

UNITED STATES DEPARTMENT OF AGRICULTURE

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APRIL 1938

*Elizabeth McClintock
Nov. 8, 1966*

THE
DISTRIBUTION OF IMPORTANT FOREST TREES
OF THE UNITED STATES

BY

E. N. MUNNS

*Chief, Division of Forest Influences
Forest Service*



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**THE DISTRIBUTION OF IMPORTANT FOREST TREES OF THE
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By E. N. MUNNS, *Chief, Division of Forest Influences,¹ Forest Service*

INTRODUCTION

Information on the range and distribution of forest trees has far-reaching practical usefulness in addition to its value to botanists, naturalists, teachers, and others whose work or interests are with trees. It is a valuable tool for the forester, the lumberman, and the manufacturer in search of raw materials. It is an essential element in erosion and flood control operations, and in land-use planning. Indeed, present trends toward better planning and integration of land use are directing increased attention to forest cover, the species represented in it, and the possibilities of enlarging the contribution of forest land to community welfare. In some cases the occurrence of certain species in a region may assume major importance in such planning. It is the purpose of this publication to make readily accessible the information available in the Forest Service on the distribution of important forest trees.

The Forest Service, for over 30 years, has been actively gathering data on the species of trees present in the United States and the extent of their occurrence. More than 20 years ago distribution maps were published for American pines, and as a result much new information on these and other forest-tree species has been obtained. Much of this information has been presented in condensed form in United States Department of Agriculture Miscellaneous Circular 92, Check List of the Forest Trees of the United States, Their Names and Ranges. There has

been a strong demand, however, to have this material available on maps because of the greater accuracy, simplicity, and detail possible in this form of presentation. Even the most detailed published descriptions of species distribution are found to be too broadly generalized when an attempt is made to plot the ranges on maps. A mere listing of known points of occurrence would be even less satisfactory.

The maps do not, however, carry any implication as to the density, continuity of occurrence, or commercial quality and quantity of the various species. Lumbering, fire, and agricultural development in many parts of the United States have markedly affected the original forest. Although in some instances they may have caused an extension of the range of some species, their influence is usually in the opposite direction, and in extreme cases, such as in portions of the Lake States and the South, they have eliminated formerly abundant species from fairly large areas. It is, however, impractical to show such locally depleted areas on maps of the scale used.

No attempt has been made to show the commercial range of important timber tree species, since changing demands, practices, and standards in utilization would make such information out of date in a comparatively short time.

So many sources of information, published and unpublished, have been drawn upon in the preparation of the maps that individual reference and acknowledgment is not feasible. The sources include taxonomic and botanical handbooks, ecological papers, and occurrence

¹ The maps here presented have been based very largely upon data collected by the late George B. Sudworth, dendrologist of the Forest Service until his death in 1927. Since his death this work has been carried on as an activity of the Division of Silvics. Many of the more recent data have been compiled by William W. Mitchell, junior forester.

notes by botanists, foresters, biologists, and other workers. However, since not all of the unpublished notes have been supported by authenticated herbarium specimens, an effort has been made to include only reports of qualified observers.

Nomenclature of the species, both scientific and common names, and the order of arrangement, follow the Check List. Since the issuance of that publication in 1927, certain minor revisions in the standard nomenclature have been adopted by the Forest Service. These have been incorporated in the present publication along with other minor corrections listed below.

CHECK LIST	CORRECTION
<i>Pinus monticola</i> D. Don.	<i>Pinus monticola</i> Douglas.
<i>Pinus balfouriana</i> Murray.	<i>Pinus balfouriana</i> A. Murray.
<i>Pinus resinosa</i> Solander.	<i>Pinus resinosa</i> Aiton.
<i>Pinus ponderosa</i> Lawson.	<i>Pinus ponderosa</i> Douglas.
<i>Pinus jeffreyi</i> "Oreg. Com."	<i>Pinus jeffreyi</i> Greville and Balfour.
<i>Pinus contorta</i> Loudon.	<i>Pinus contorta</i> Douglas.
<i>Picea engelmannii</i> Engelm.	<i>Picea engelmannii</i> (Parry) Engelm.
<i>Pseudotsuga taxifolia</i> (La Marck) Britton.	<i>Pseudotsuga taxifolia</i> (Lambert) Britton.

CHECK LIST—continued

Abies concolor Lindley and Gordon.
Abies amabilis (Loudon) Forbes.
Chamaecyparis nootkatensis (Lambert) Sudworth.
Populus trichocarpa Hooker.
Ostrya virginiana (Miller) Koch.
Betula lutea Michaux.
Betula populifolia Marsh.
Gymnocladus dioicus (Linnaeus) Koch.
Acer nigrum F. A. Michaux.

CORRECTION—continued

Abies concolor Lindley.
Abies amabilis (Douglas) Forbes.
Chamaecyparis nootkatensis (Lambert) Spach.
Populus trichocarpa Torrey and Gray.
Ostrya virginiana (Miller) K. Koch.
Betula lutea Michaux filius.
Betula populifolia Marshall.
Gymnocladus dioicus (Linnaeus) K. Koch.
Acer nigrum Michaux filius.

Although collection of data has continued for many years, the records are still incomplete. One of the objectives of the present publication, therefore, is to stimulate interest in the accumulation of more accurate information on the distribution of our North American trees. The Forest Service will welcome data indicating the need for changes on the present maps. Location data should be as specific as possible to facilitate plotting, and occurrence should be substantiated by herbarium specimens when their collection is practicable.

TREE DISTRIBUTION MAPS

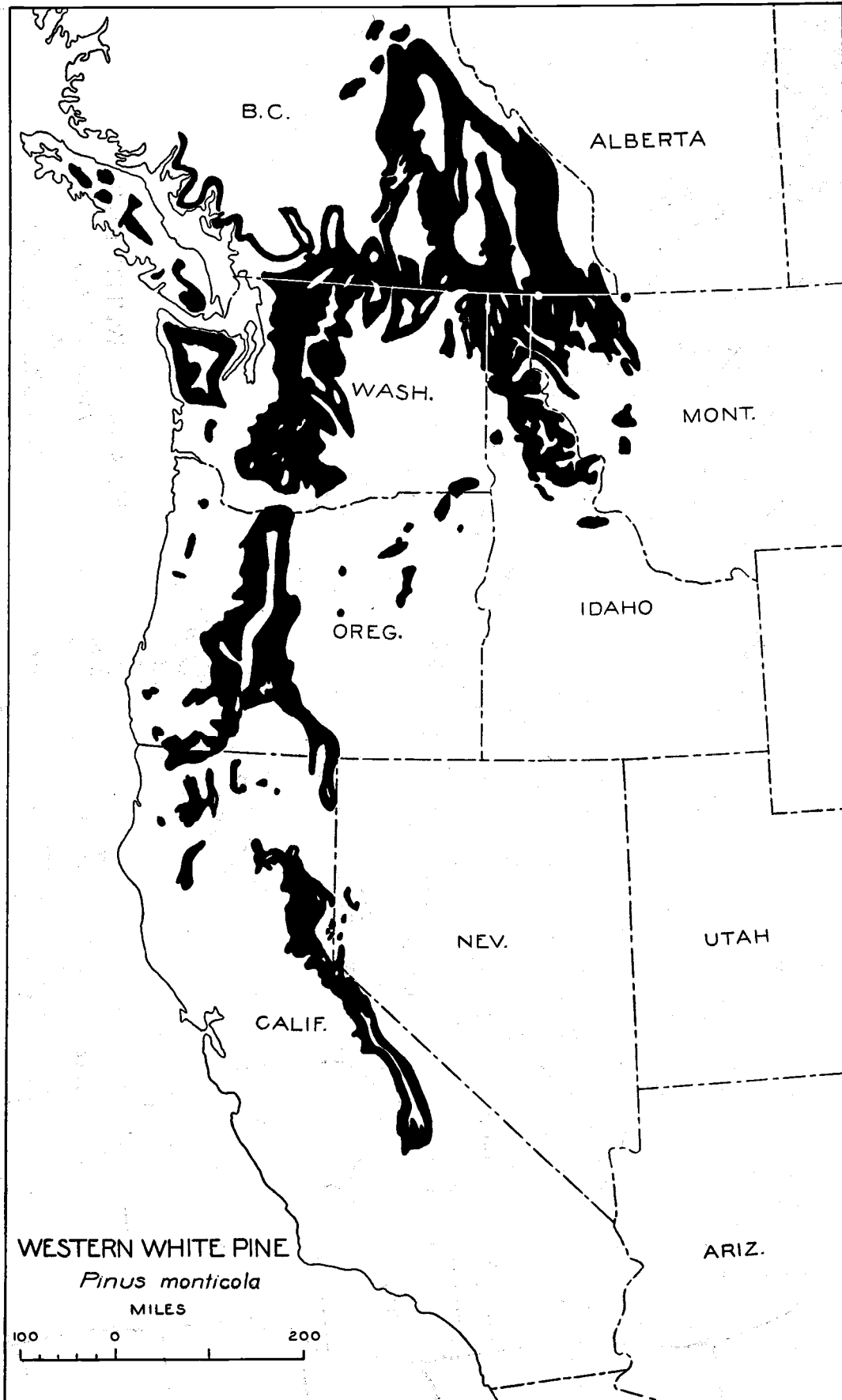
	Map no.		Map no.
<i>Pinus strobus</i> Linnaeus, northern white pine.....	1	<i>Chamaecyparis thyoides</i> (Linnaeus) Britton, Sterns, and Poggenberg, southern white cedar.....	55
<i>Pinus monticola</i> Douglas, western white pine.....	2	<i>Chamaecyparis nootkatensis</i> (Lambert) Spach, Alaska cedar.....	56
<i>Pinus lambertiana</i> Douglas, sugar pine.....	3	<i>Chamaecyparis lawsoniana</i> (A. Murray) Parlatore, Port Orford cedar.....	57
<i>Pinus flexilis</i> James, limber pine.....	4	<i>Juniperus occidentalis</i> Hooker, western juniper.....	58
<i>Pinus albicaulis</i> Engelm., whitebark pine.....	5	<i>Juniperus virginiana</i> Linnaeus, eastern red cedar.....	59
<i>Pinus strobiformis</i> Engelm., Mexican white pine.....	6	<i>Taxus brevifolia</i> Nuttall, Pacific yew.....	60
<i>Pinus cembroides</i> Zuccarini, Mexican piñon.....	7	<i>Juglans cinerea</i> Linnaeus, butternut.....	61
<i>Pinus edulis</i> Engelm., piñon.....	8	<i>× Juglans quadrangulata</i> Rehder.....	62
<i>Pinus monophylla</i> Torrey and Fremont, singleleaf piñon.....	9	<i>Juglans nigra</i> Linnaeus, black walnut.....	63
<i>Pinus balfouriana</i> A. Murray, foxtail pine.....	10	<i>Hicoria pecan</i> (Marshall) Britton, pecan.....	64
<i>Pinus aristata</i> Engelm., bristlecone pine.....	11	<i>Hicoria cordiformis</i> (Wangenheim) Britton, bitternut hickory.....	65
<i>Pinus resinosa</i> Aiton, red pine.....	12	<i>Hicoria ovata</i> (Miller) Britton, shagbark hickory.....	66
<i>Pinus ponderosa</i> Douglas, ponderosa pine.....	13	<i>Hicoria laciniosa</i> (Michaux filius) Sargent, bigleaf shagbark hickory.....	67
<i>Pinus jeffreyi</i> Greville and Balfour, Jeffrey pine.....	14	<i>Hicoria alba</i> (Linnaeus) Britton, mockernut hickory.....	68
<i>Pinus contorta</i> Douglas, lodgepole pine.....	15	<i>Hicoria glabra</i> (Miller) Sweet, pignut hickory.....	69
<i>Pinus sabiniana</i> Douglas, digger pine.....	16	<i>Populus tremuloides</i> Michaux, aspen.....	70
<i>Pinus coulteri</i> D. Don, Coulter pine.....	17	<i>Populus grandidentata</i> Michaux, large-tooth aspen.....	71
<i>Pinus taeda</i> Linnaeus, loblolly pine.....	18	<i>Populus heterophylla</i> Linnaeus, swamp cottonwood.....	72
<i>Pinus rigida</i> Miller, pitch pine.....	19	<i>Populus balsamifera</i> Linnaeus, balsam poplar.....	73
<i>Pinus rigida serotina</i> (Michaux) Loudon, pond pine.....	20	<i>Populus trichocarpa</i> Torrey and Gray, black cottonwood.....	74
<i>Pinus virginiana</i> Miller, Virginia pine.....	21	<i>Populus deltoides</i> Marshall, eastern cottonwood.....	75
<i>Pinus echinata</i> Miller, shortleaf pine.....	22	<i>Populus deltoides virginiana</i> (Castiglioni) Sudworth, southern cottonwood.....	76
<i>Pinus glabra</i> Walter, spruce pine.....	23	<i>Salix nigra</i> Marshall, black willow.....	77
<i>Pinus banksiana</i> Lambert, jack pine.....	24	<i>Salix amygdaloides</i> Andersson, peachleaf willow.....	78
<i>Pinus palustris</i> Miller, longleaf pine.....	25	<i>Carpinus caroliniana</i> Walter, blue beech.....	79
<i>Pinus caribaea</i> Morelet, slash pine.....	26	<i>Ostrya virginiana</i> (Miller) K. Koch, hophornbeam.....	80
<i>Larix laricina</i> (DuRoi) K. Koch, tamarack.....	27	<i>Betula lenta</i> Linnaeus, sweet birch.....	81
<i>Larix occidentalis</i> Nuttall, western larch.....	28	<i>Betula lutea</i> Michaux filius, yellow birch.....	82
<i>Picea mariana</i> (Miller) Britton, Sterns, and Poggenberg, black spruce.....	29	<i>Betula nigra</i> Linnaeus, river birch.....	83
<i>Picea rubra</i> Link. ² red spruce.....	30	<i>Betula populifolia</i> Marshall, gray birch.....	84
<i>Picea glauca</i> (Moench) Voss, white spruce.....	31	<i>Betula papyrifera</i> Marshall, paper birch.....	85
<i>Picea engelmanni</i> (Parry) Engelm., Engelmann spruce.....	32	<i>Alnus rubra</i> Bongard, ⁴ red alder.....	86
<i>Picea pungens</i> Engelm., blue spruce.....	33	<i>Alnus rhombifolia</i> Nuttall, white alder.....	87
<i>Picea sitchensis</i> (Bongard) Carrière, Sitka spruce.....	34	<i>Fagus grandifolia</i> Ehrhart, beech.....	88
<i>Tsuga canadensis</i> (Linnaeus) Carrière, eastern hemlock.....	35	<i>Castanea pumila</i> (Linnaeus) Miller, chinquapin.....	89
<i>Tsuga heterophylla</i> (Rafinesque) Sargent, western hemlock.....	36	<i>Castanea dentata</i> (Marshall) Borkhausen, chestnut.....	90
<i>Tsuga mertensiana</i> (Bongard) Sargent, mountain hemlock.....	37	<i>Lithocarpus densiflora</i> (Hooker and Arnott) Rehder, tanoak.....	91
<i>Pseudotsuga taxifolia</i> (Lambert) Britton, ³ Douglas fir.....	38	<i>Quercus borealis</i> Michaux filius, red oak.....	92
<i>Pseudotsuga macrocarpa</i> (Torrey) Mayr, bigcone-spruce.....	39	<i>Quercus borealis maxima</i> (Marshall) Ashe, red oak.....	93
<i>Abies balsamea</i> (Linnaeus) Miller, balsam fir.....	40	<i>Quercus palustris</i> Muenchhausen, pin oak.....	94
<i>Abies lasiocarpa</i> (Hooker) Nuttall, alpine fir.....	41	<i>Quercus shumardii</i> Buckley, Shumard red oak.....	95
<i>Abies arizonica</i> Merriam, corkbark fir.....	42	<i>Quercus ellipsoidalis</i> E. J. Hill, jack oak.....	96
<i>Abies grandis</i> Lindley, lowland white fir.....	43	<i>Quercus coccinea</i> Muenchhausen } scarlet oak.....	97
<i>Abies concolor</i> Lindley, white fir.....	44	<i>Quercus coccinea tuberculata</i> Sargent } black oak.....	98
<i>Abies amabilis</i> (Douglas) Forbes, silver fir.....	45	<i>Quercus velutina</i> La Marek } black oak.....	99
<i>Abies nobilis</i> Lindley, noble fir.....	46	<i>Quercus velutina missouriensis</i> Sargent } black oak.....	100
<i>Abies magnifica</i> A. Murray, California red fir.....	47	<i>Quercus kelloggii</i> Newberry, California black oak.....	101
<i>Abies magnifica shastensis</i> Lemmon, Shasta red fir.....	48	<i>Quercus ilicifolia</i> Wangenheim, bear oak.....	102
<i>Sequoia washingtoniana</i> (Winslow) Sudworth, bigtree.....	49	<i>Quercus rubra</i> Linnaeus, southern red oak.....	
<i>Sequoia sempervirens</i> (Lambert) Endlicher, redwood.....	50	<i>Quercus rubra pagodaefolia</i> (Elliott) Ashe, swamp red oak.....	
<i>Taxodium distichum</i> (Linnaeus) Richard, southern cypress.....	51	<i>Quercus marilandica</i> Muenchhausen } blackjack oak.....	
<i>Libocedrus decurrens</i> Torrey, incense cedar.....	52	<i>Quercus marilandica ashei</i> Sudworth } blackjack oak.....	
<i>Thuja occidentalis</i> Linnaeus, northern white cedar.....	53		
<i>Thuja plicata</i> D. Don, western red cedar.....	54		

² Although this name has been adopted in the Check List many well-qualified taxonomists prefer *Picea rubens* Sargent.

³ Although this name has been adopted in the Check List many well-qualified taxonomists prefer *Pseudotsuga mucronata* (Rafinesque) Sudworth.

⁴ Although this name has been adopted in the Check List many well-qualified taxonomists prefer *Alnus oregona* Nuttall.

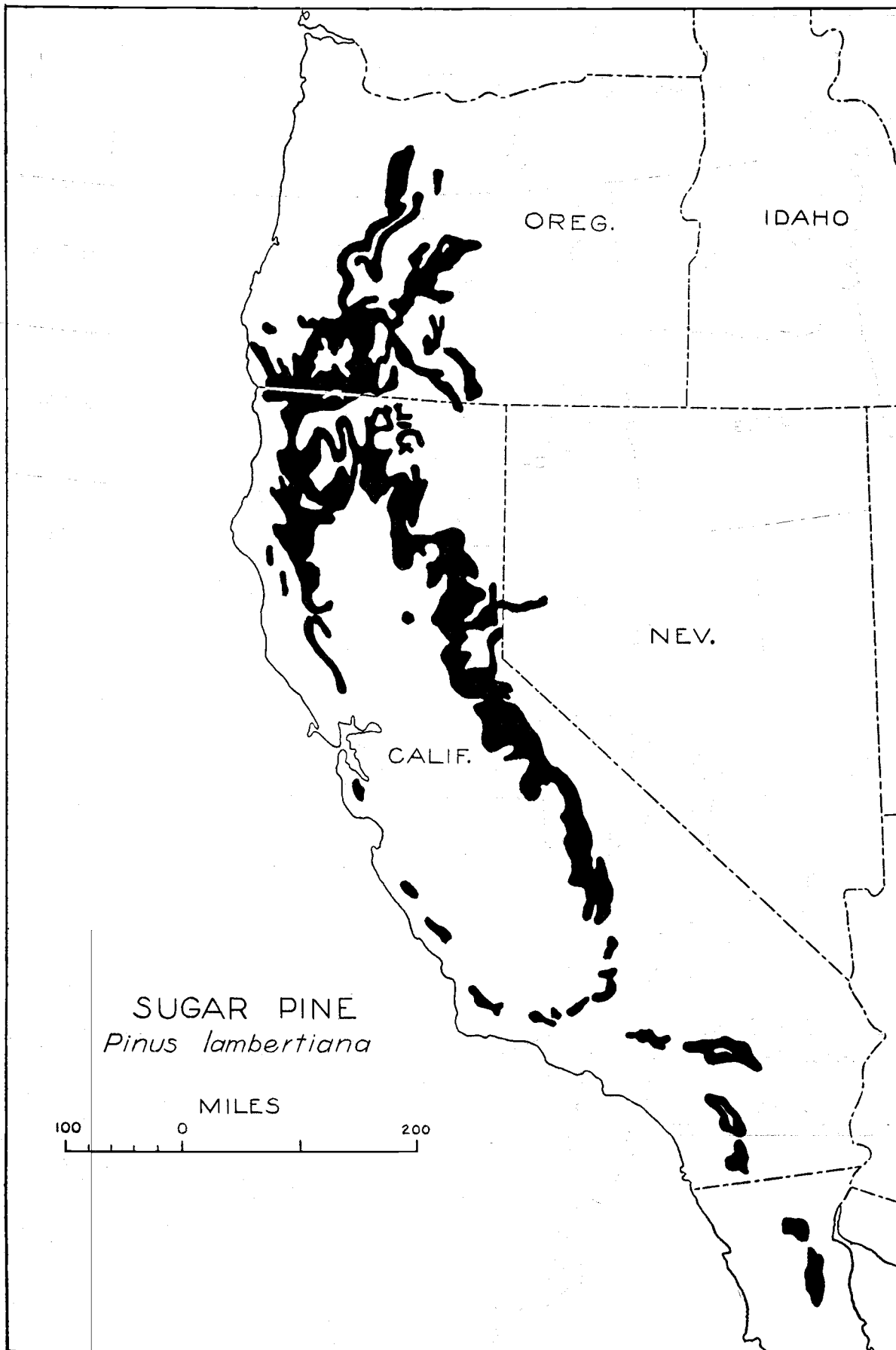
	Map no.		Map no.
<i>Quercus nigra</i> Linnaeus, water oak	103	<i>Prunus pennsylvanica</i> Linnaeus filius, pin cherry	136
<i>Quercus phellos</i> Linnaeus, willow oak		<i>Prunus virginiana</i> Linnaeus, chokecherry	137
× <i>Quercus heterophylla</i> Michaux filius, Bartram oak	104	<i>Prunus serotina</i> Ehrhart, black cherry	138
<i>Quercus laurifolia</i> Michaux, laurel oak	105	<i>Cercis canadensis</i> Linnaeus, redbud	139
<i>Quercus imbricaria</i> Michaux, shingle oak	106	<i>Cercis occidentalis</i> Torrey, California redbud	140
<i>Quercus chrysolepis</i> Liebmann, canyon live oak	107	<i>Gymnocladus dioica</i> (Linnaeus) K. Koch, coffeetree	141
<i>Quercus virginiana</i> Miller, live oak	108	<i>Gleditsia triacanthos</i> Linnaeus, honeylocust	142
<i>Quercus douglasii</i> Hooker and Arnott, California blue oak	109	<i>Robinia pseudoacacia</i> Linnaeus, black locust	143
<i>Quercus alba</i> Linnaeus, white oak	110	<i>Ptelea trifoliata</i> Linnaeus, hoptree	144
<i>Quercus lobata</i> Née, valley white oak	111	<i>Ilex opaca</i> Aiton, holly	145
<i>Quercus garryana</i> Douglas, Oregon white oak	112	<i>Acer pennsylvanicum</i> Linnaeus, striped maple	146
<i>Quercus utahensis</i> (A. de Candolle) Rydberg, Rocky Mountain white oak	113	<i>Acer macrophyllum</i> Pursh, bigleaf maple	147
<i>Quercus stellata</i> Wangenheim, post oak	114	<i>Acer saccharum</i> Marshall, sugar maple	148
<i>Quercus macrocarpa</i> Michaux, bur oak	115	<i>Acer nigrum</i> Michaux filius, black maple	149
<i>Quercus bicolor</i> Willdenow, swamp white oak	116	<i>Acer saccharinum</i> Linnaeus, silver maple	150
<i>Quercus prinus</i> Linnaeus, swamp chestnut oak	117	<i>Acer rubrum</i> Linnaeus, red maple	151
<i>Quercus montana</i> Willdenow, chestnut oak	118	<i>Acer negundo</i> Linnaeus, boxelder	152
<i>Quercus muehlenbergii</i> Engelm, chinquapin oak	119	<i>Aesculus glabra</i> Willdenow, Ohio buckeye	153
<i>Ulmus americana</i> Linnaeus, American elm	120	<i>Aesculus octandra</i> Marshall, yellow buckeye	154
<i>Celtis occidentalis</i> Linnaeus, hackberry	121	<i>Rhamnus purshiana</i> de Candolle, cascara	155
<i>Celtis laevigata</i> Willdenow, sugarberry	122	<i>Tilia glabra</i> Ventenat, basswood	156
<i>Morus rubra</i> Linnaeus, red mulberry	123	<i>Nyssa sylvatica</i> Marshall, black gum	157
<i>Toxylon pomiferum</i> Rafinesque, osage-orange	124	<i>Nyssa aquatica</i> Linnaeus, tupelo gum	158
<i>Magnolia virginiana</i> Linnaeus, sweetbay	125	<i>Cornus florida</i> Linnaeus, dogwood	159
<i>Magnolia acuminata</i> Linnaeus, cucumber magnolia	126	<i>Rhododendron maximum</i> Linnaeus, great rhododendron	160
<i>Liriodendron tulipifera</i> Linnaeus, yellow poplar	127	<i>Kalmia latifolia</i> Linnaeus, mountain-laurel	161
<i>Umbellularia californica</i> (Hooker and Arnott) Nuttall, California-laurel	128	<i>Diospyros virginiana</i> Linnaeus, persimmon	162
<i>Sassafras variifolium</i> (Salisbury) Kuntze, sassafras	129	<i>Fraxinus quadrangulata</i> Michaux, blue ash	163
<i>Hamamelis virginiana</i> Linnaeus, witch-hazel	130	<i>Fraxinus nigra</i> Marshall, black ash	164
<i>Liquidambar styraciflua</i> Linnaeus, red gum	131	<i>Fraxinus americana</i> Linnaeus, white ash	165
<i>Platanus occidentalis</i> Linnaeus, sycamore	132	<i>Fraxinus biltmoreana</i> Beadle, Biltmore white ash	166
<i>Amelanchier canadensis</i> (Linnaeus) Medicus, serviceberry	133	<i>Fraxinus pennsylvanica</i> Marshall, red ash	167
<i>Cercocarpus ledifolius</i> Nuttall, curleaf mountain-mahogany	134	<i>Fraxinus pennsylvanica lanceolata</i> (Borkhausen) Sargent, green ash	168
<i>Prunus americana</i> Marshall, wild plum	135	<i>Fraxinus oregona</i> Nuttall, Oregon ash	169
		<i>Catalpa speciosa</i> Warder, hardy catalpa	170



