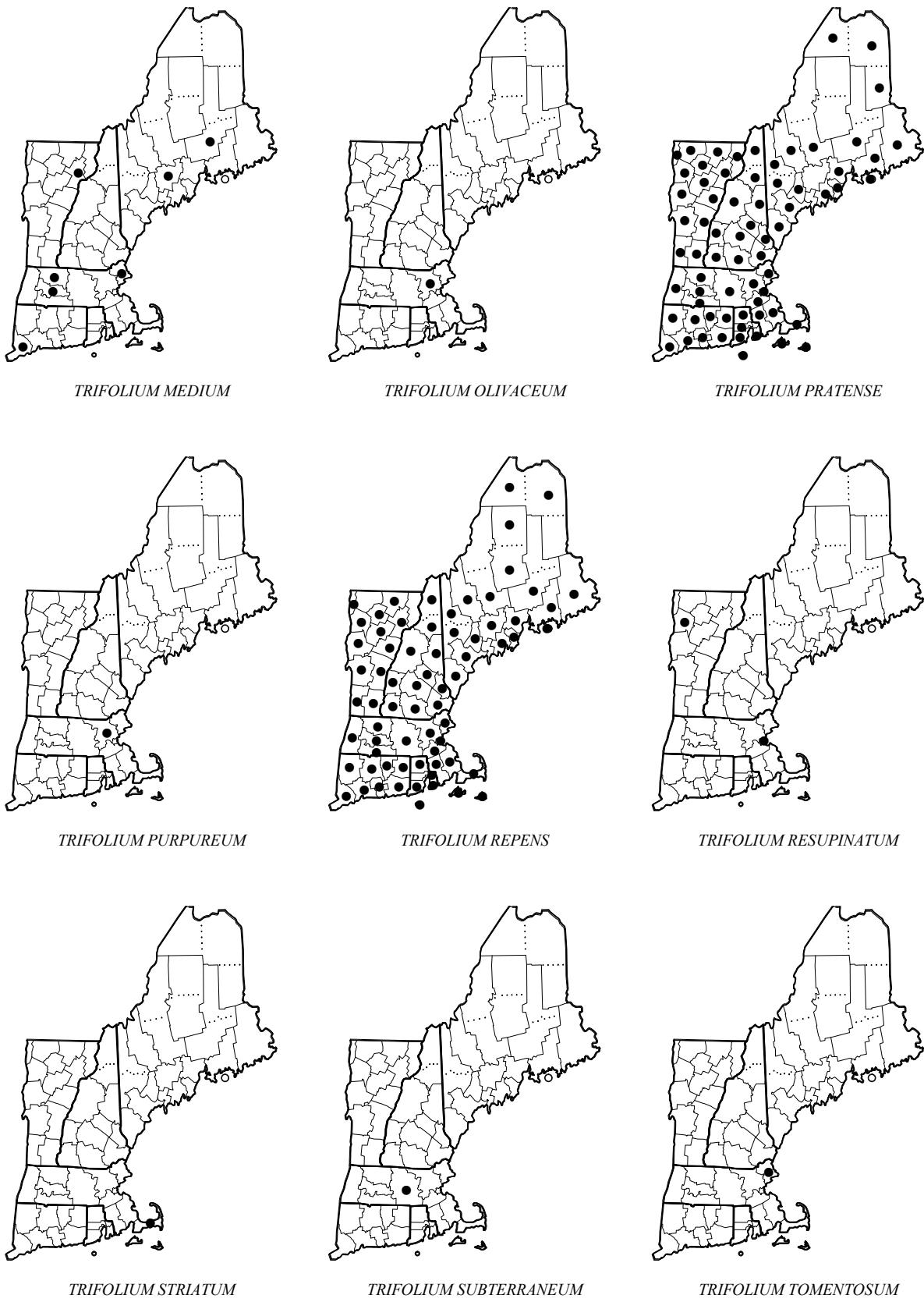


Figure 18. Distribution maps.