PINUS MONTICOLA DOUGLAS

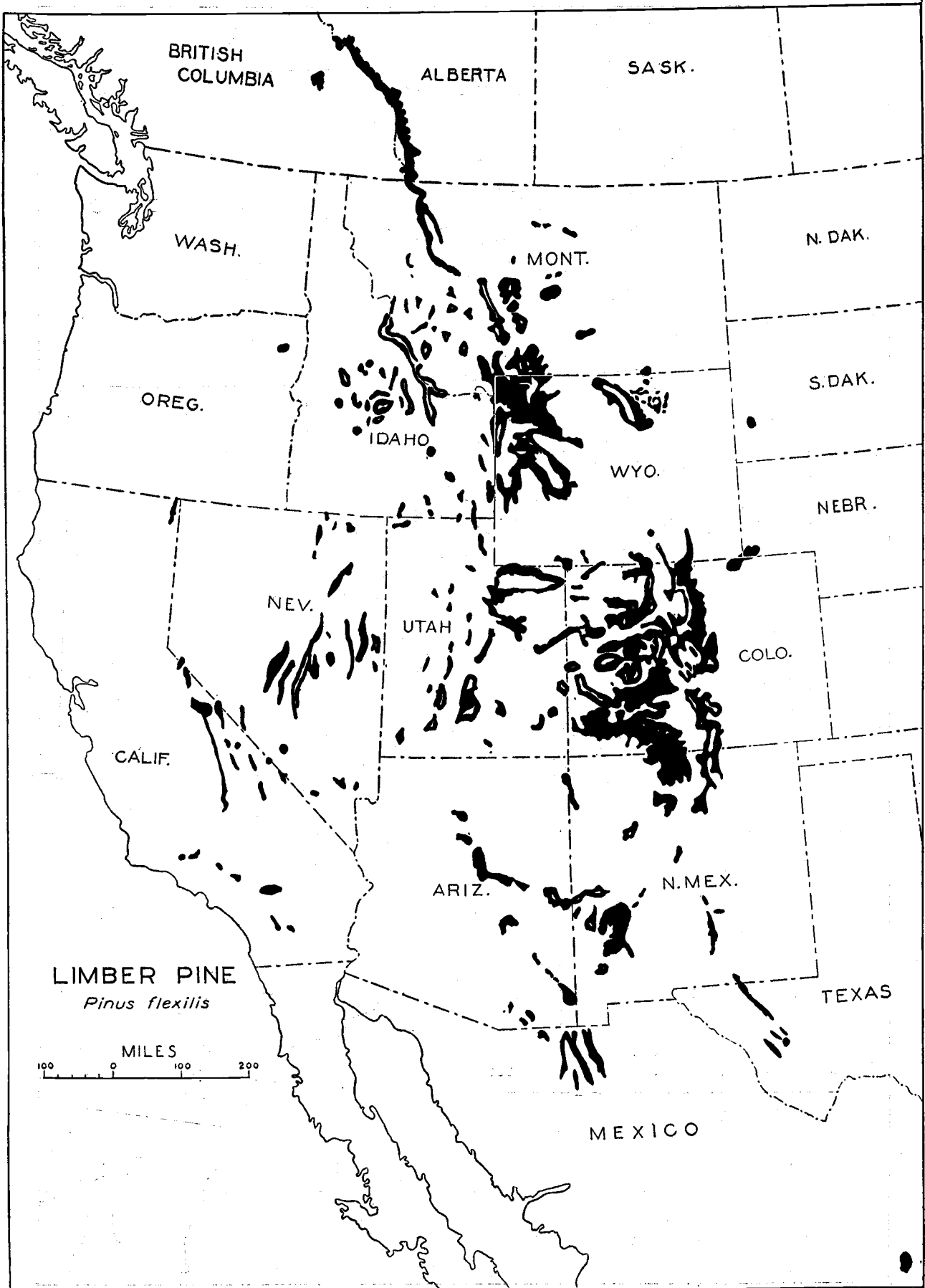
MAP 2

WESTERN WHITE PINE



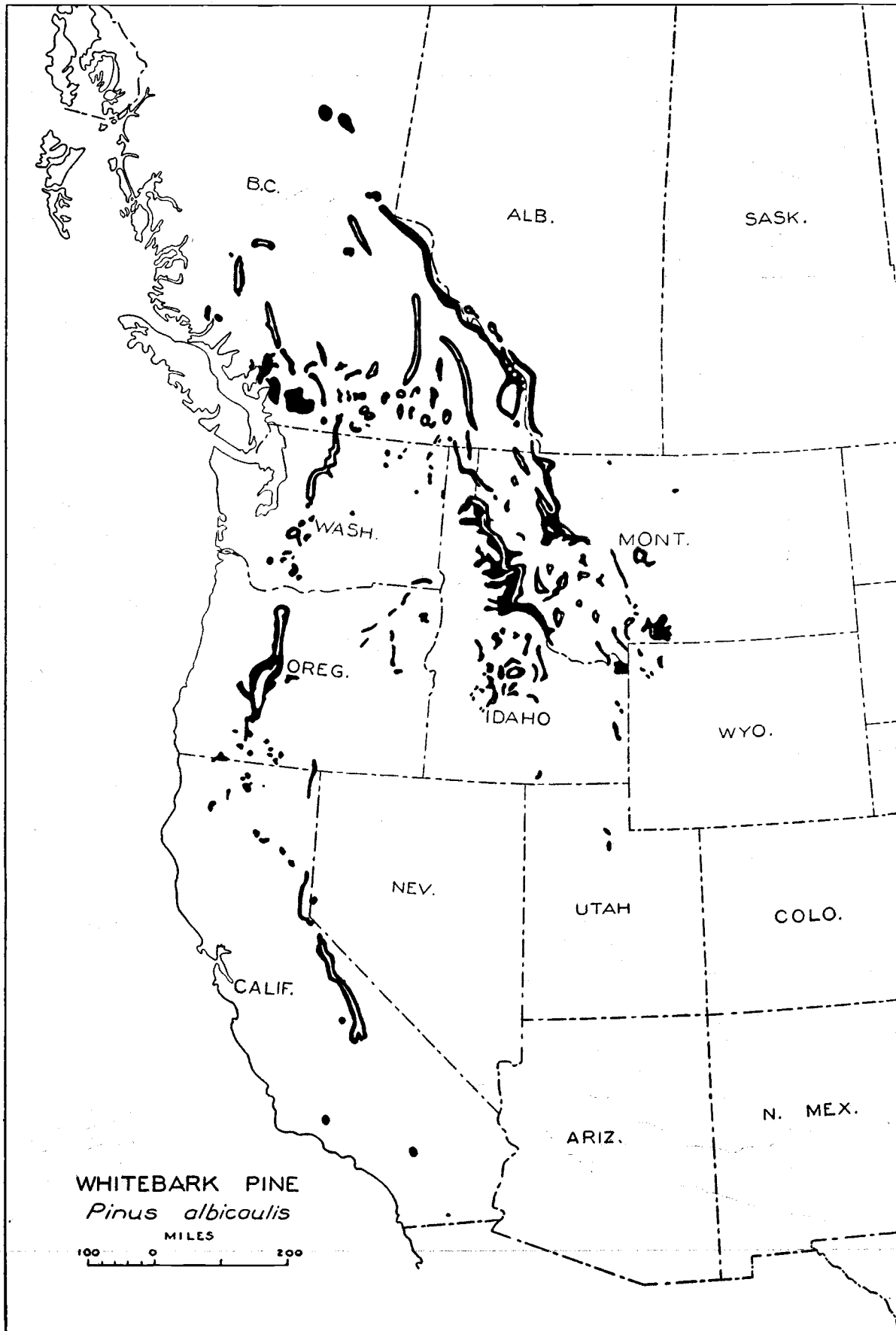
SUGAR PINE
Pinus lambertiana

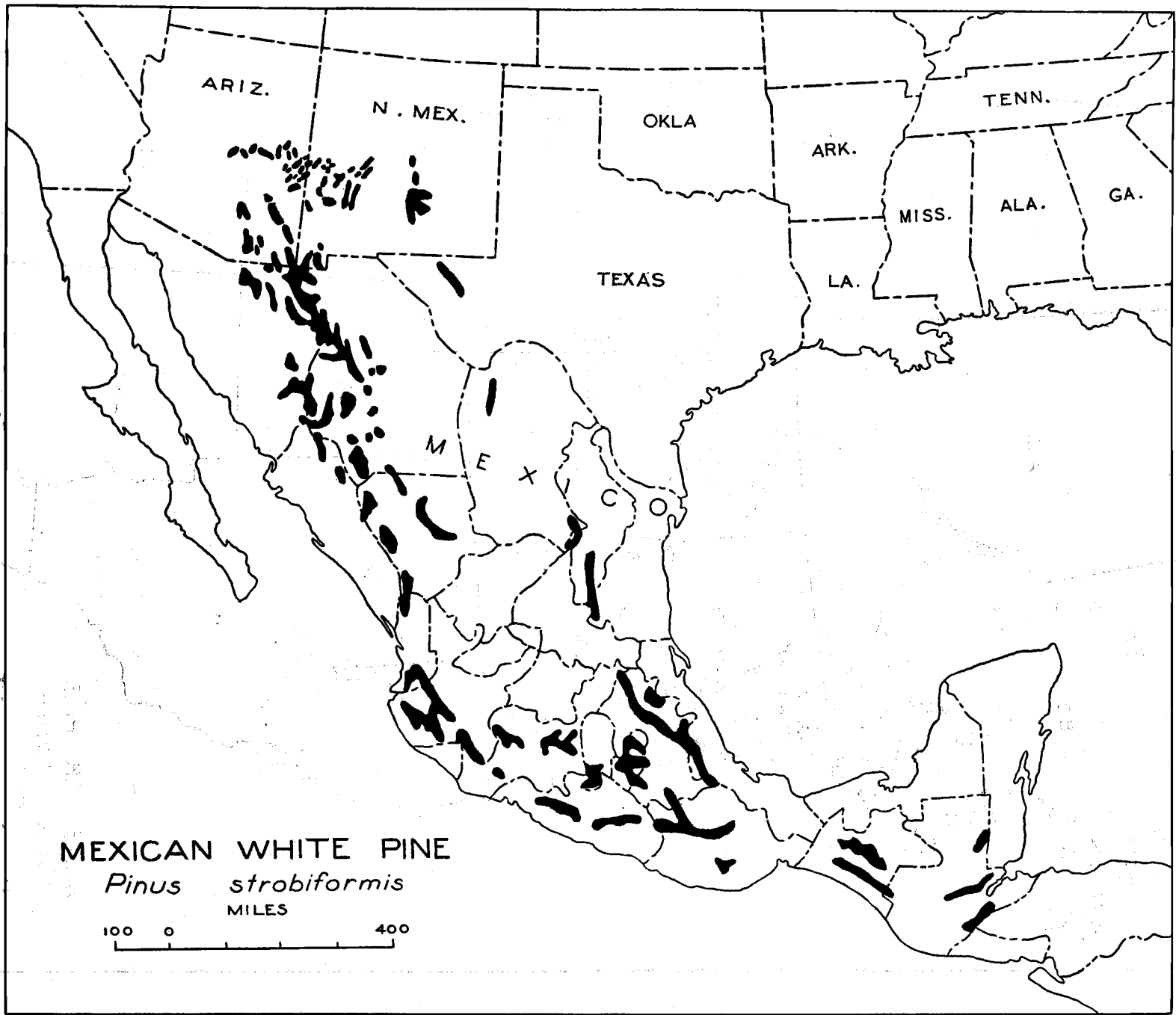
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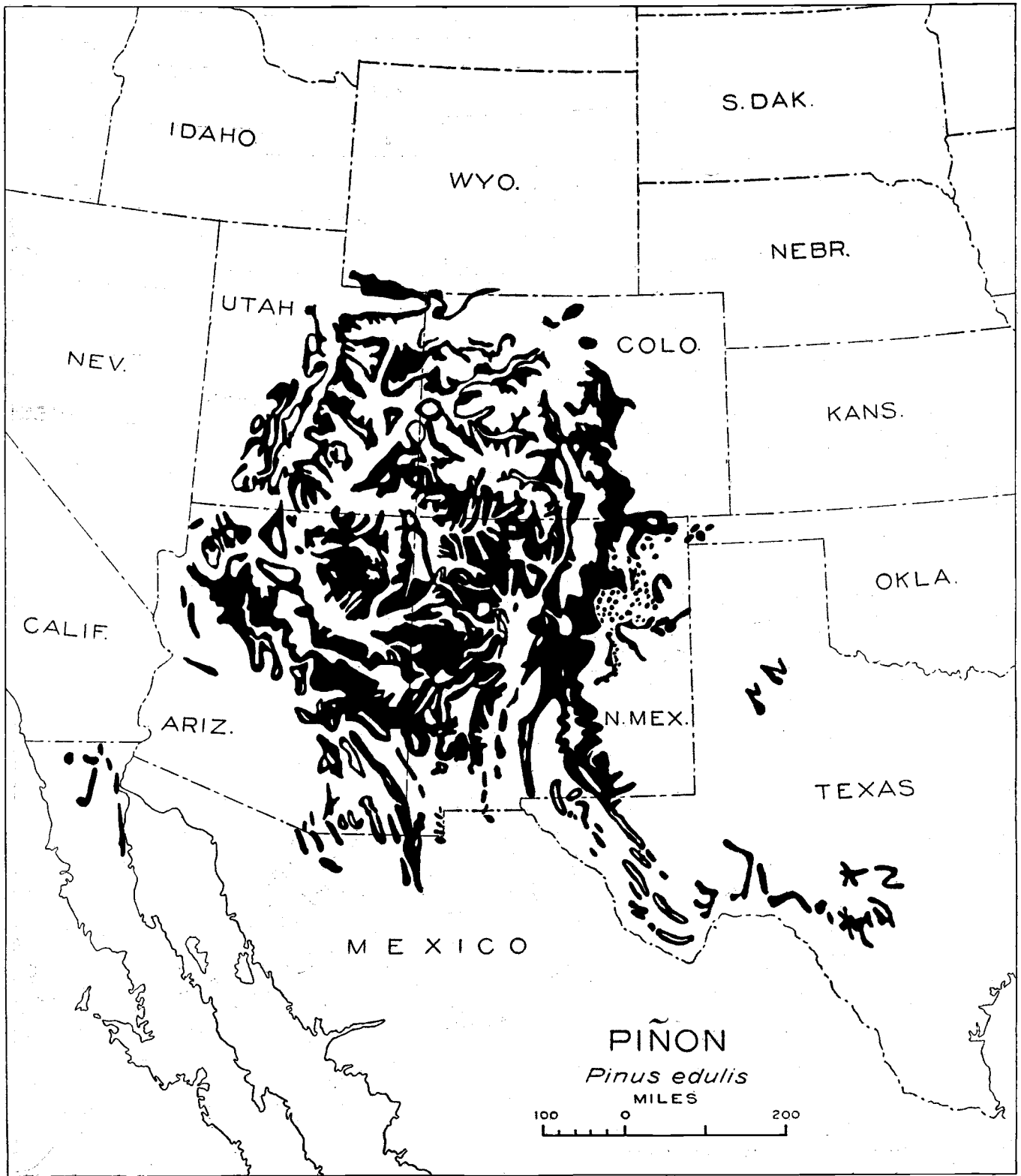
LIMBER PINE
Pinus flexilis

MILES
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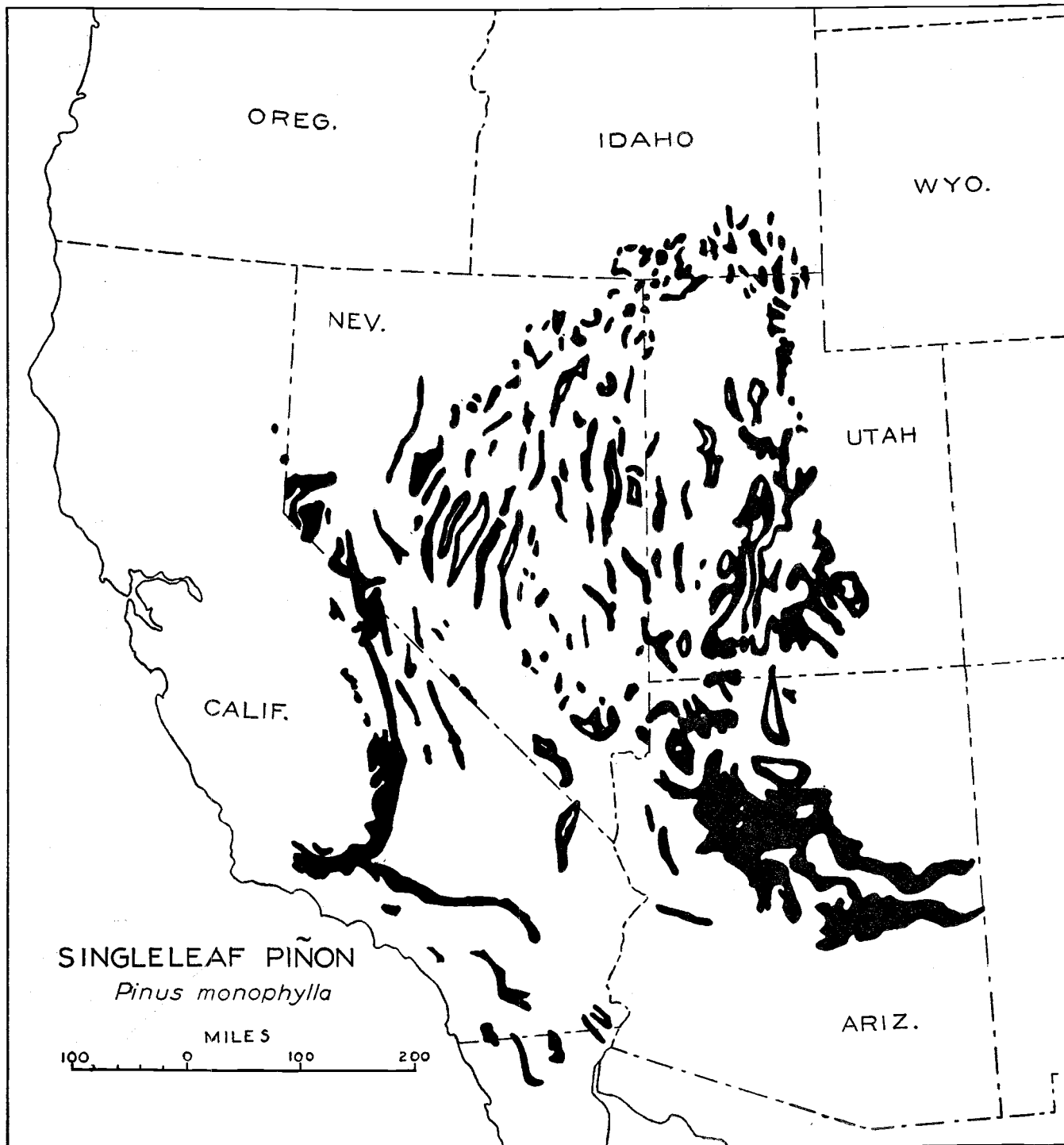




PINUS EDULIS ENGELMANN

MAP 8

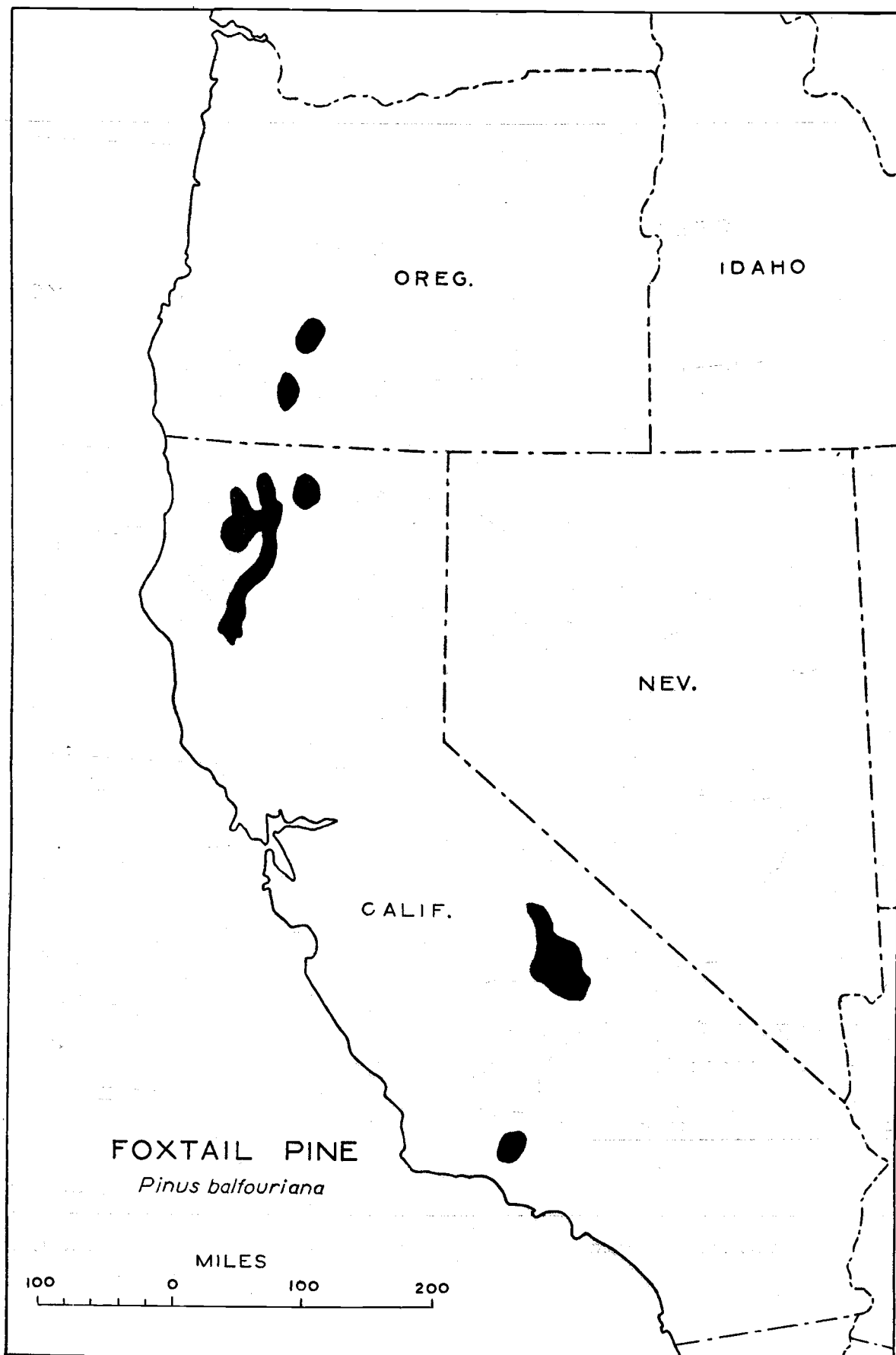
PIÑON

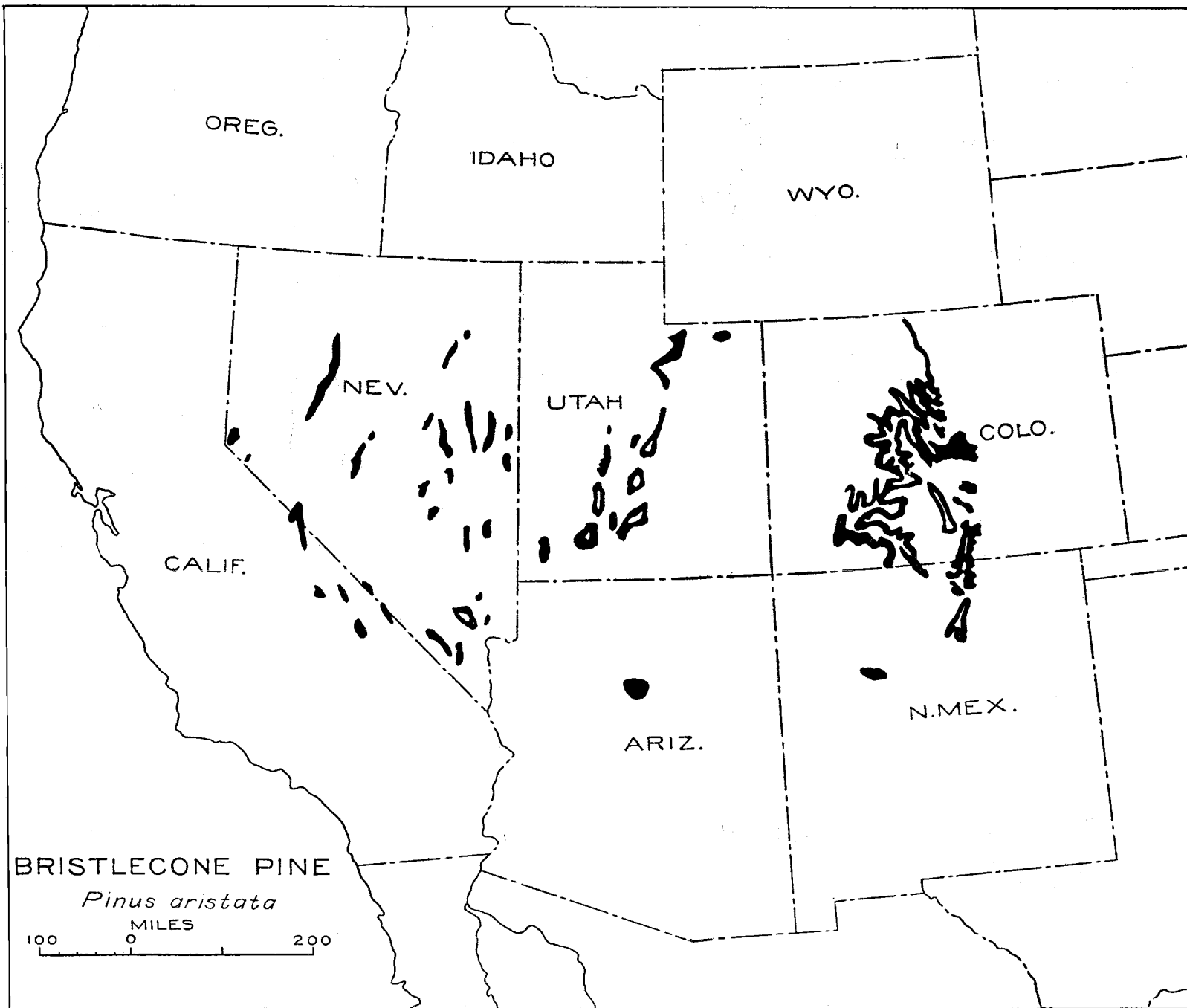


PINUS MONOPHYLLA TORREY AND FREMONT

MAP 9

SINGLELEAF PIÑON

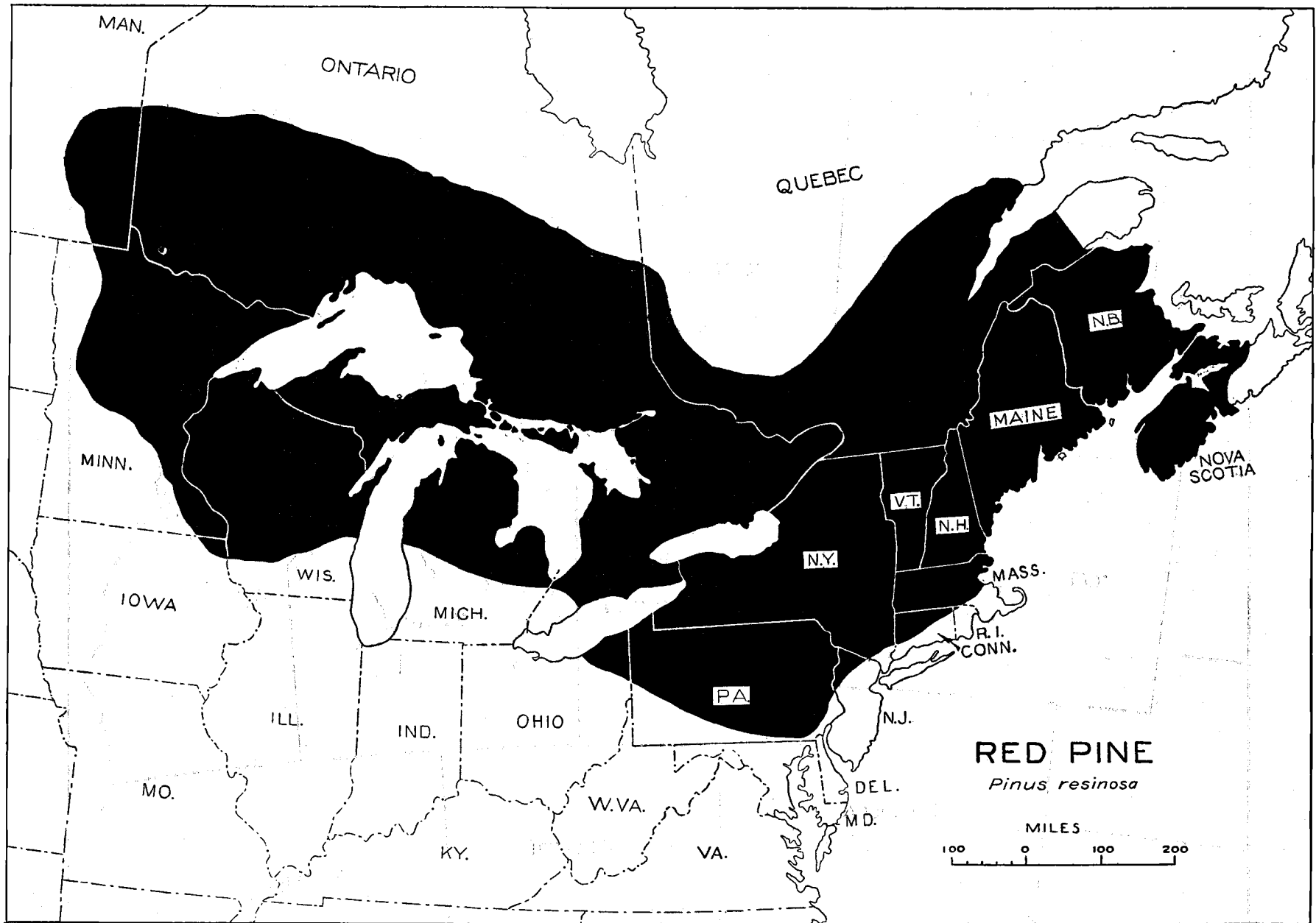




PINUS ARISTATA ENGELMANN

MAP 11

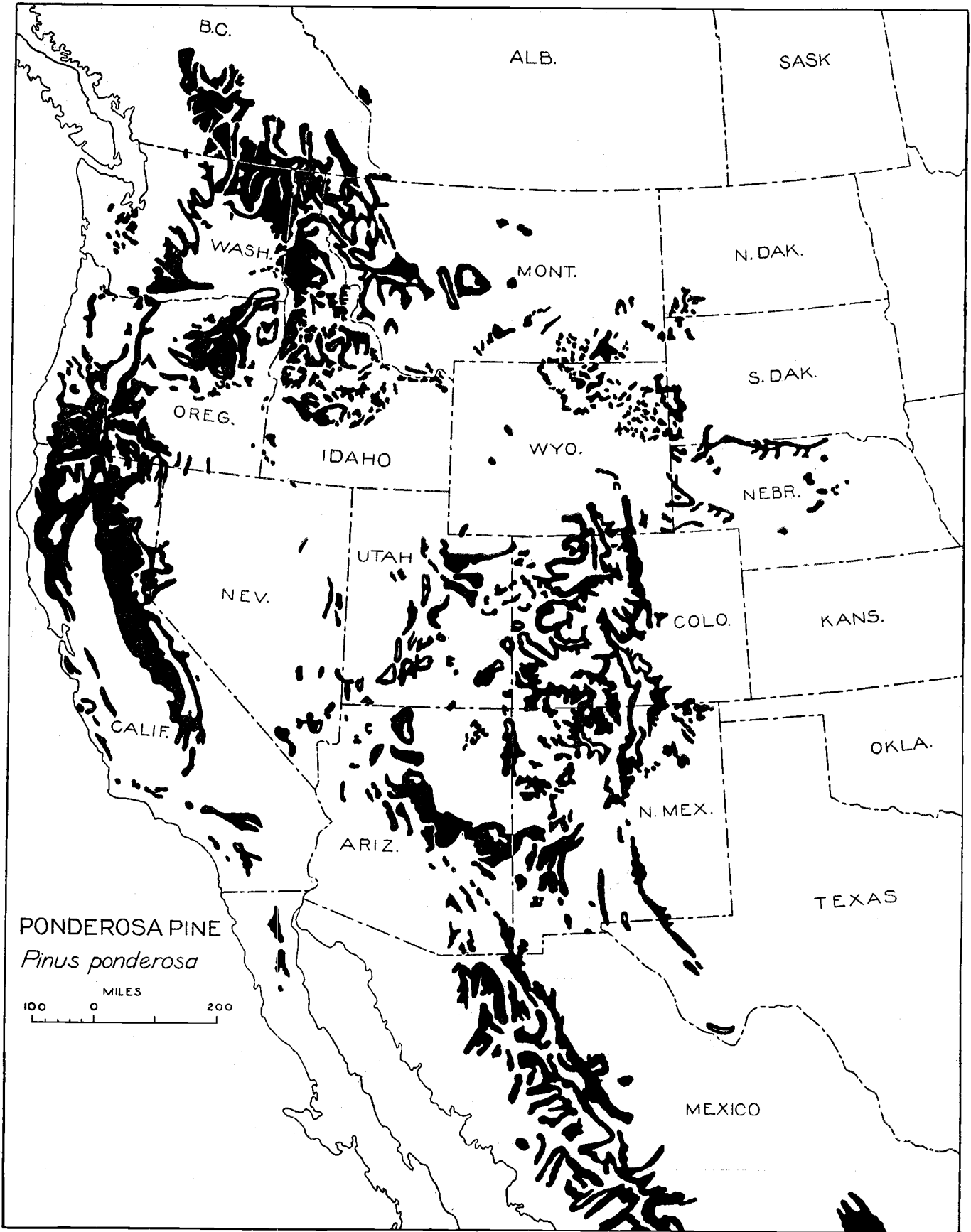
BRISTLECONE PINE

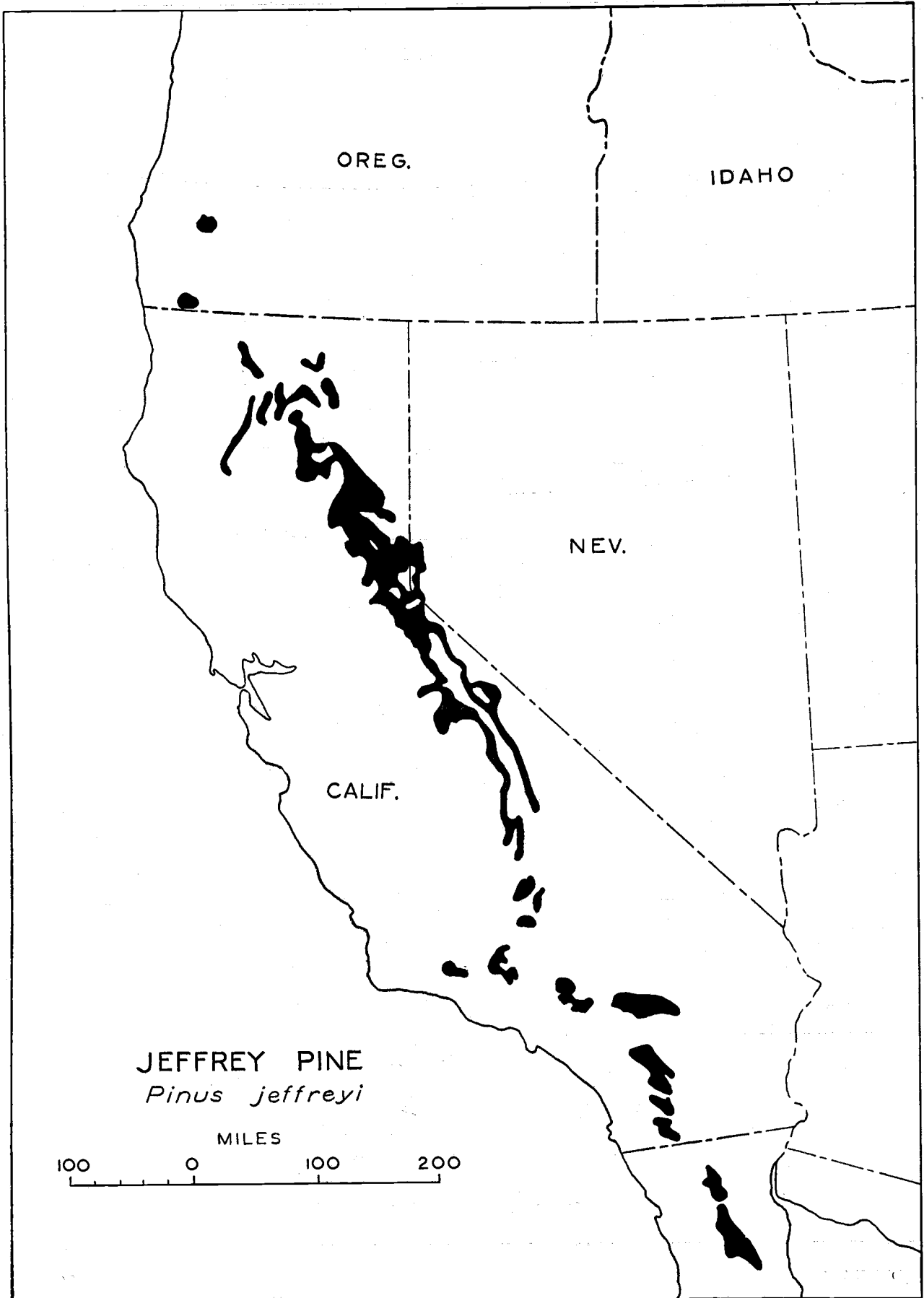


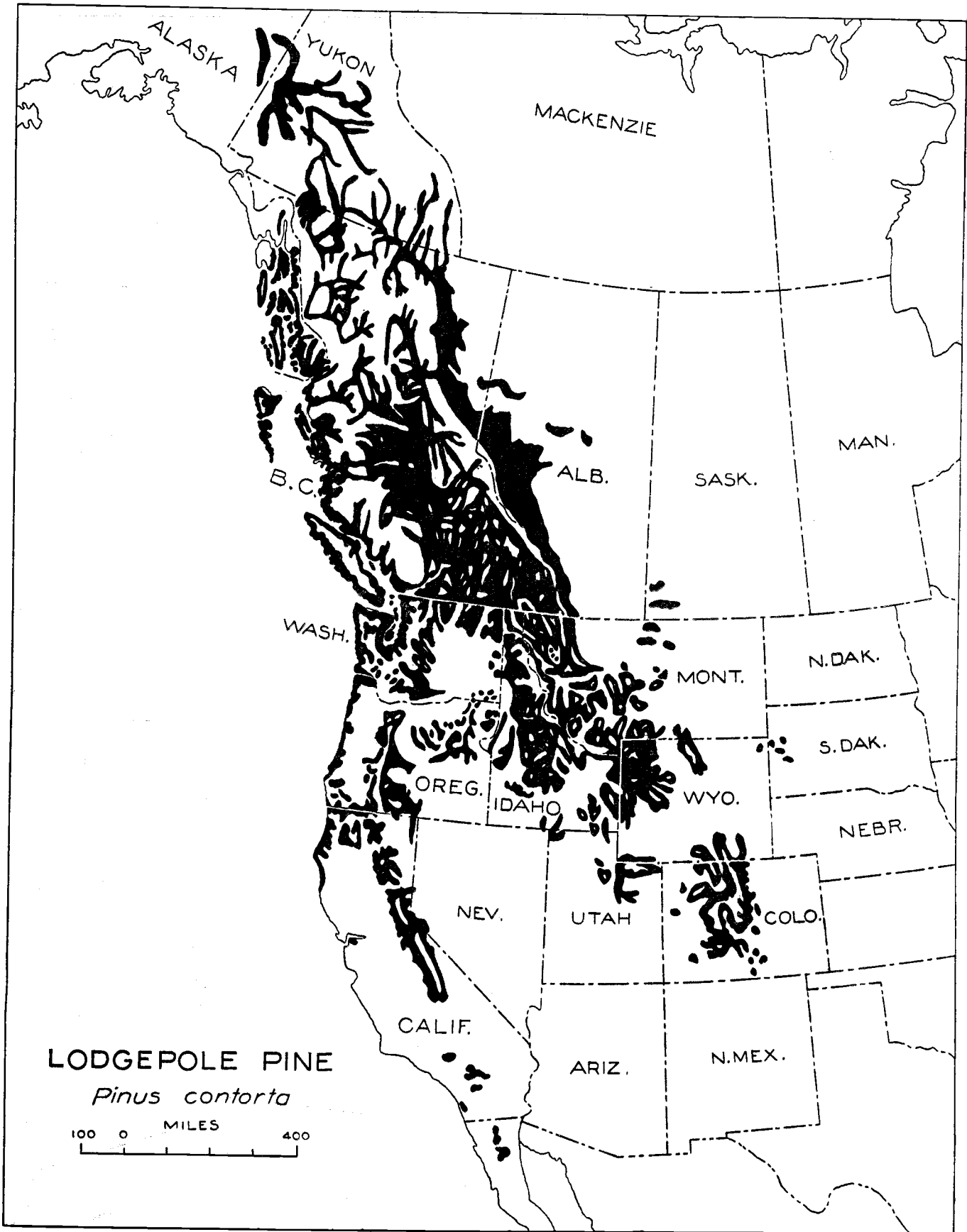
PINUS RESINOSA AITON