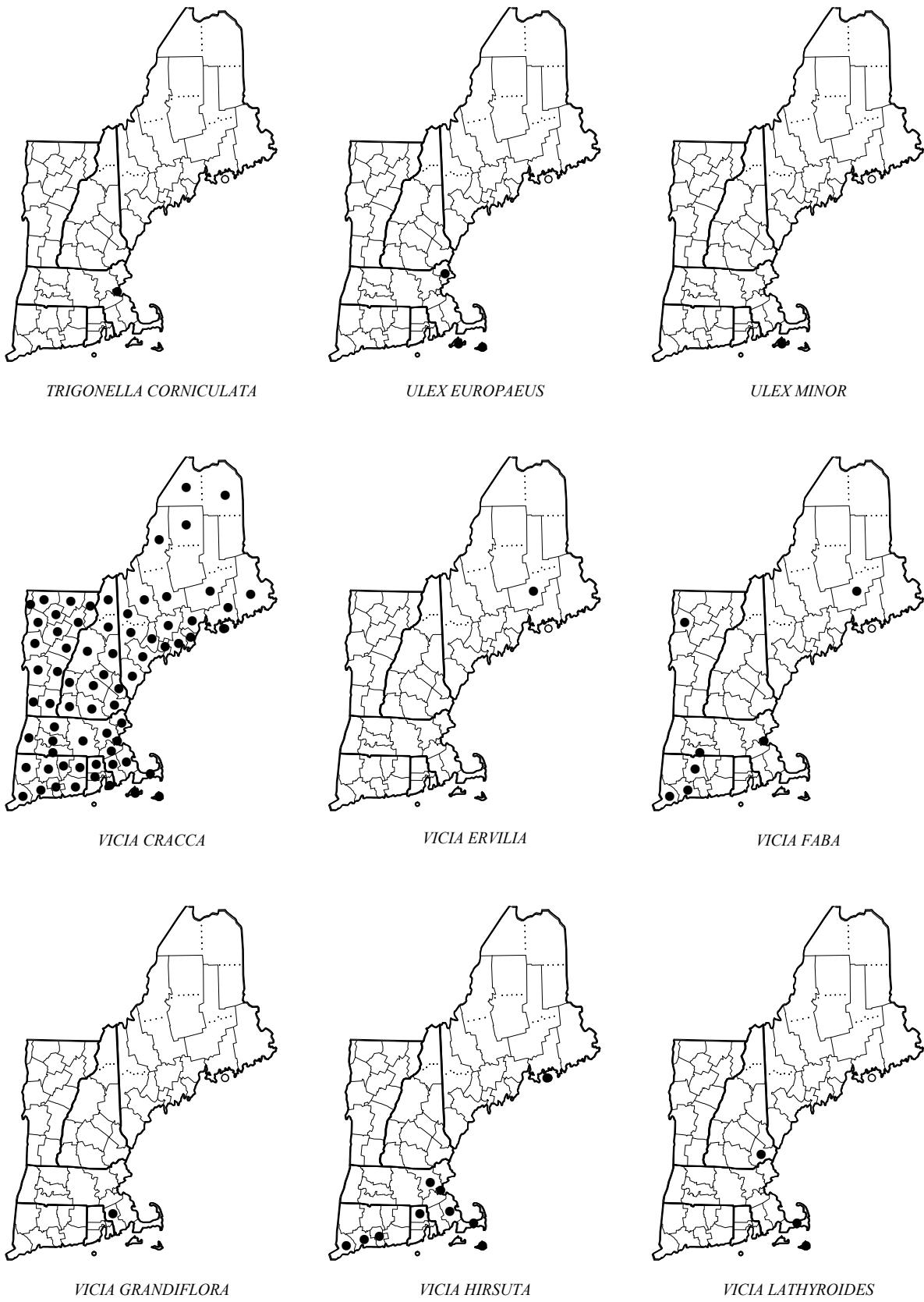


Figure 19. Distribution maps.