MAP 12

RED PINE



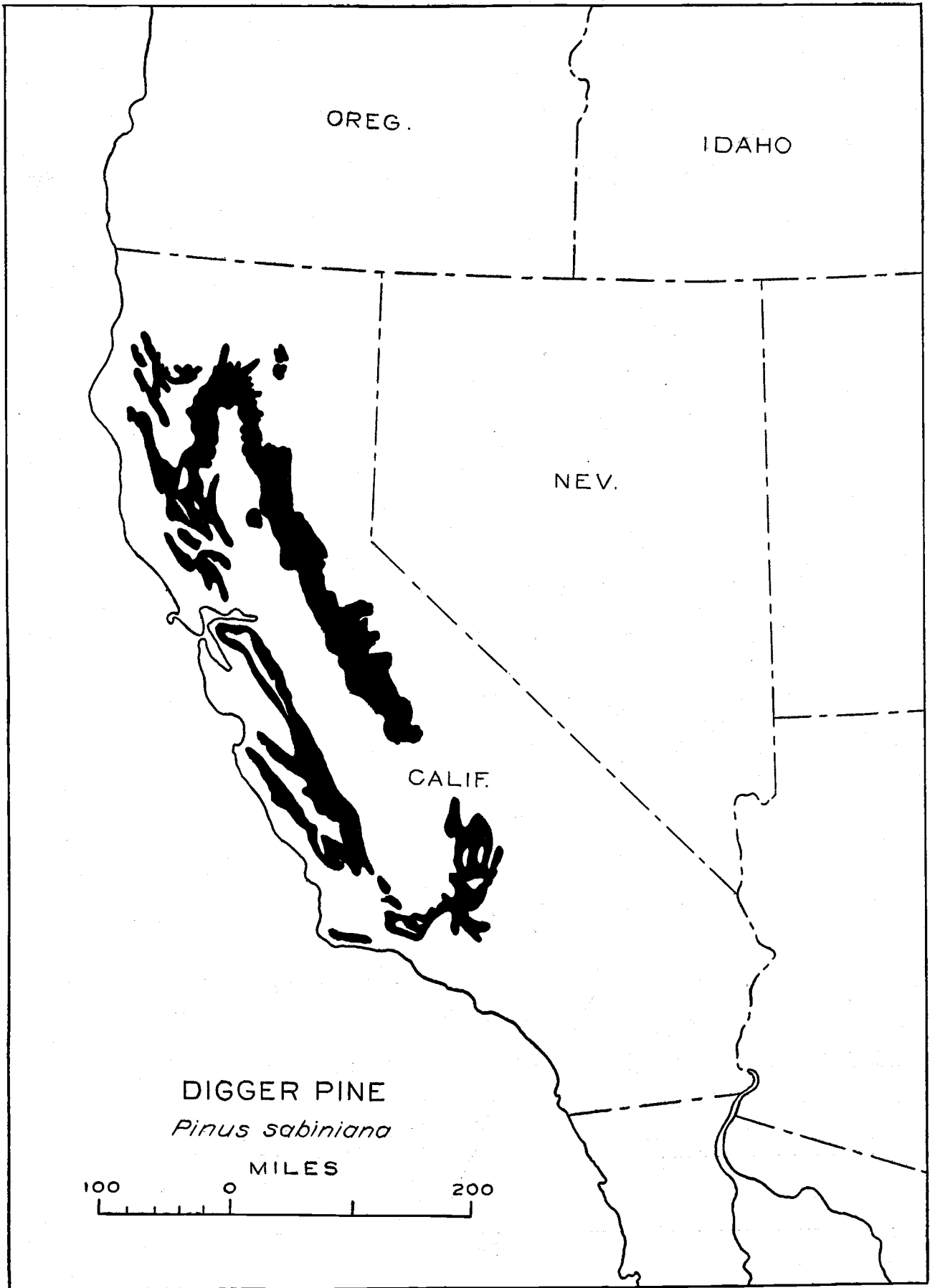


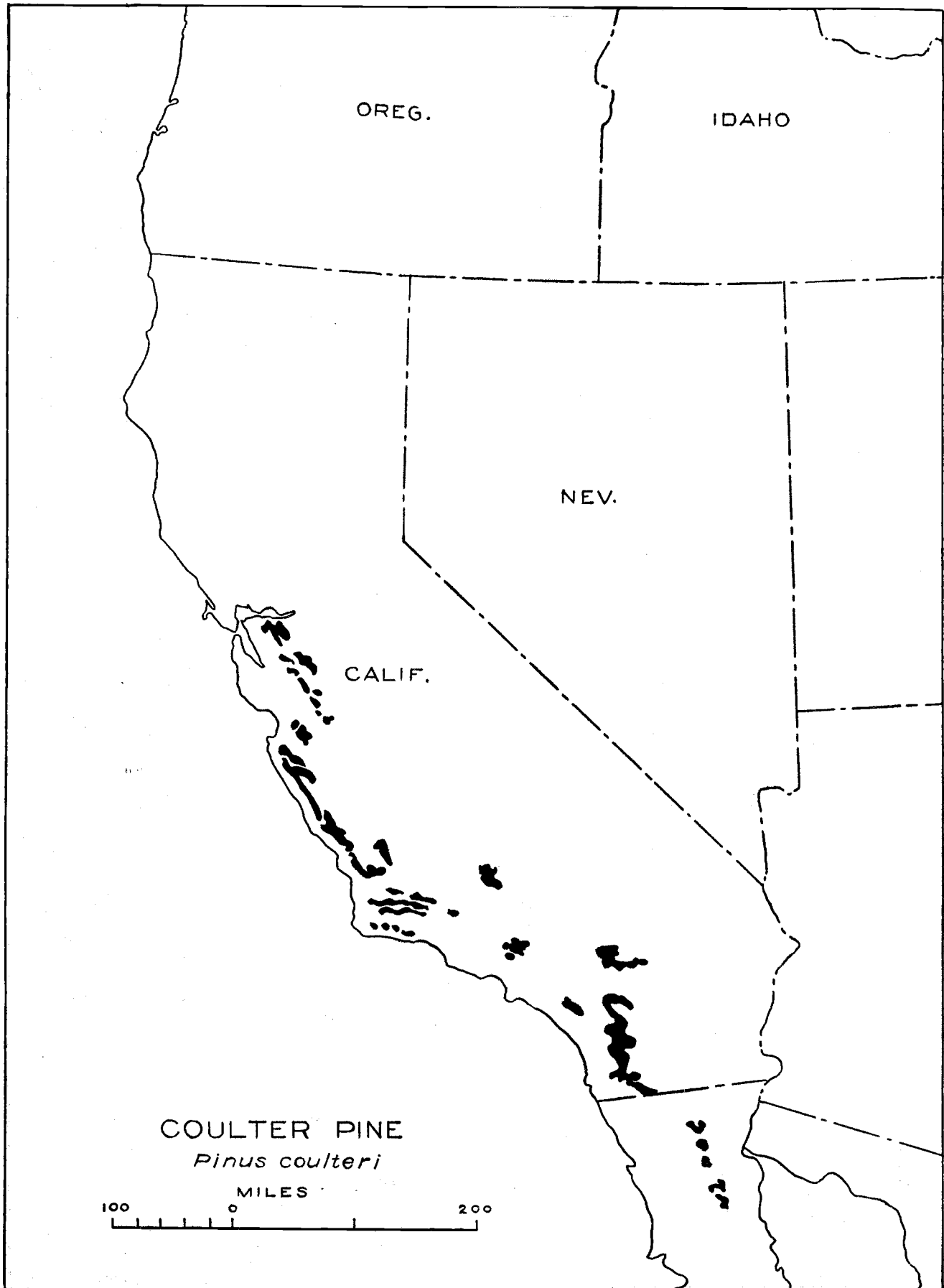


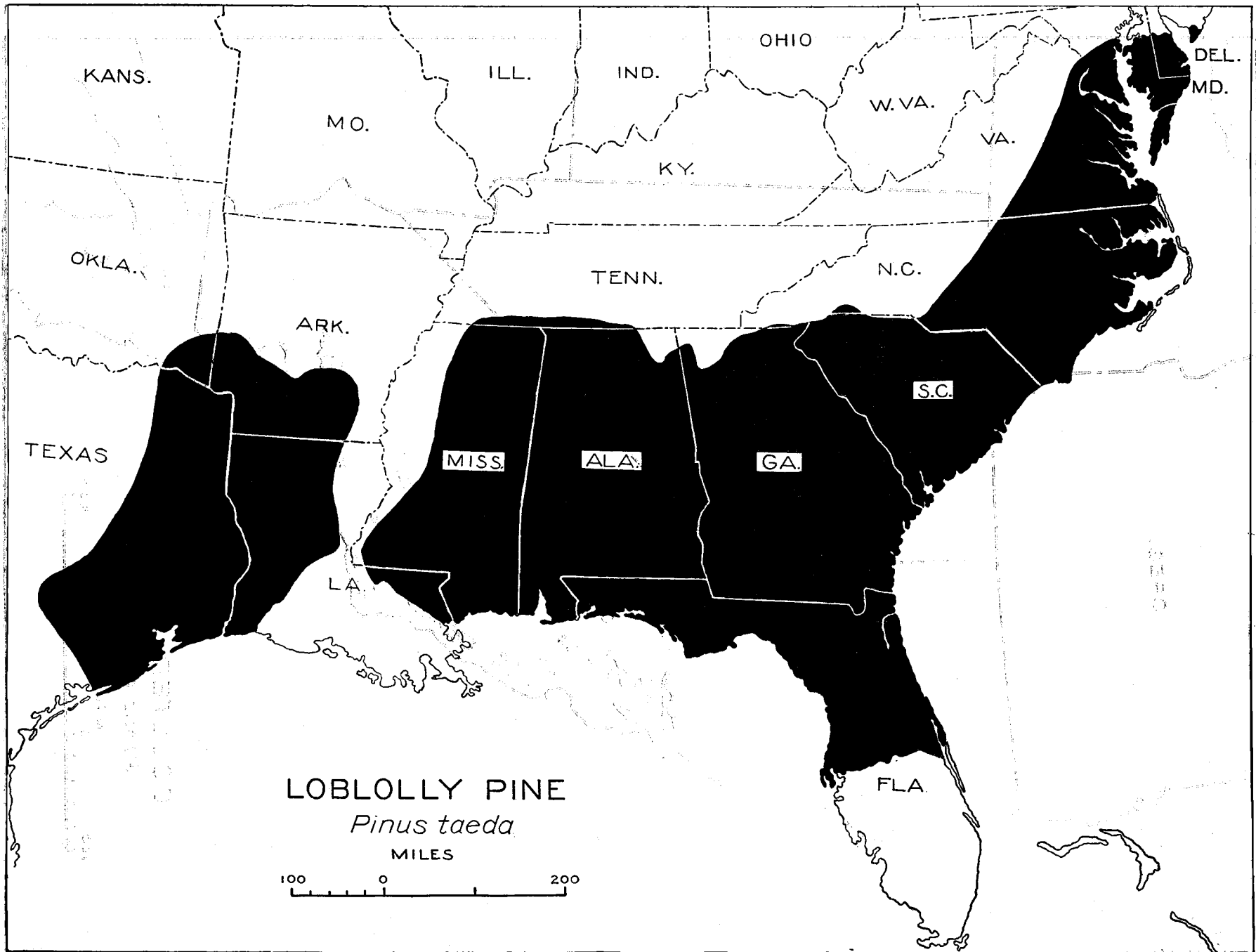
PINUS CONTORTA DOUGLAS

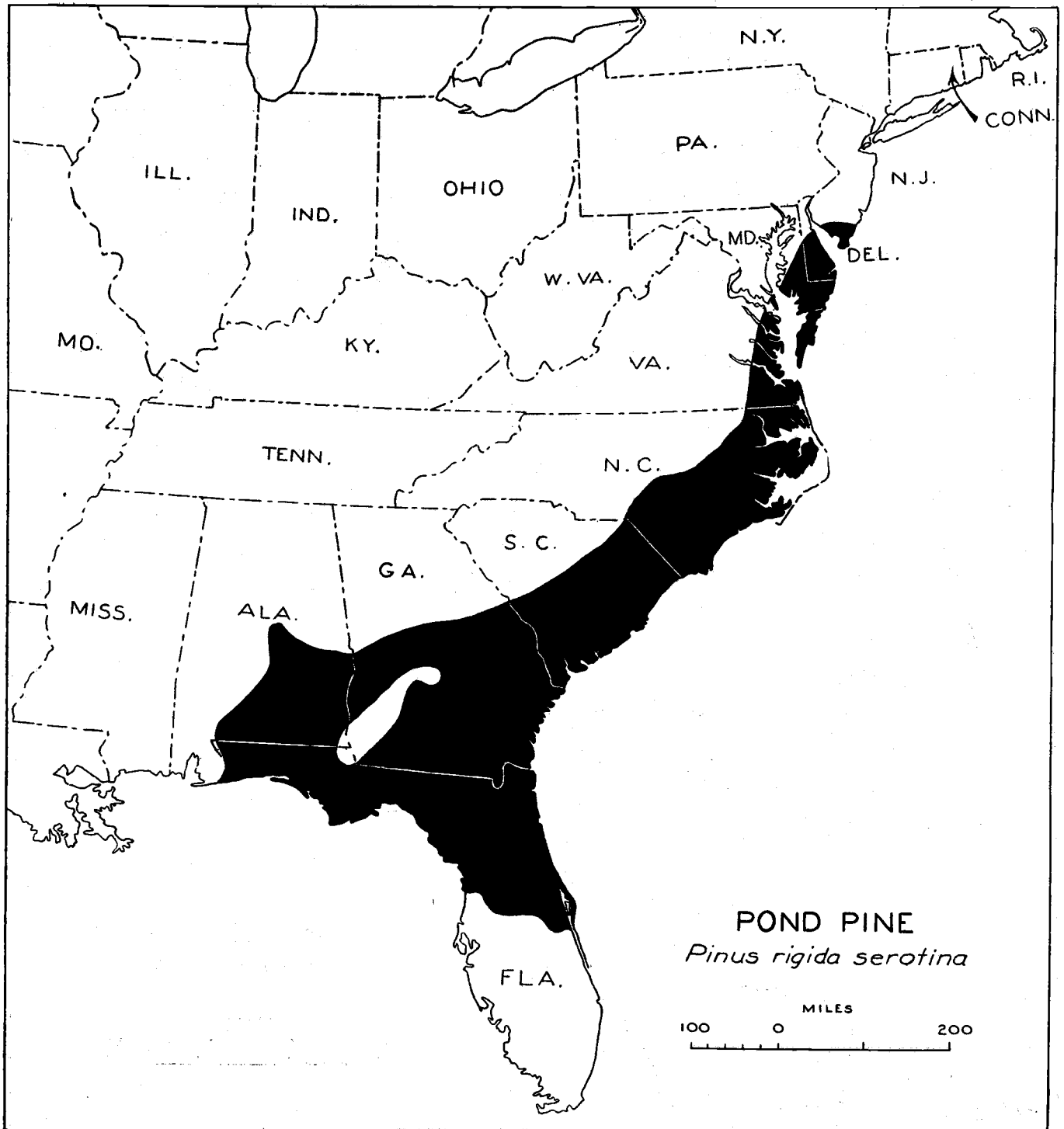
MAP 15

LODGEPOLE PINE





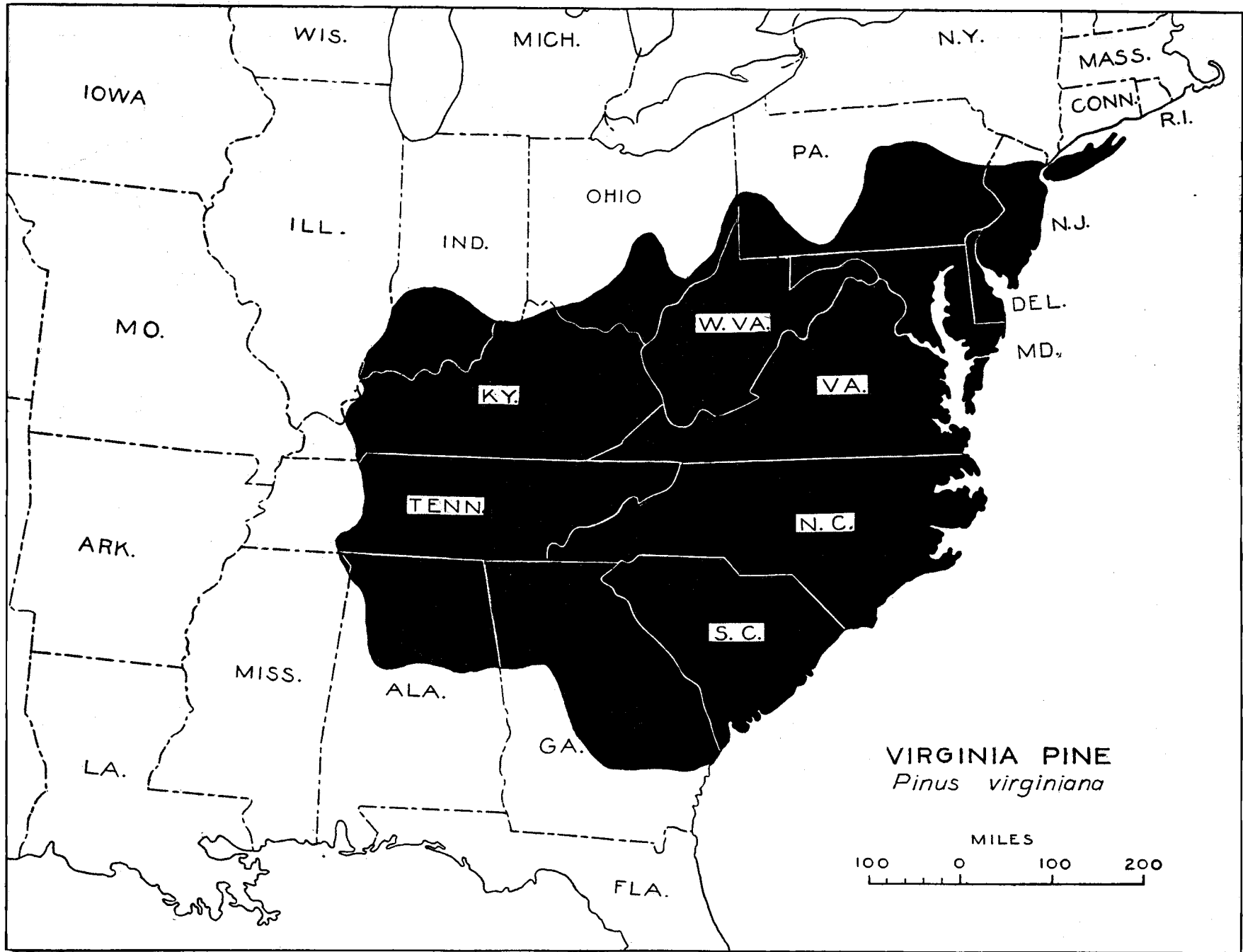


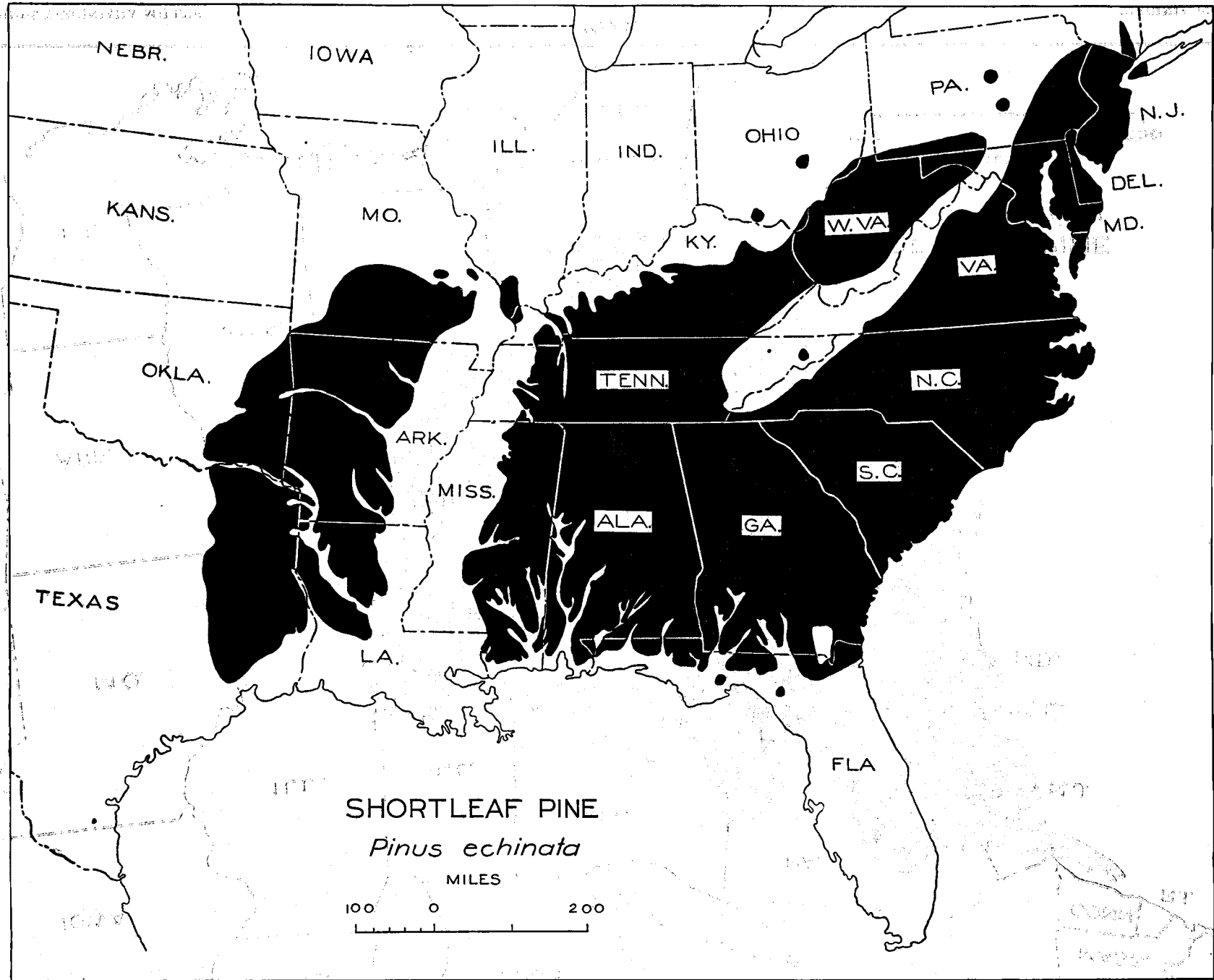


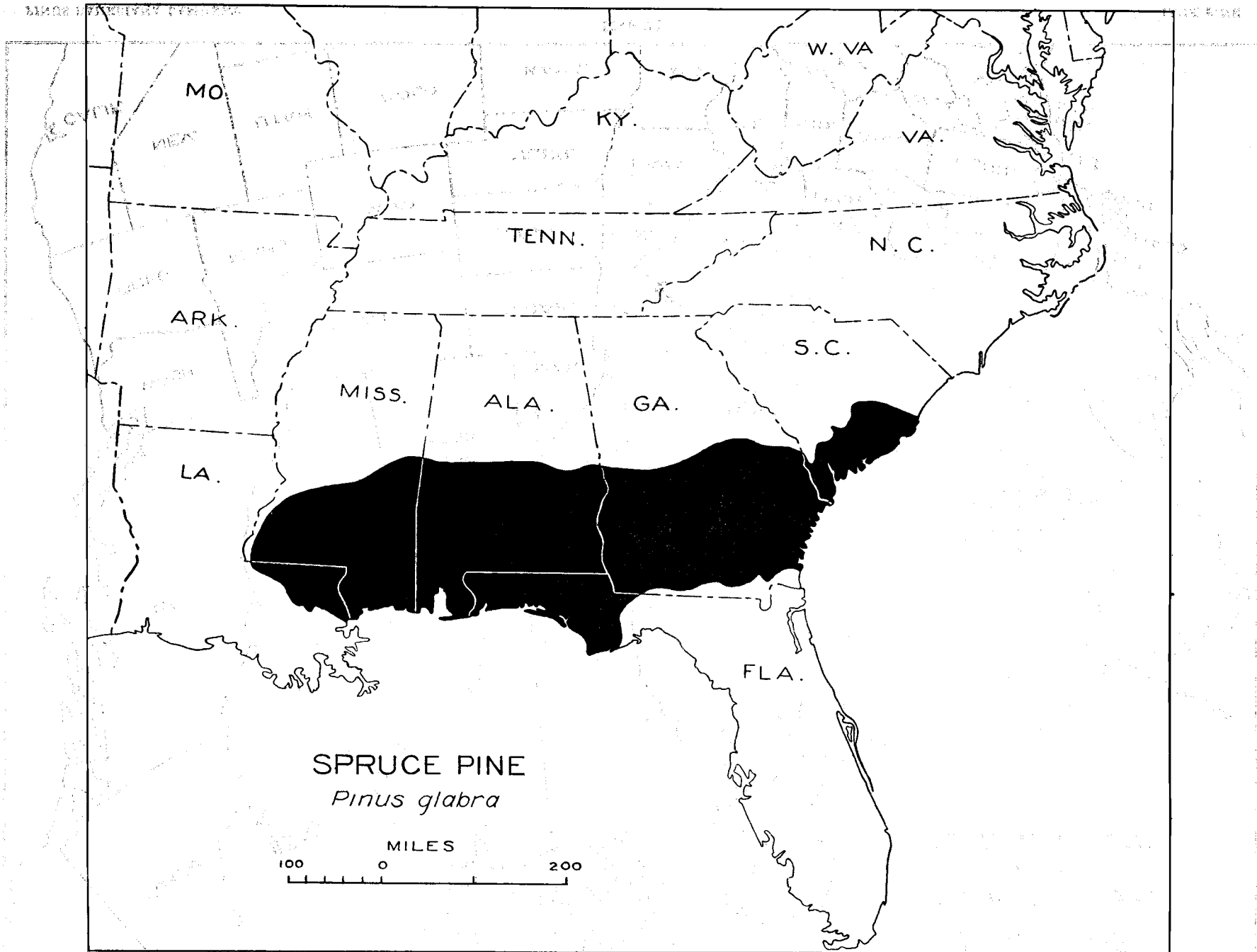
PINUS RIGIDA SEROTINA (MICHAUX) LOUDON

MAP 20

POND PINE



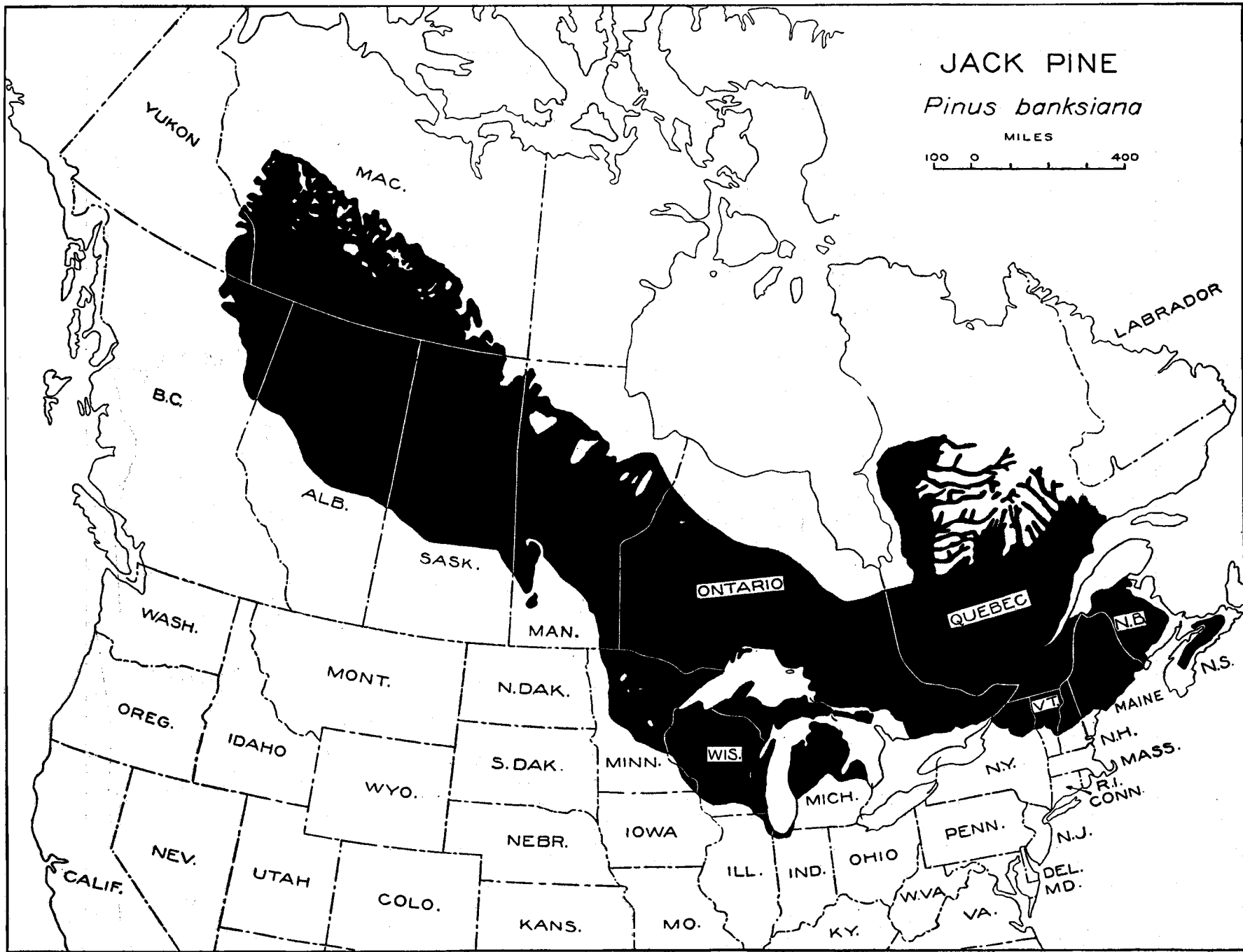




PINUS GLABRA WALTER

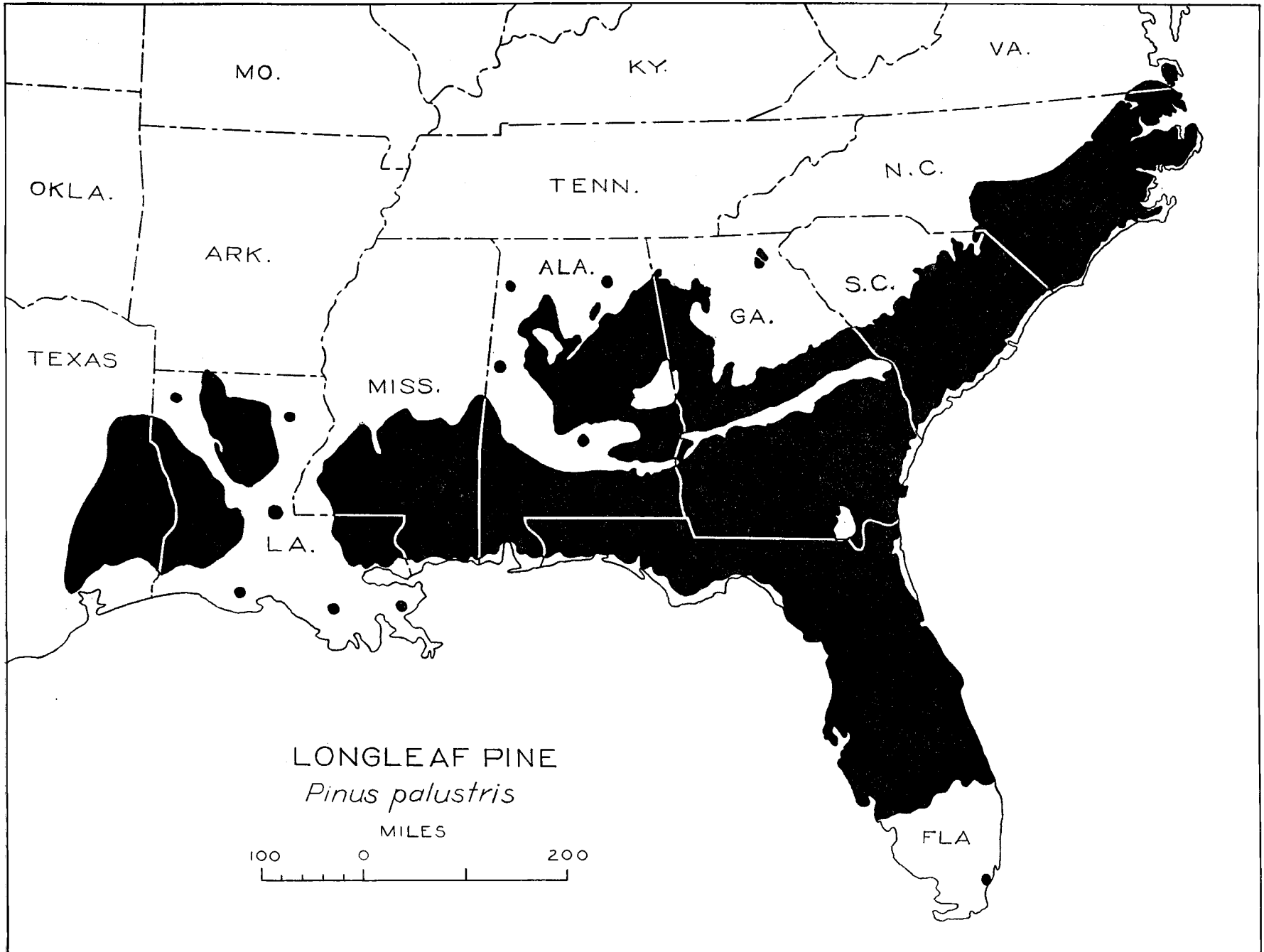
MAP 23

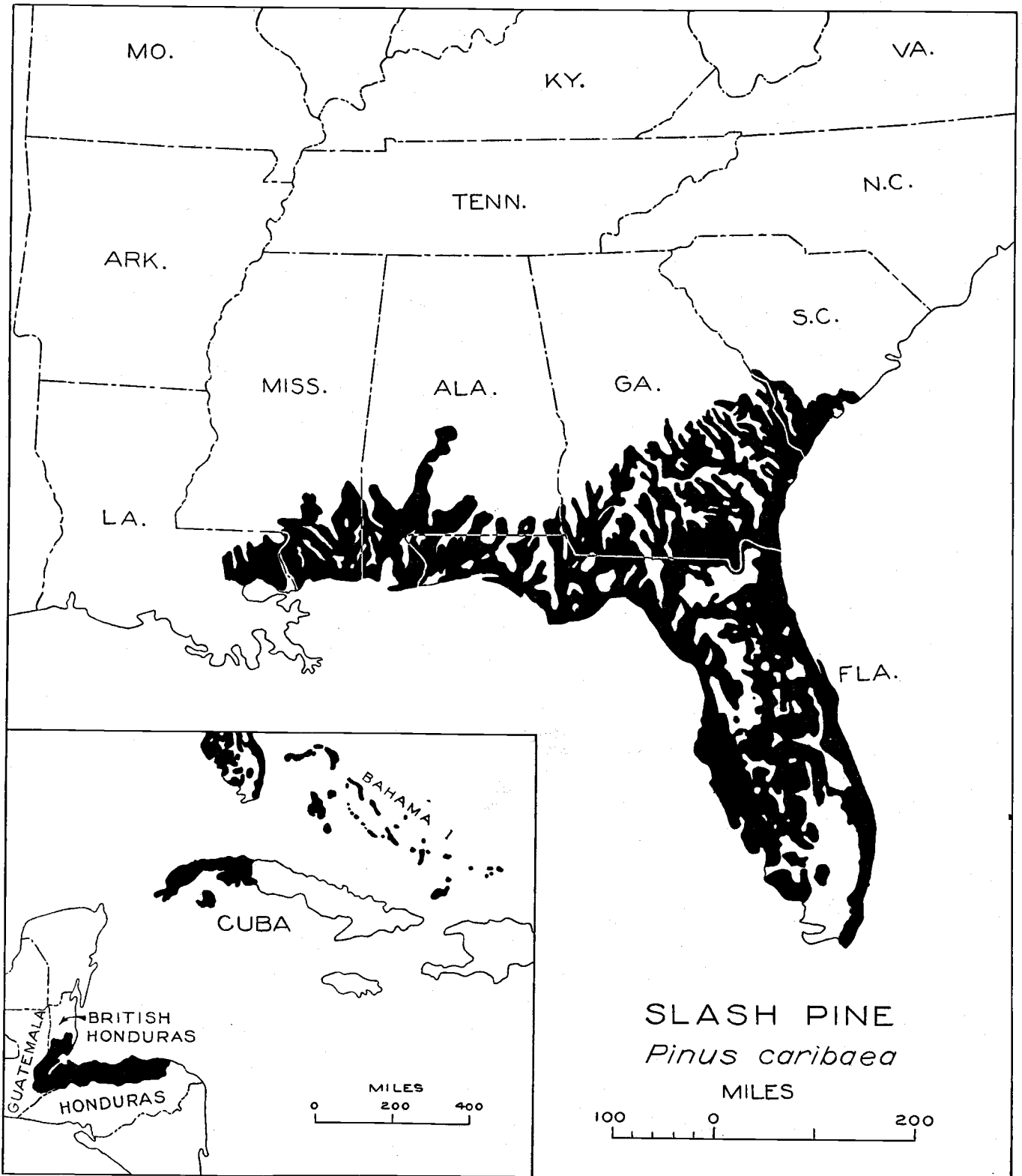
SPRUCE PINE



JACK PINE
Pinus banksiana

MILES
 100 0 400





PINUS CARIBAEA MORELET

MAP 26

SLASH PINE



TAMARACK

Larix laricina

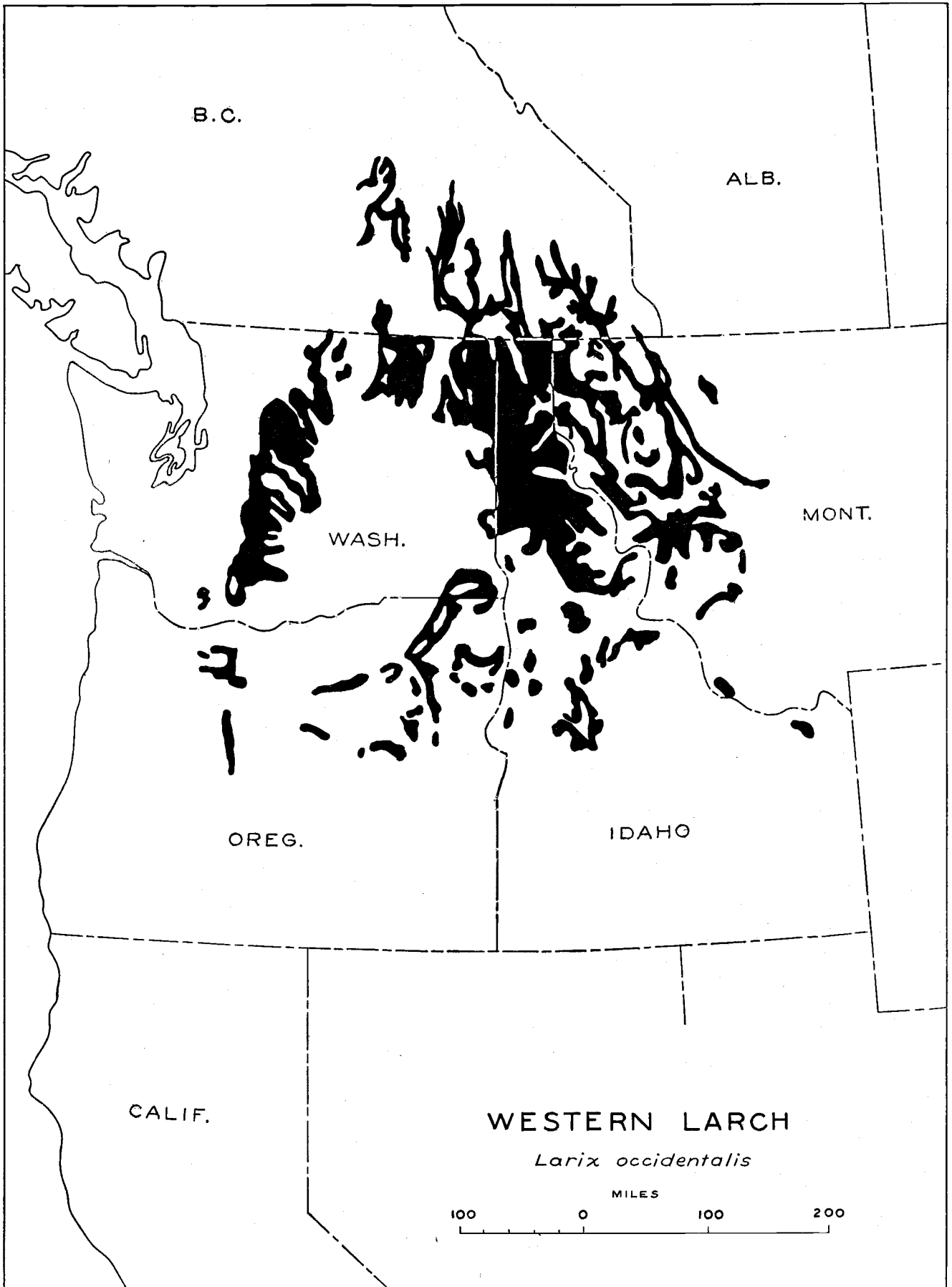
MILES



LARIX LARICINA (DU ROI) KOCH

MAP 27

TAMARACK



CALIF.

OREG.

WASH.

B.C.

ALB.

MONT.