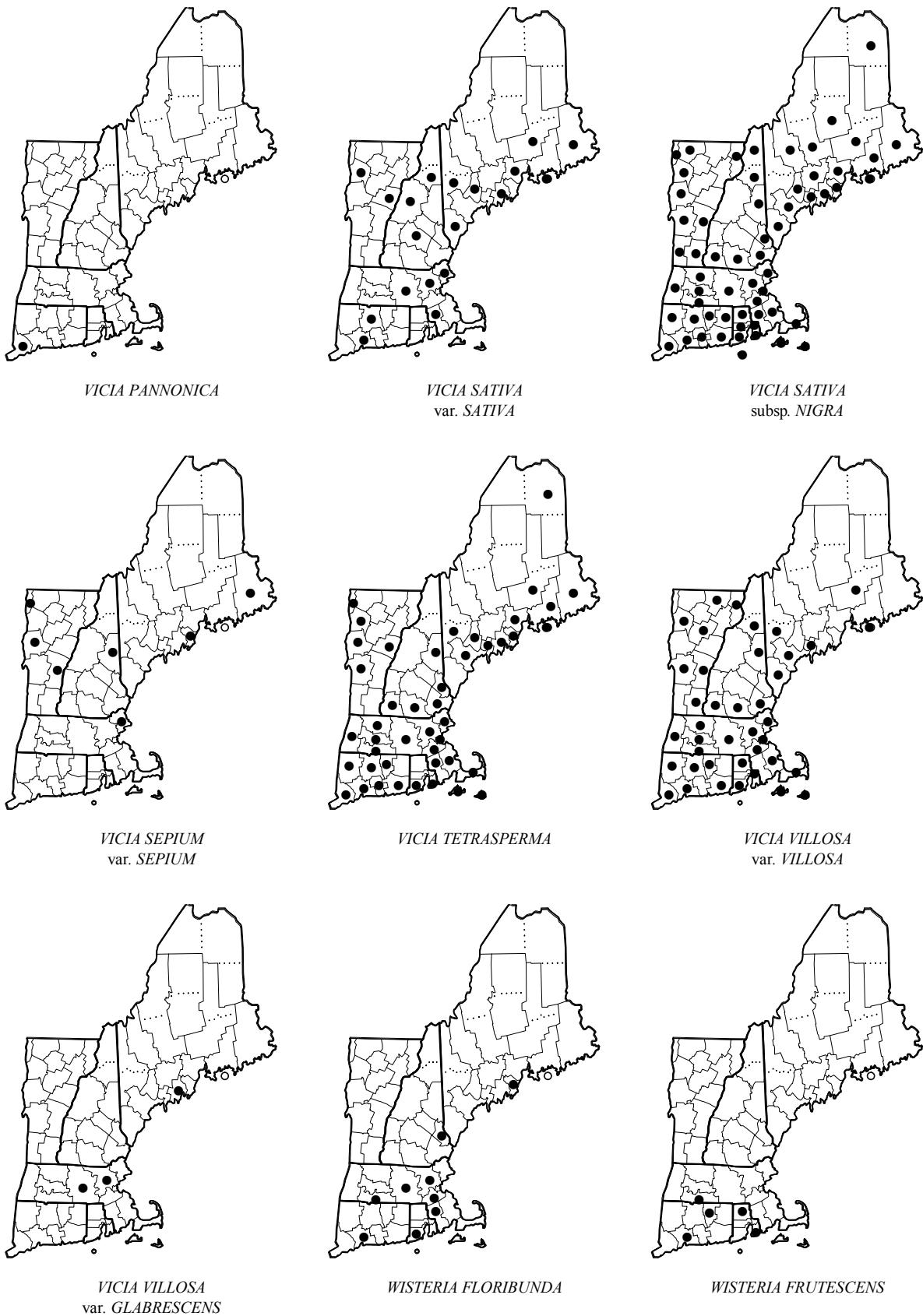
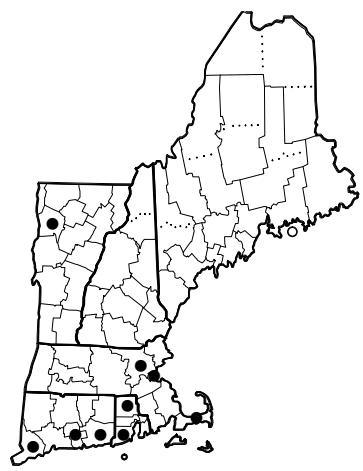


Figure 20. Distribution maps.



*WISTERIA SINENSIS*

Figure 21. Distribution map.