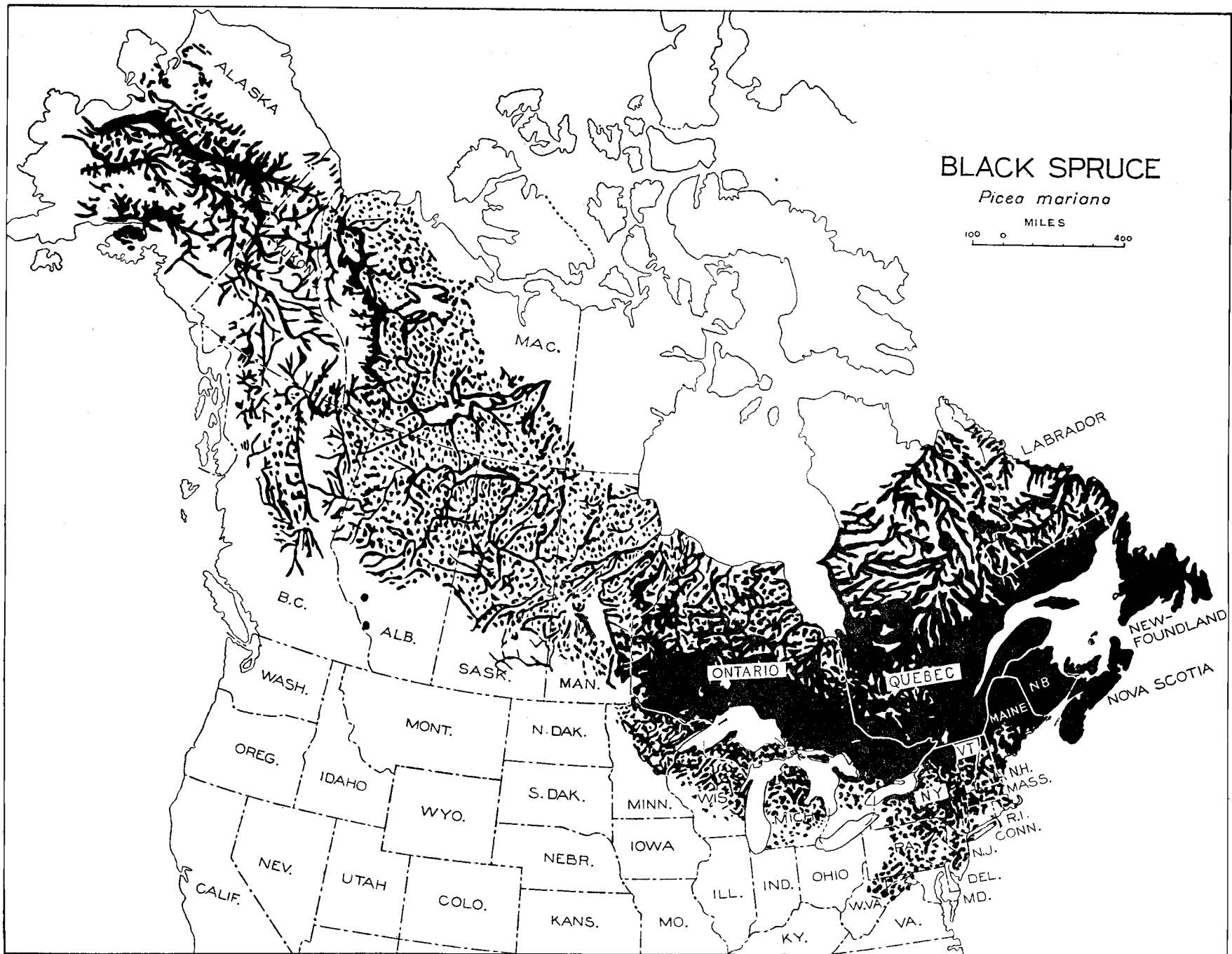
IDAHO

WESTERN LARCH

Larix occidentalis

MILES

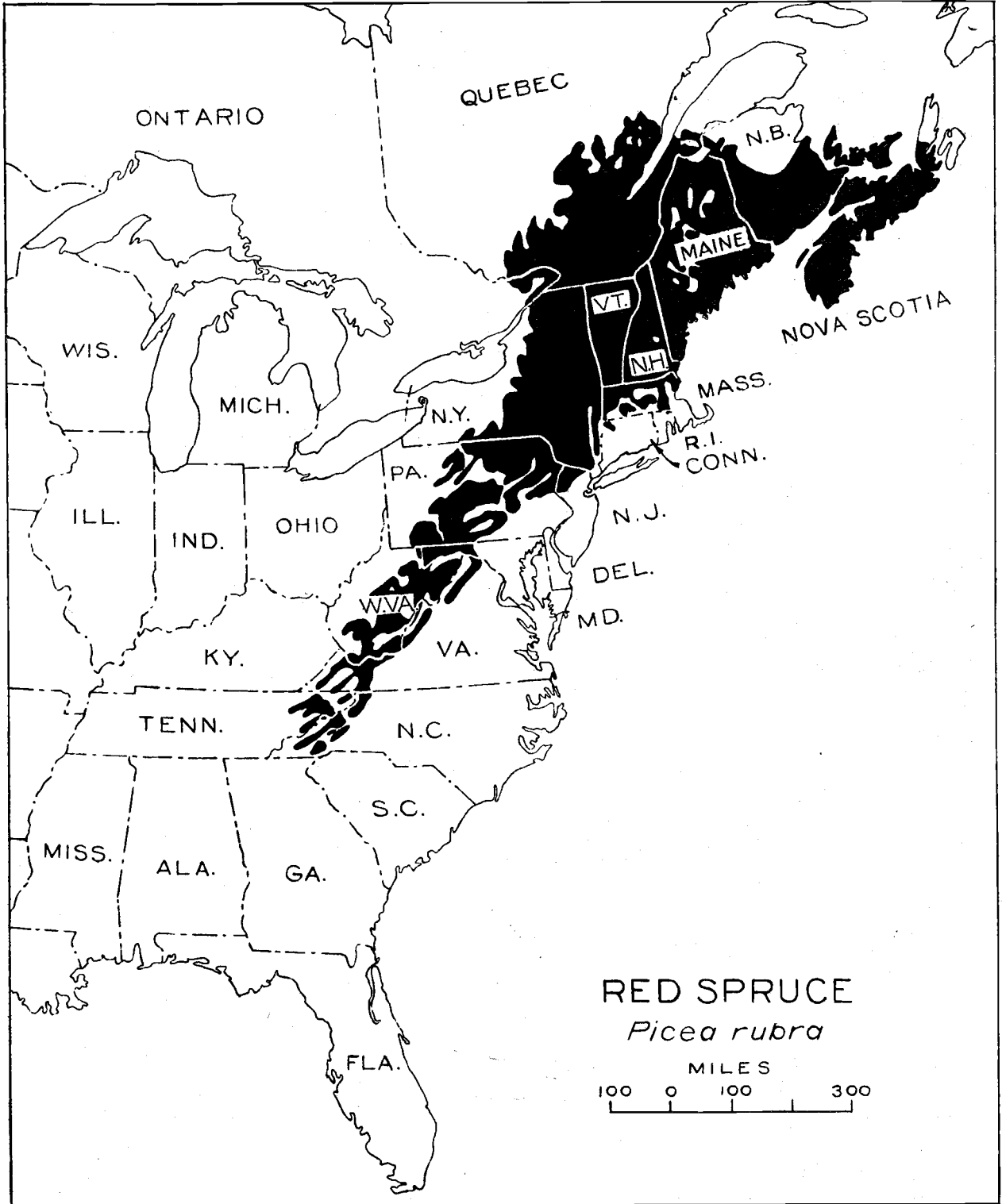
100 0 100 200



PICEA MARIANA (MILLER) BRITTON, STERNS, AND POGGENBERG

MAP 29

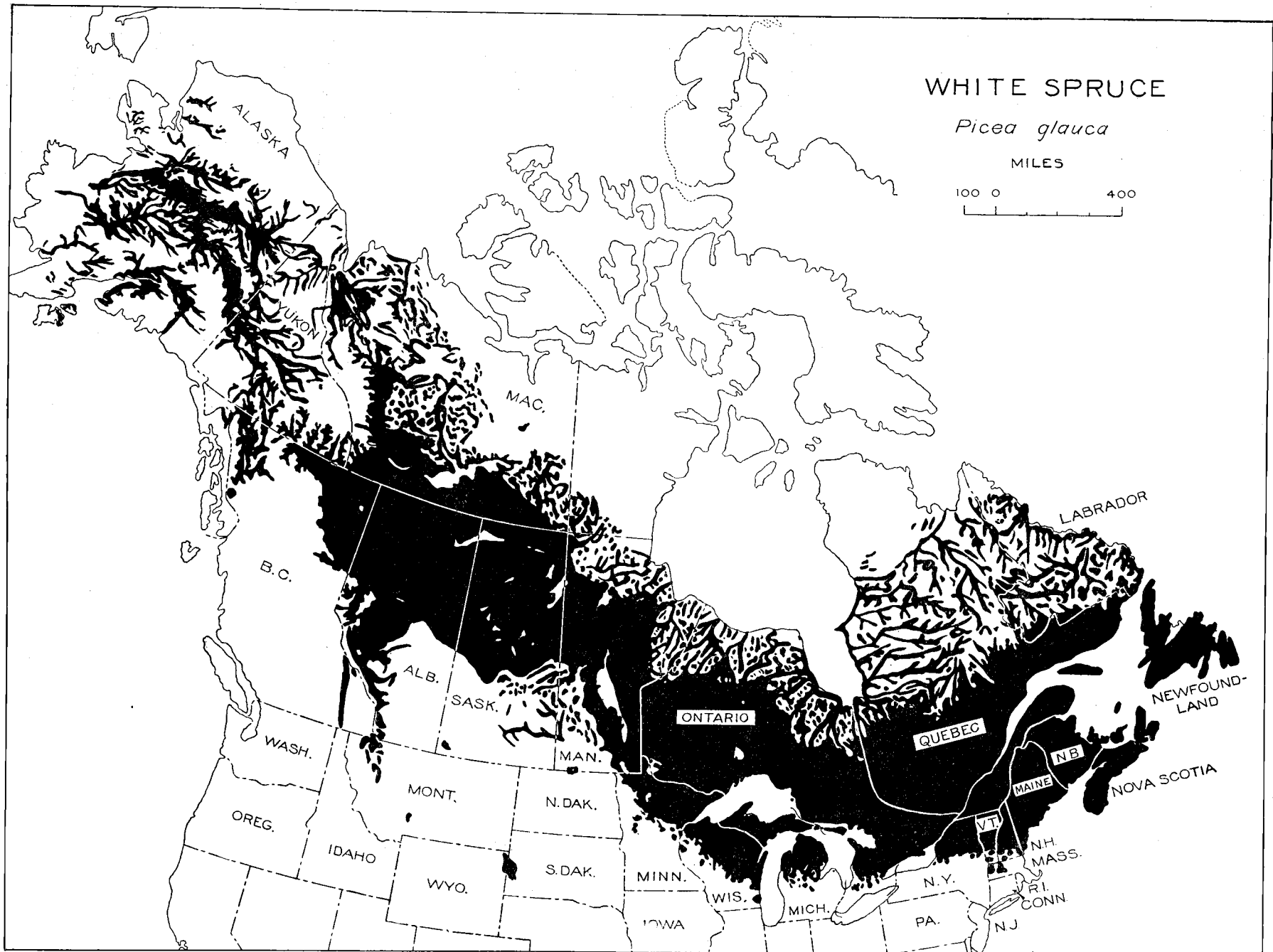
BLACK SPRUCE



PICEA RUBRA LINK

MAP 30

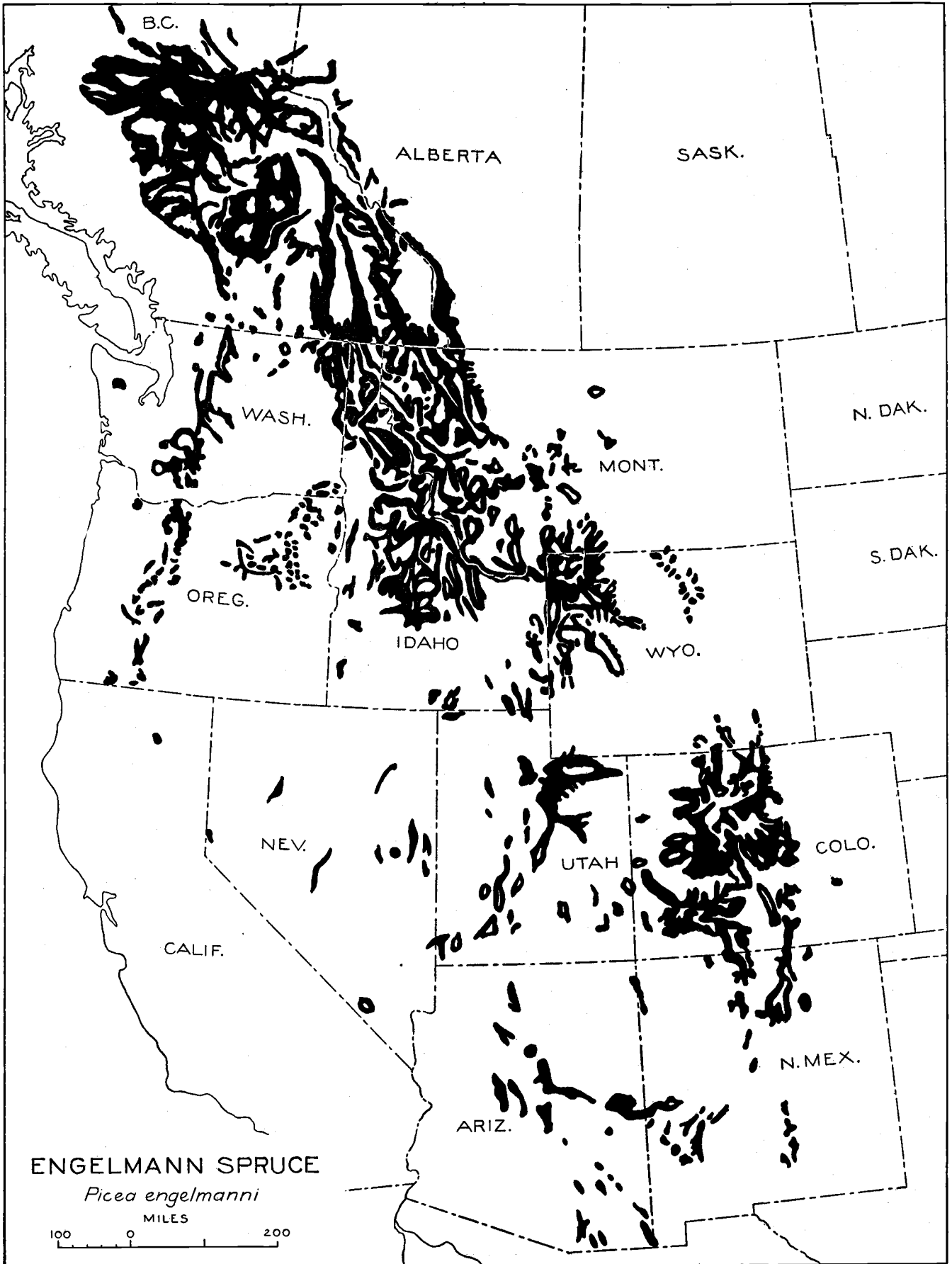
RED SPRUCE

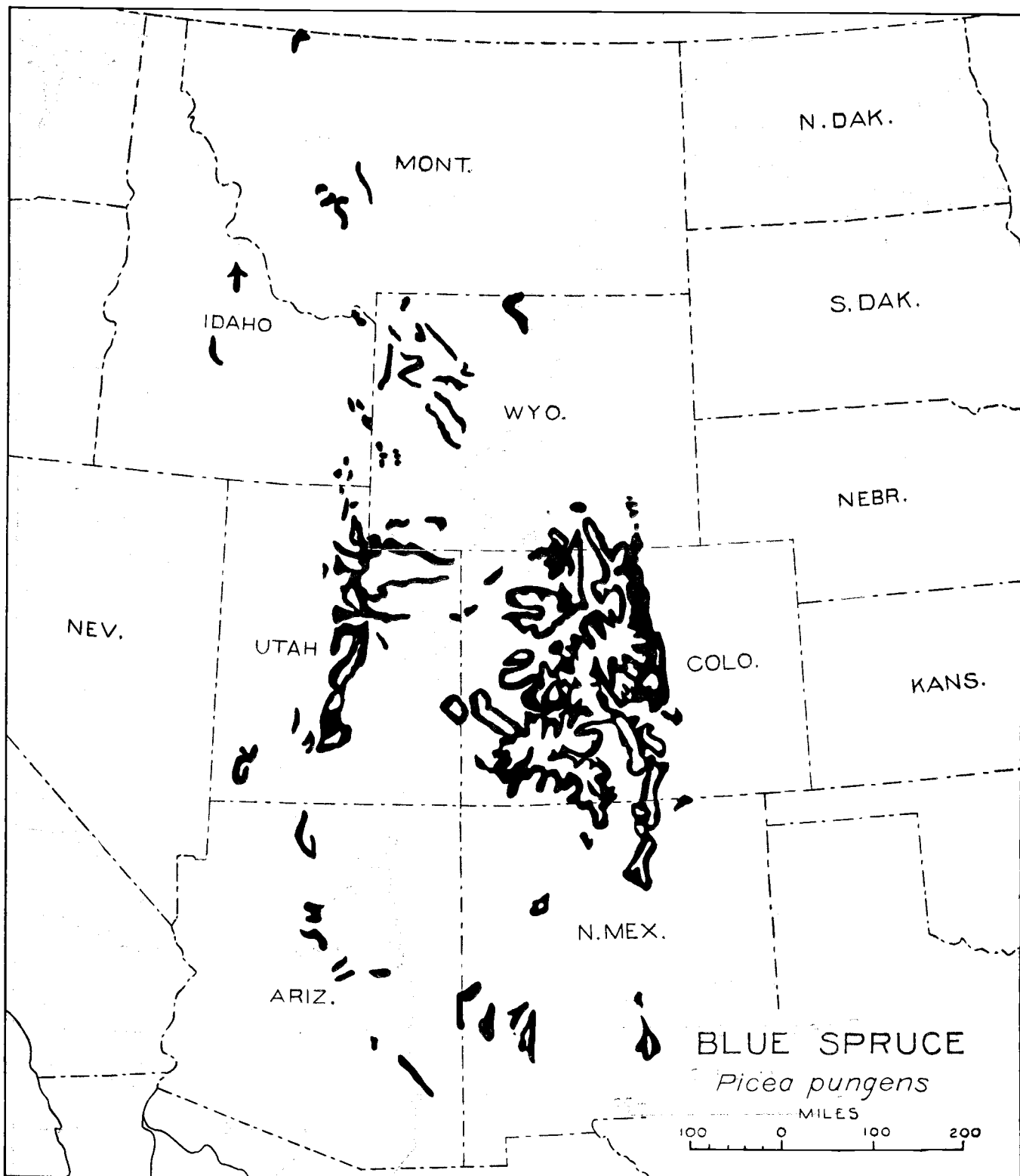


PICEA GLAUCA (MOENCH) VOSS

MAP 31

WHITE SPRUCE

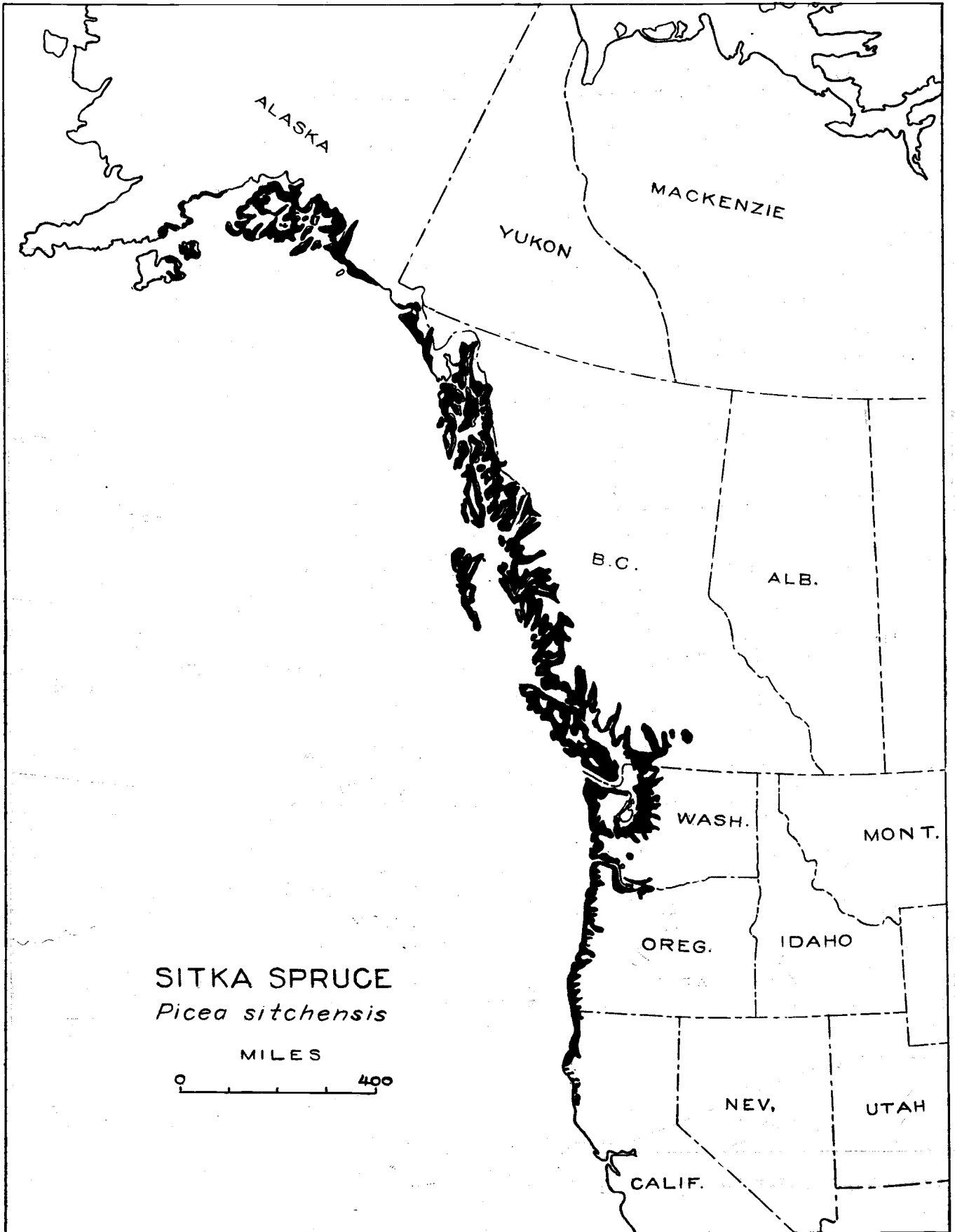


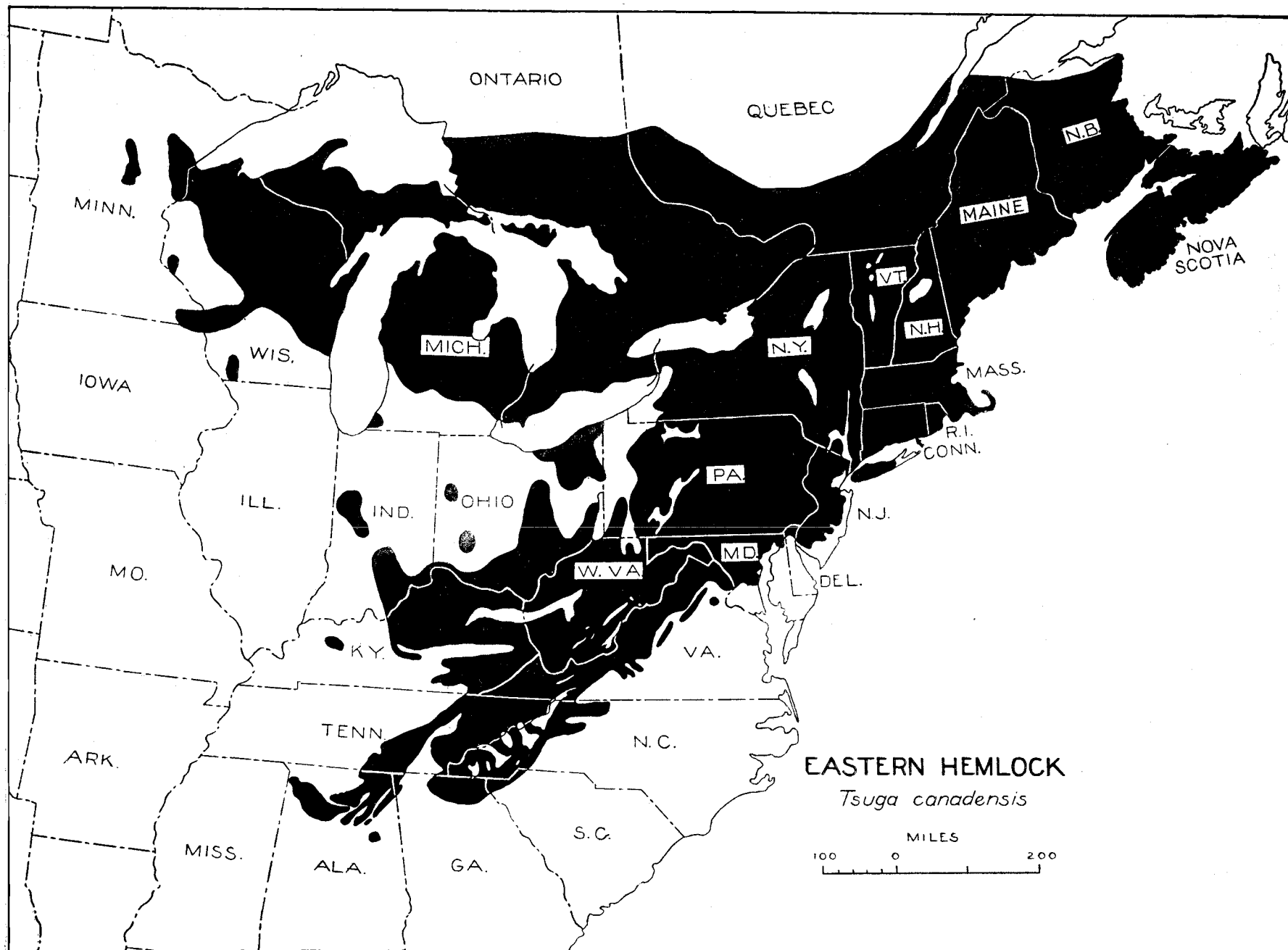


PICEA PUNGENS ENGELMANN

MAP 33

BLUE SPRUCE

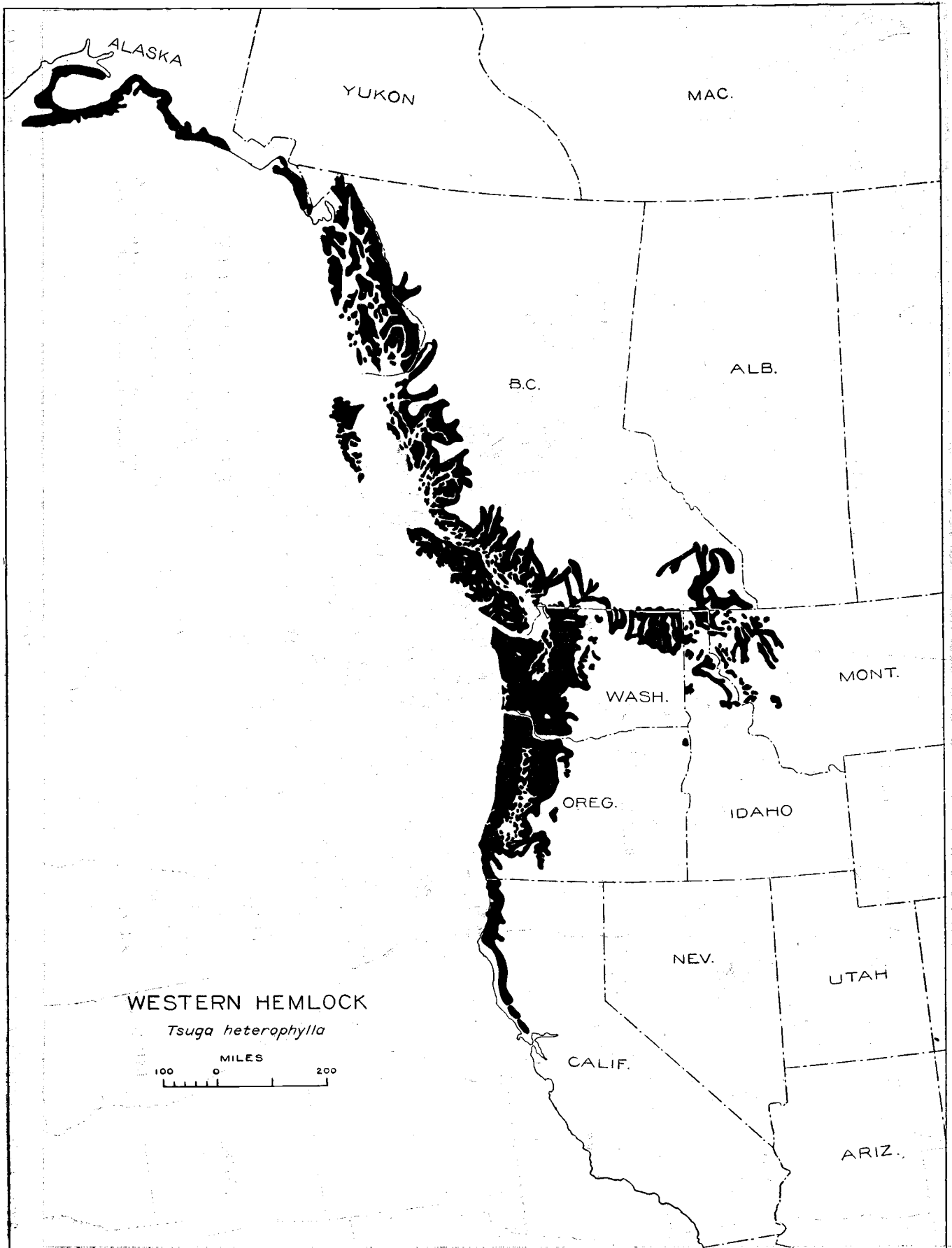


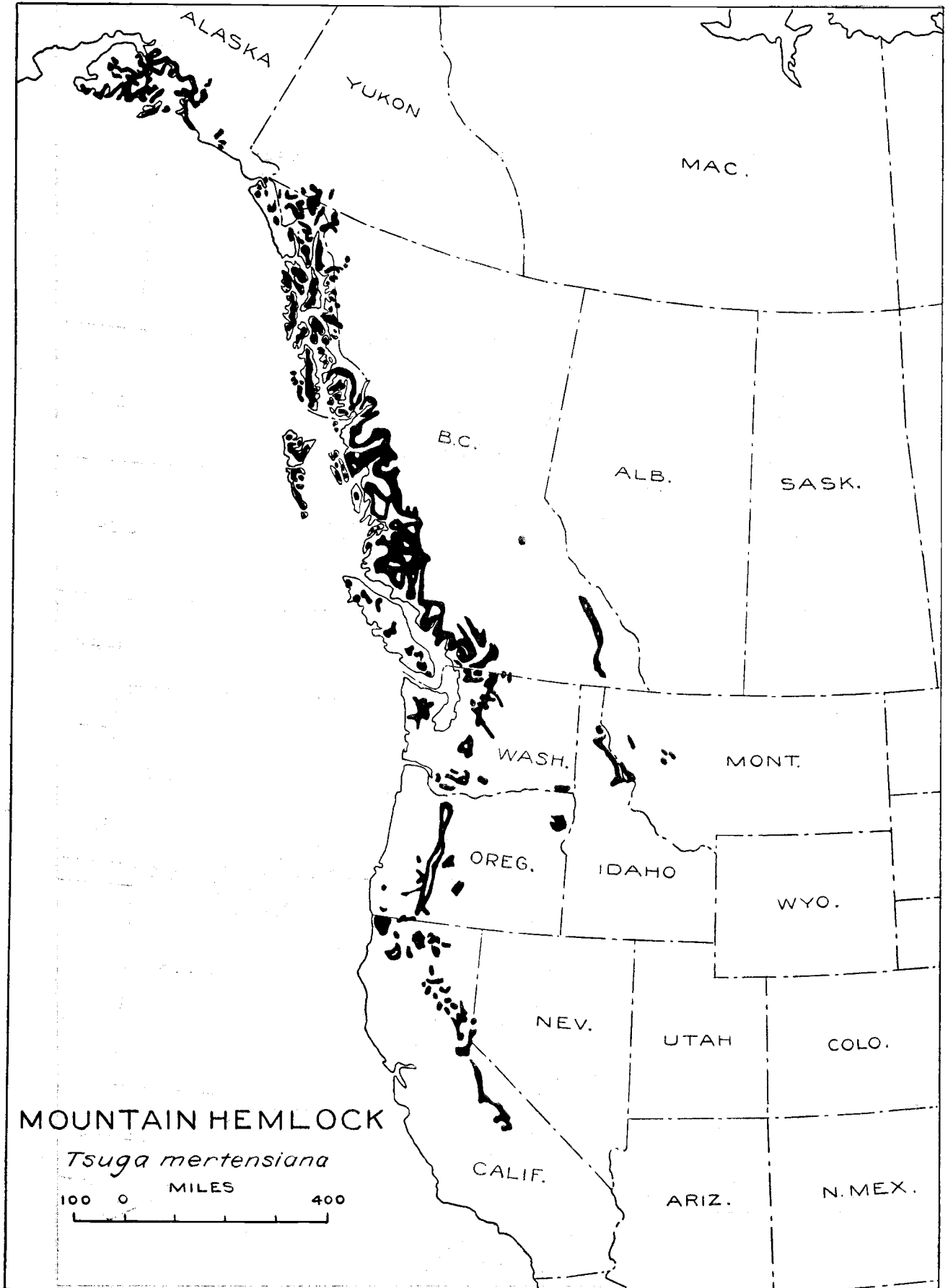


TSUGA CANADENSIS (LINNAEUS) CARRIÈRE

MAP 35

EASTERN HEMLOCK

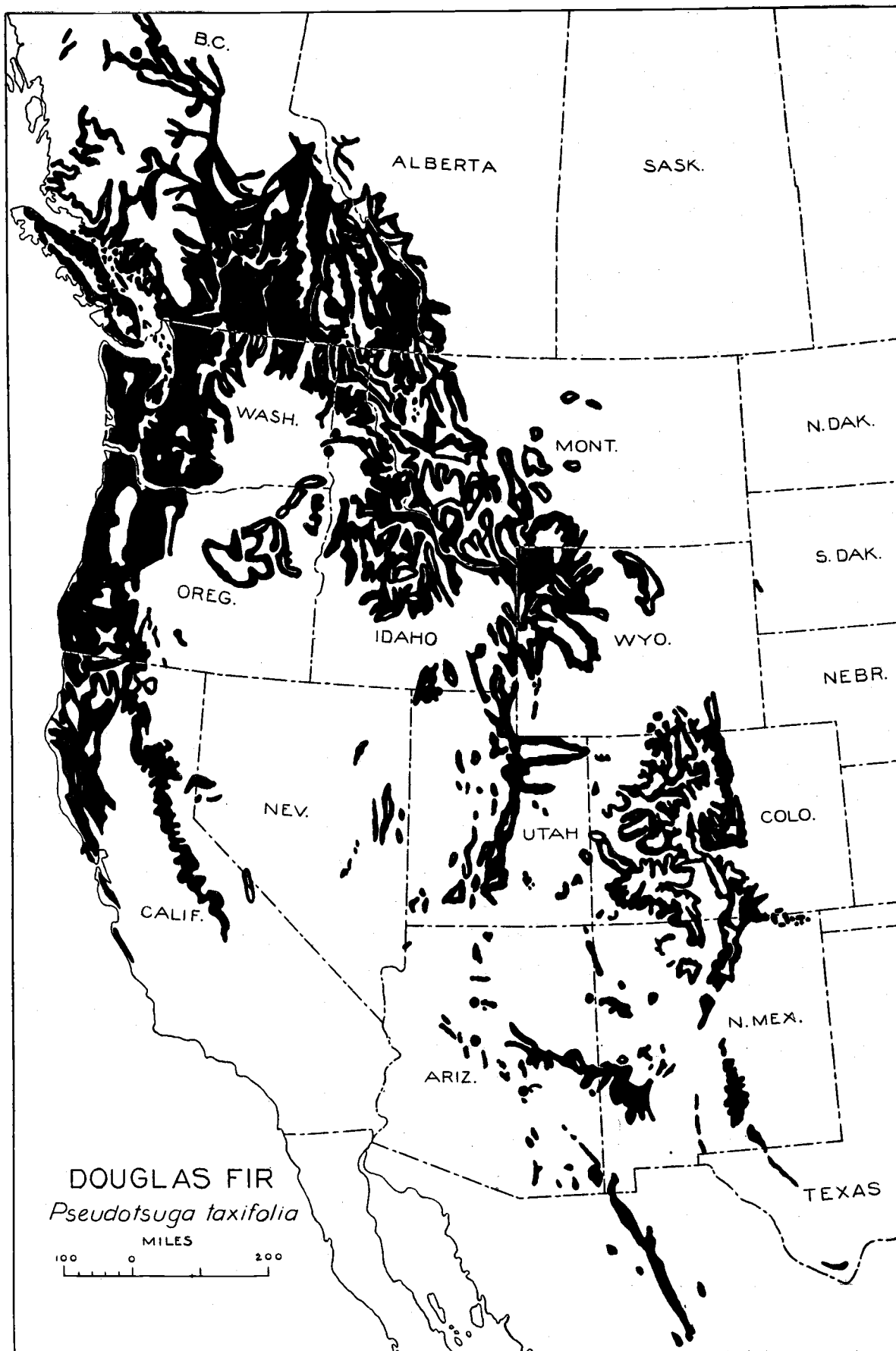




TSUGA MERTENSIANA (BONGARD) SARGENT

MAP 37

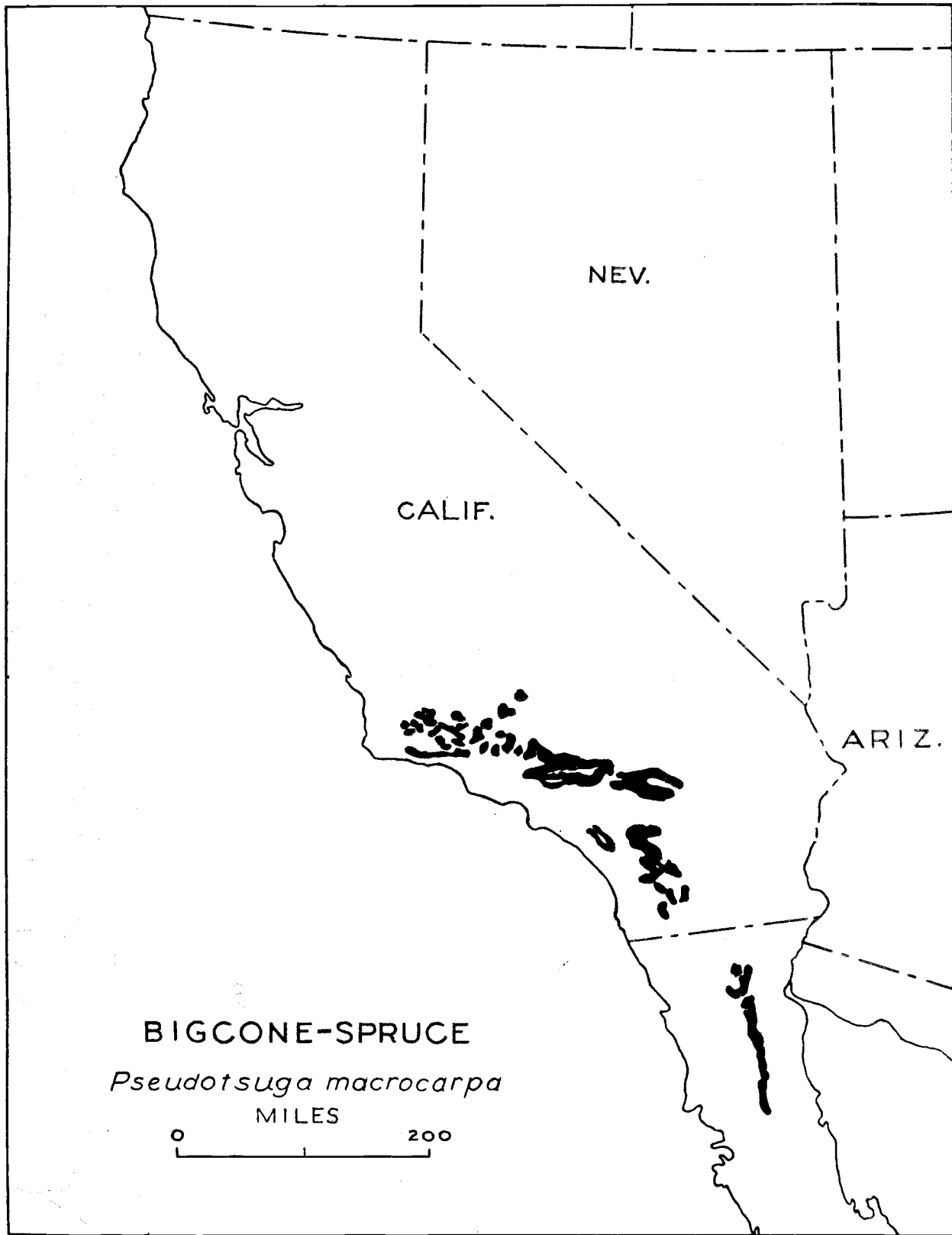
MOUNTAIN HEMLOCK



PSEUDOTSUGA TAXIFOLIA (LAMBERT) BRITTON

MAP 38

DOUGLAS FIR



PSEUDOTSUGA MACROCARPA (TORREY) MAYR

MAP 39

BIGCONE-SPRUCE

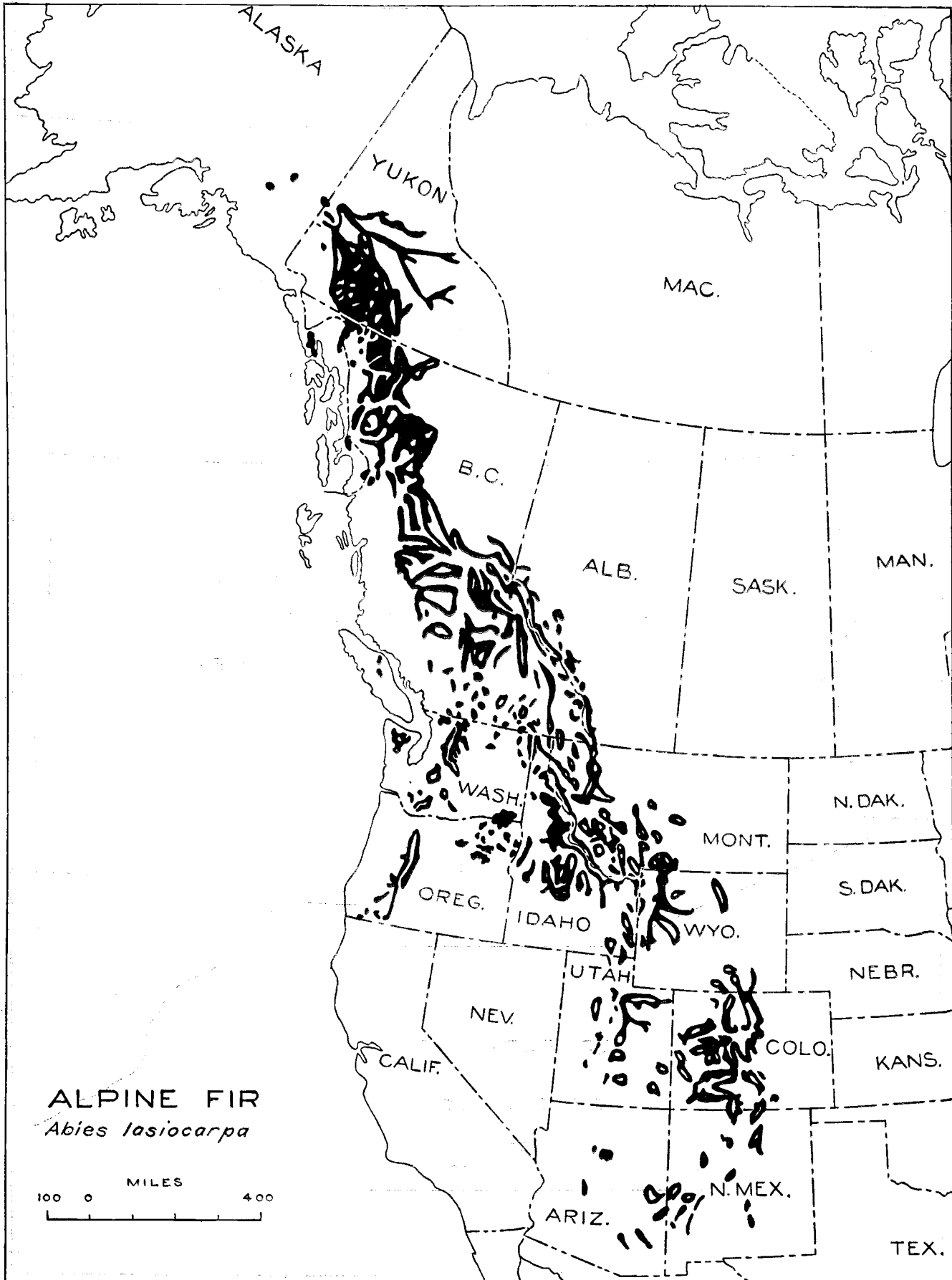


47

ABIES BALSAMEA (LINNAEUS) MILLER

MAP 40

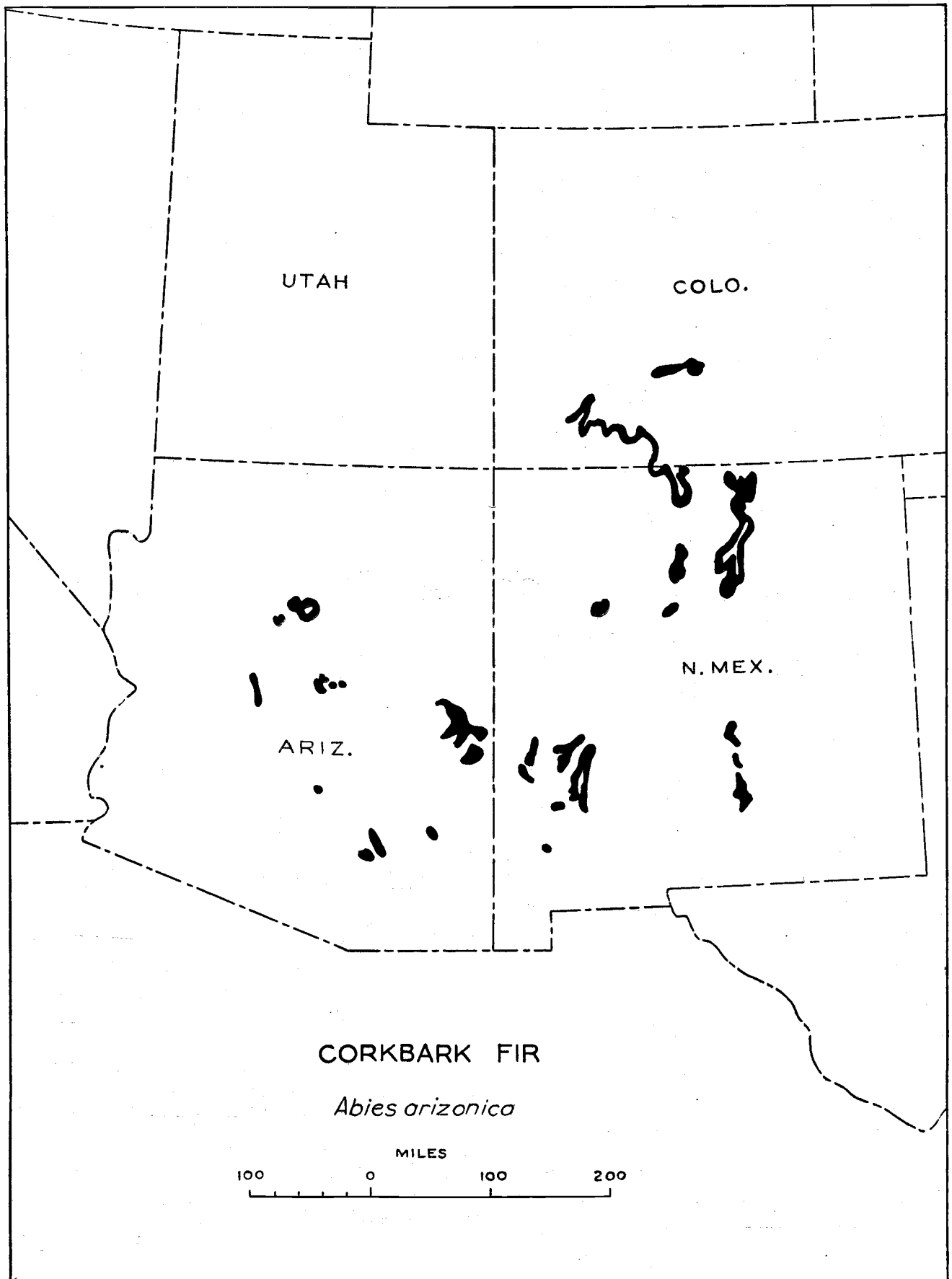
BALSAM FIR

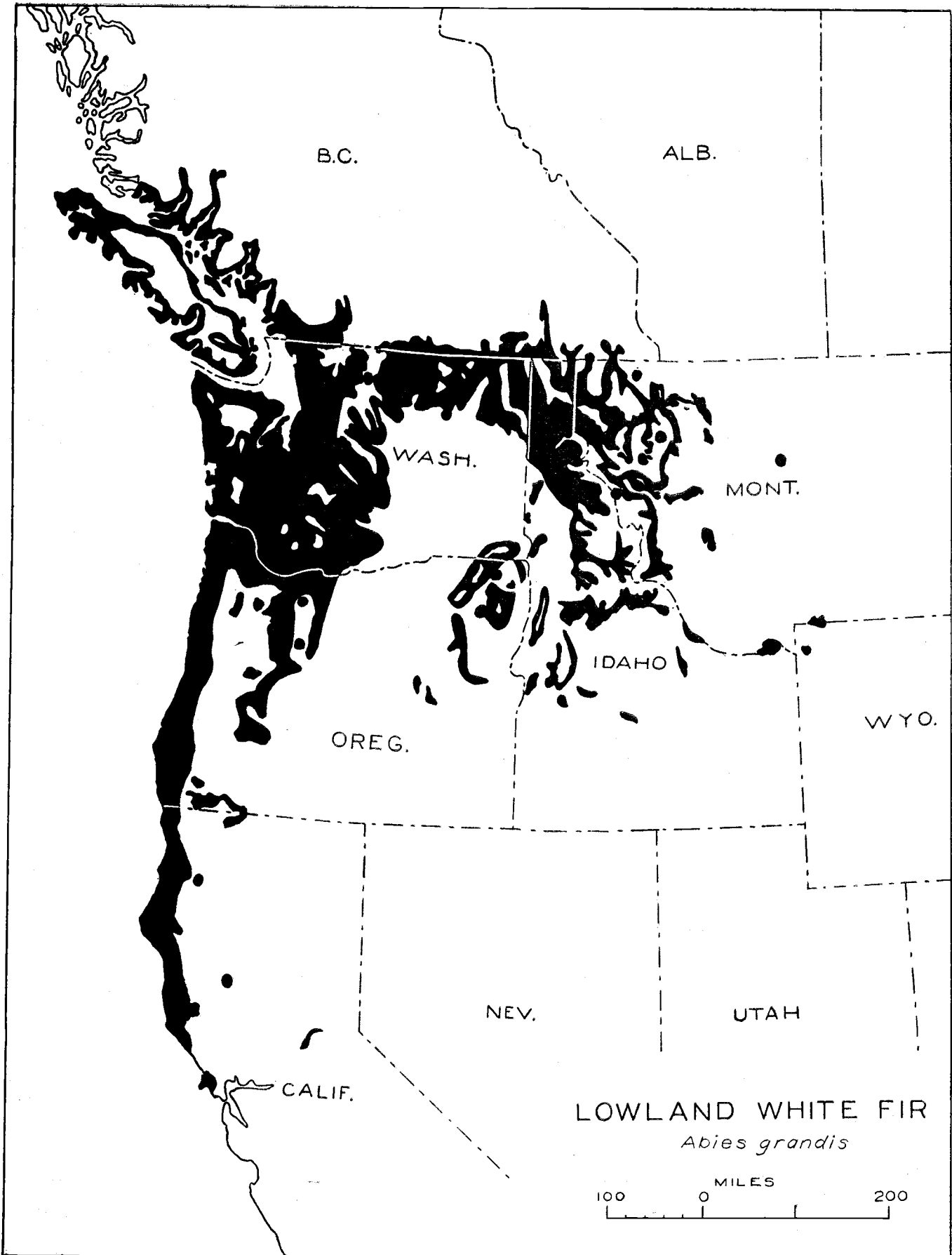


ABIES LASIOCARPA (HOOKER) NUTTALL

MAP 41

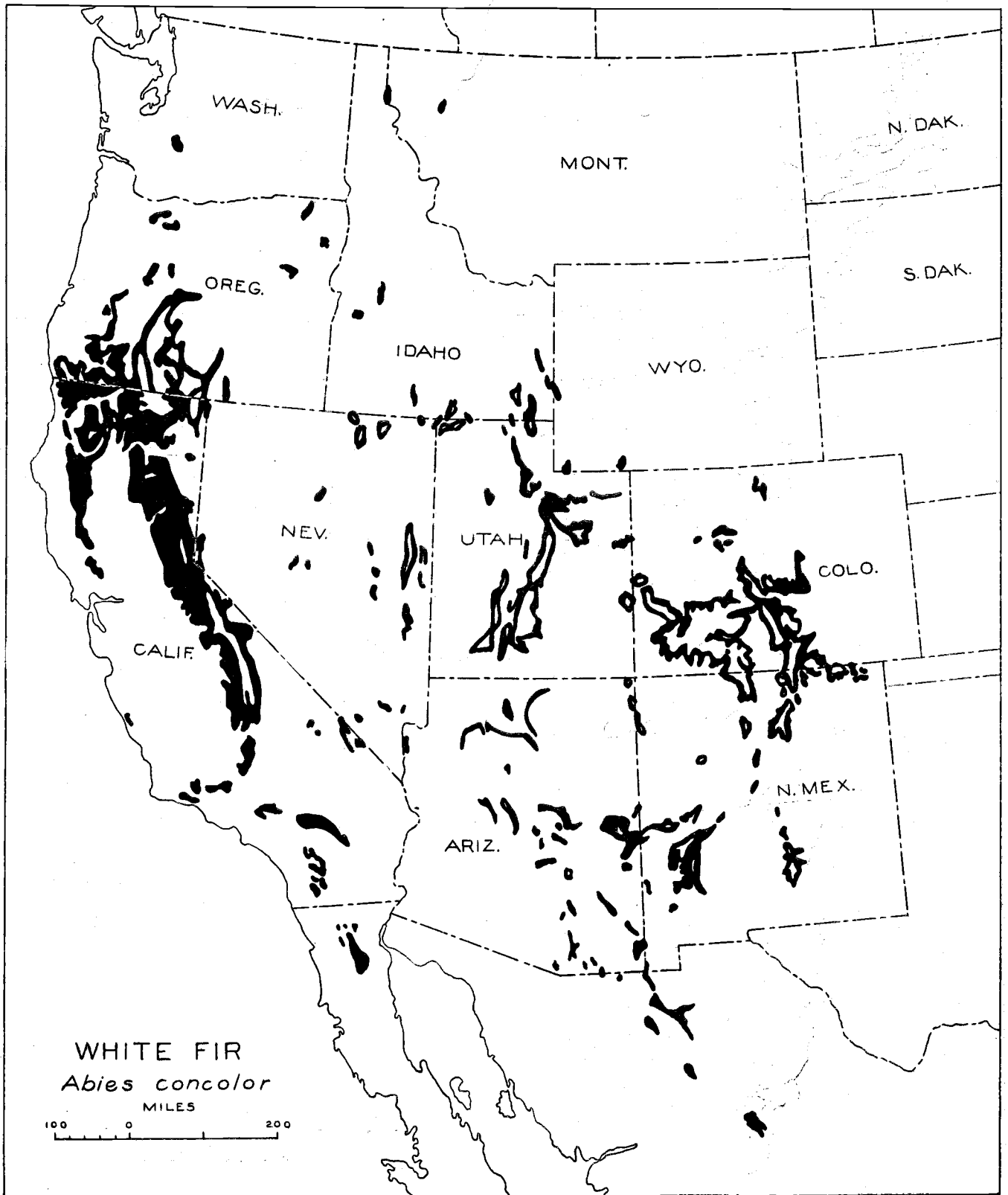
ALPINE FIR





LOWLAND WHITE FIR
Abies grandis

100 0 200
MILES



WHITE FIR
Abies concolor
MILES

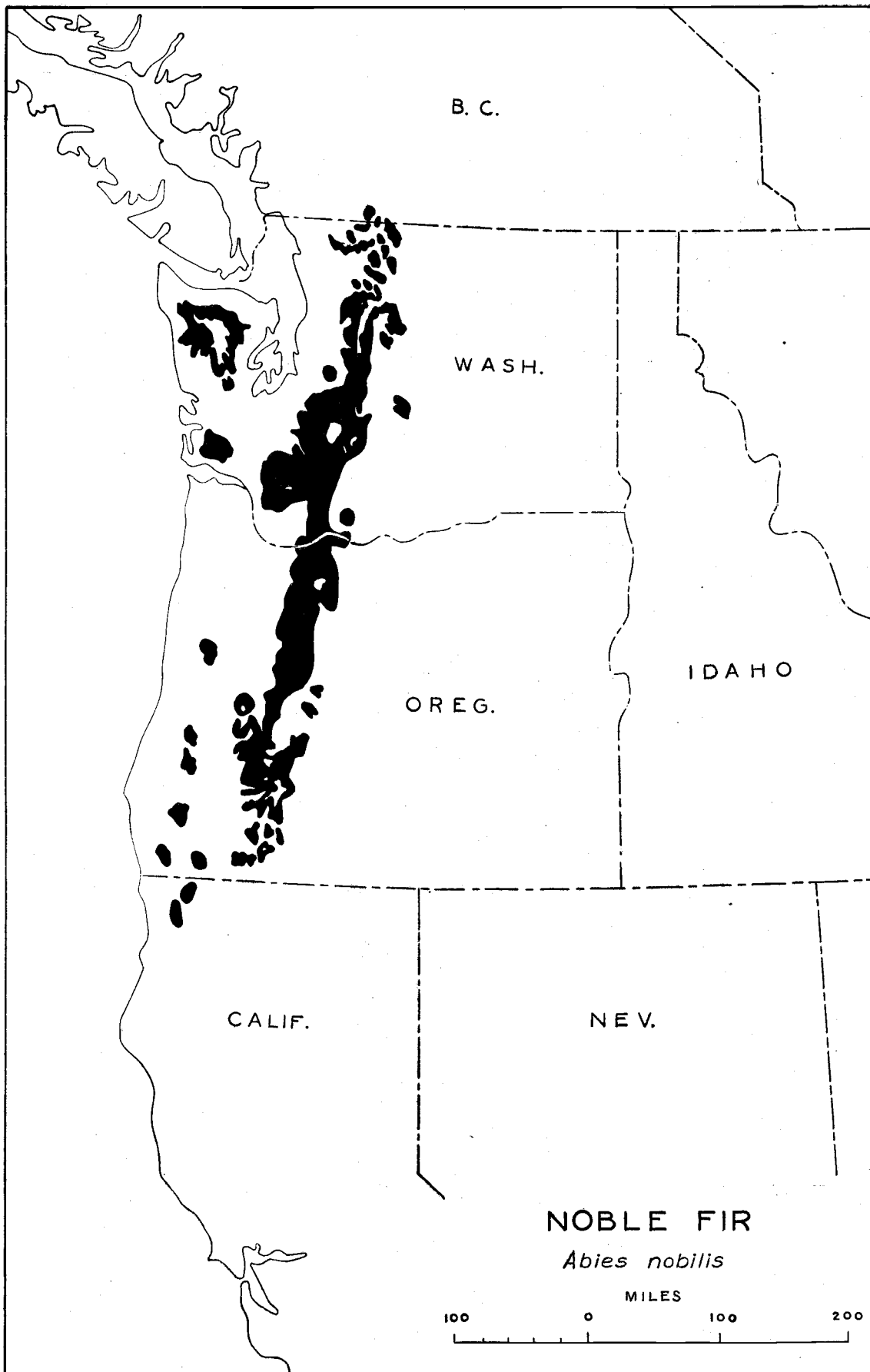
100 0 200

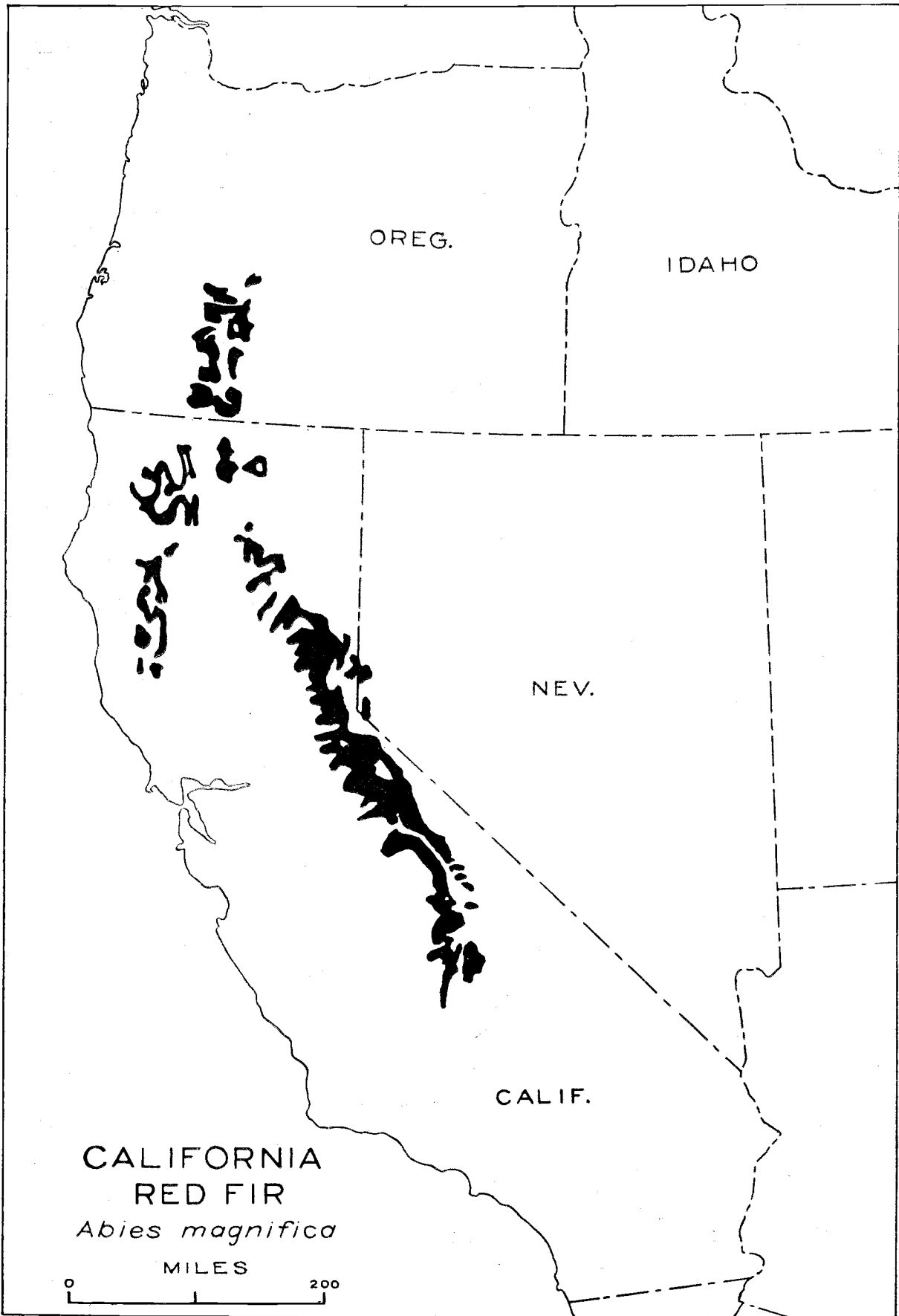
ABIES CONCOLOR LINDLEY

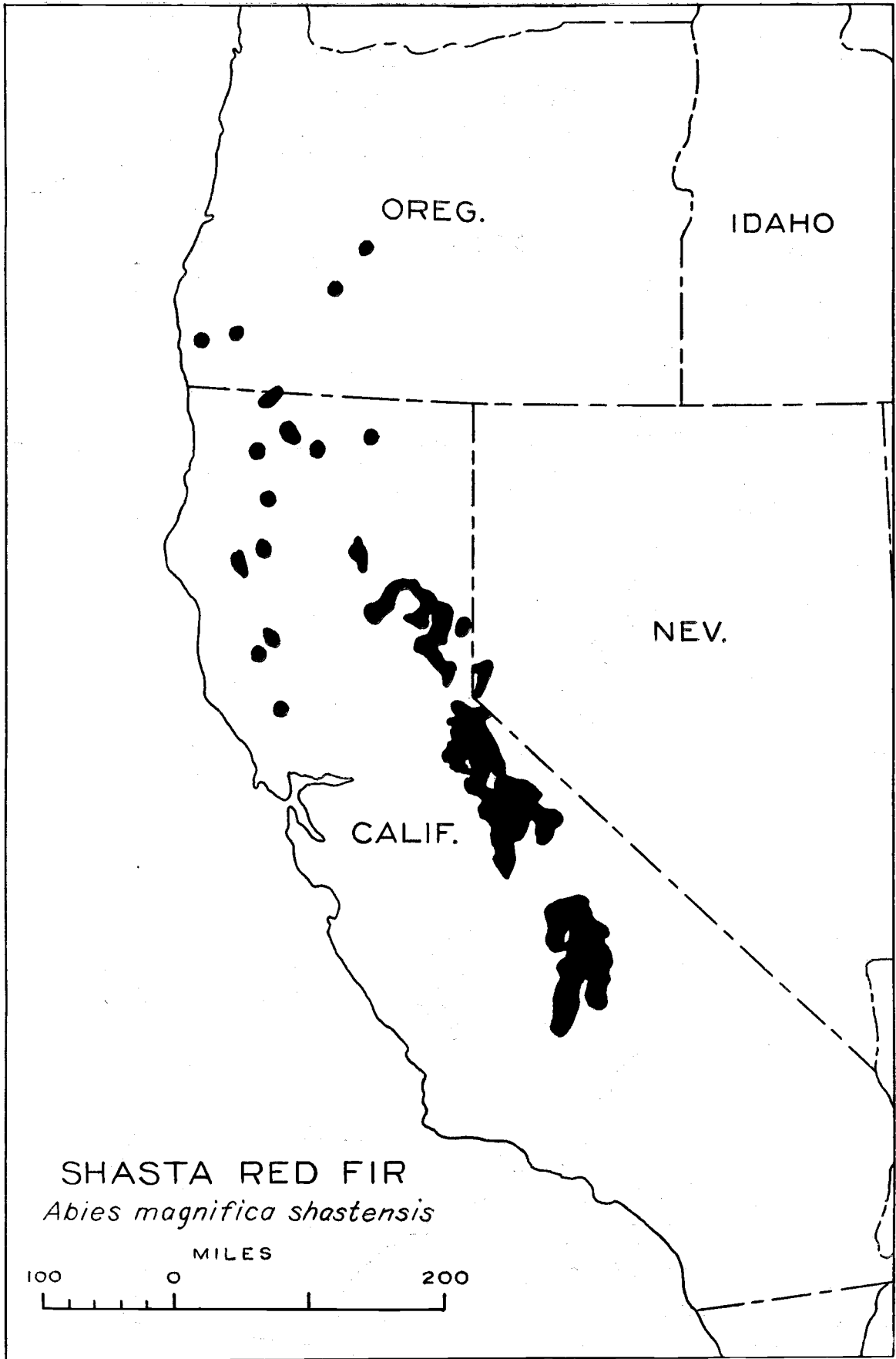
MAP 44

WHITE FIR



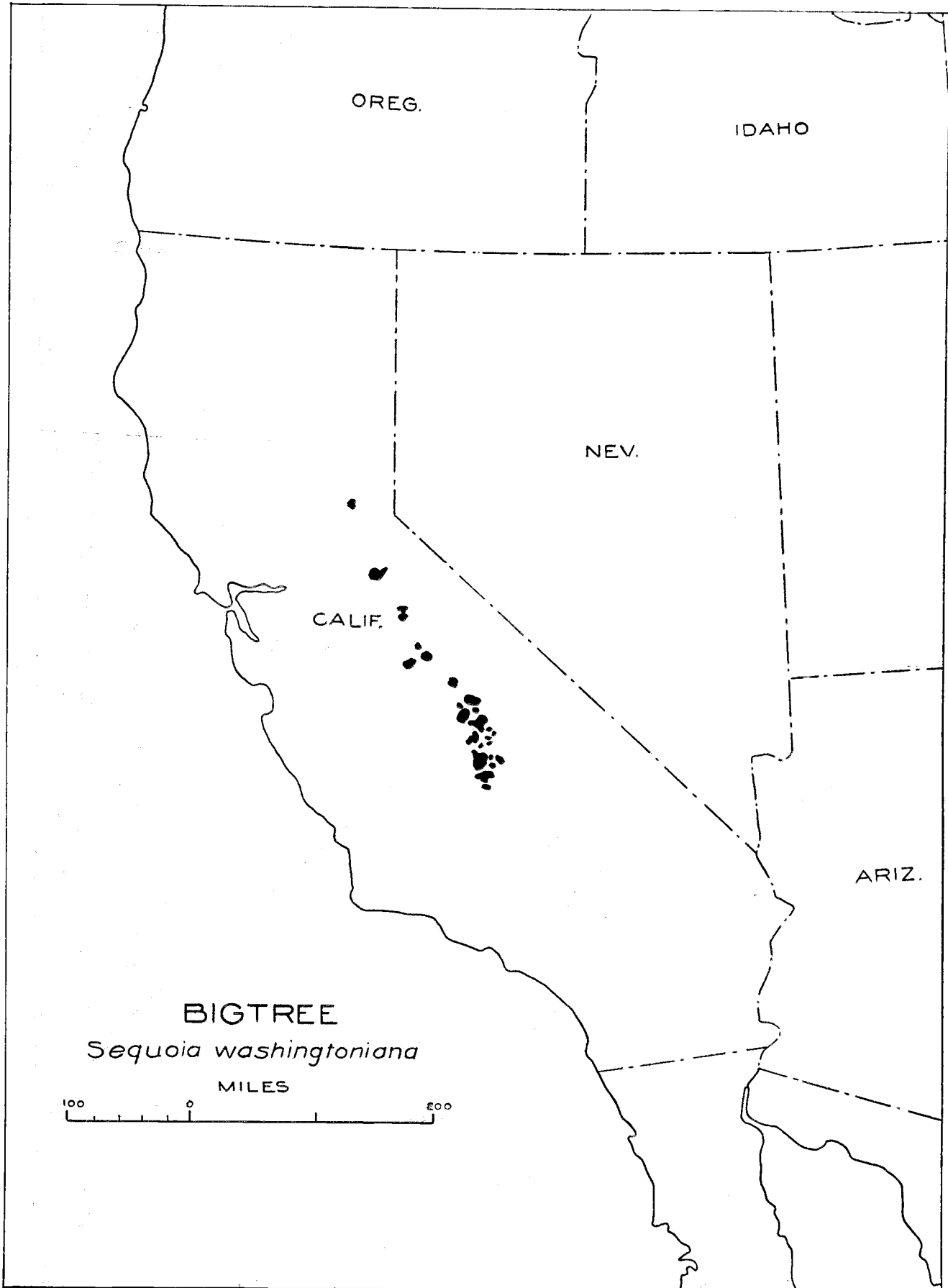


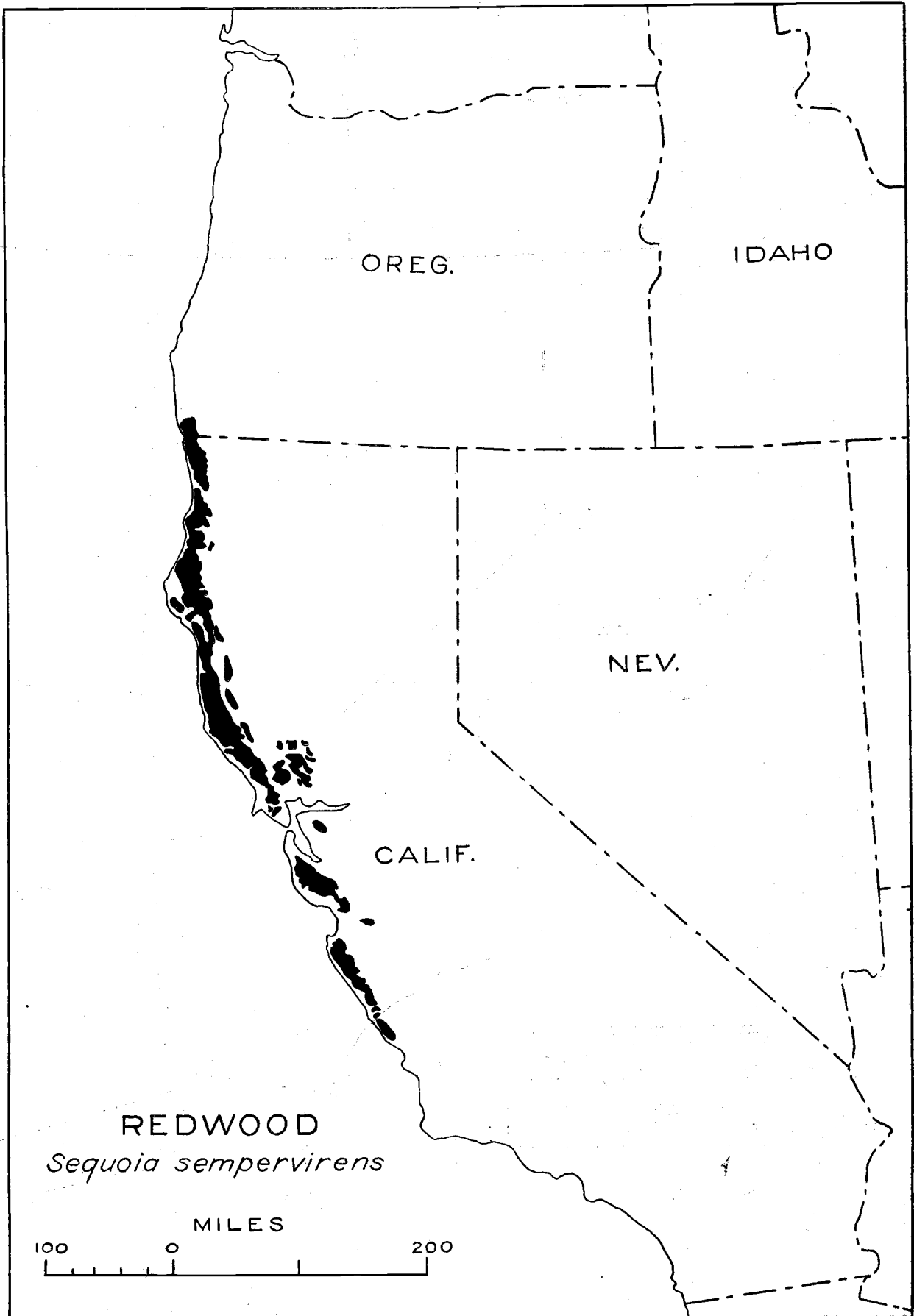


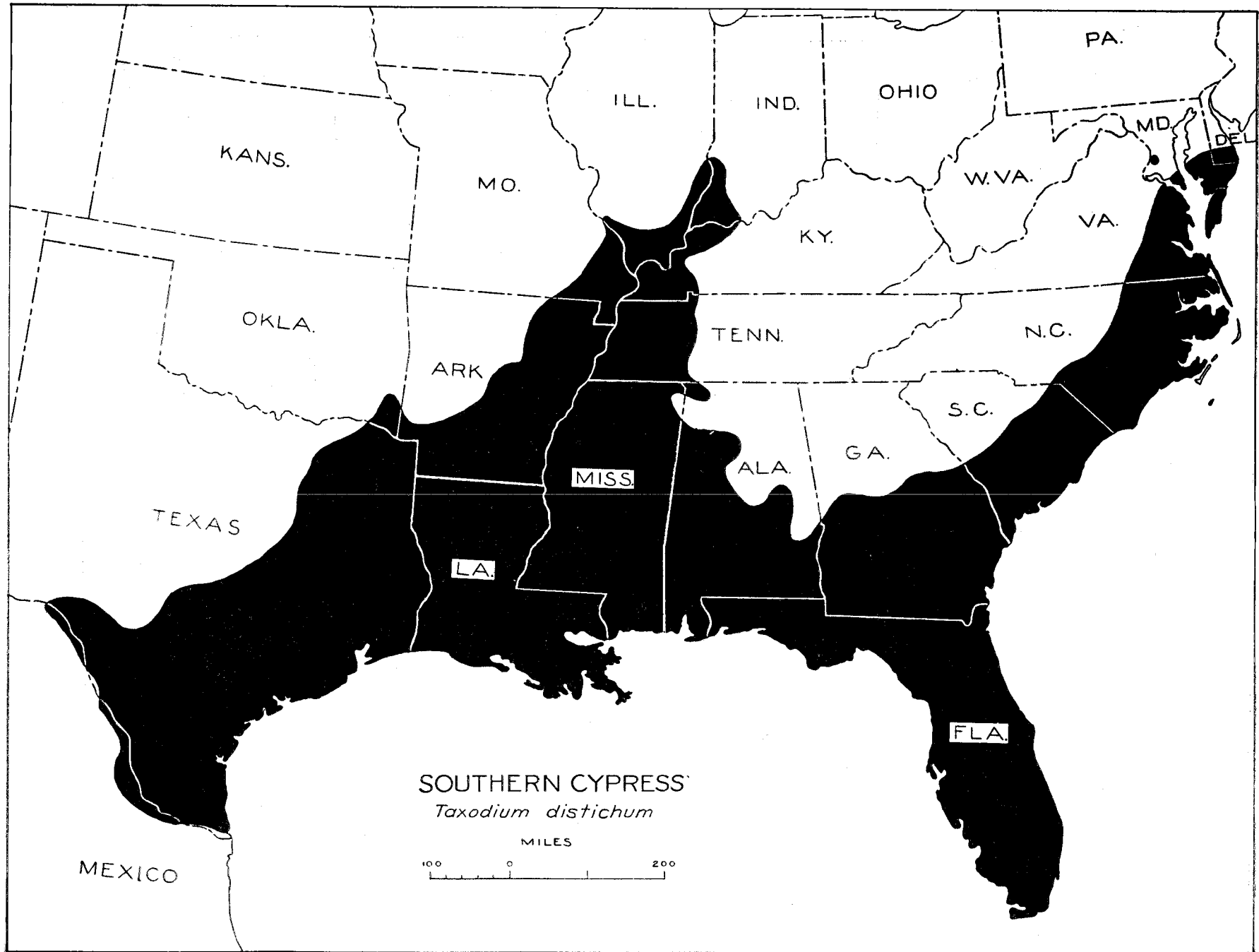


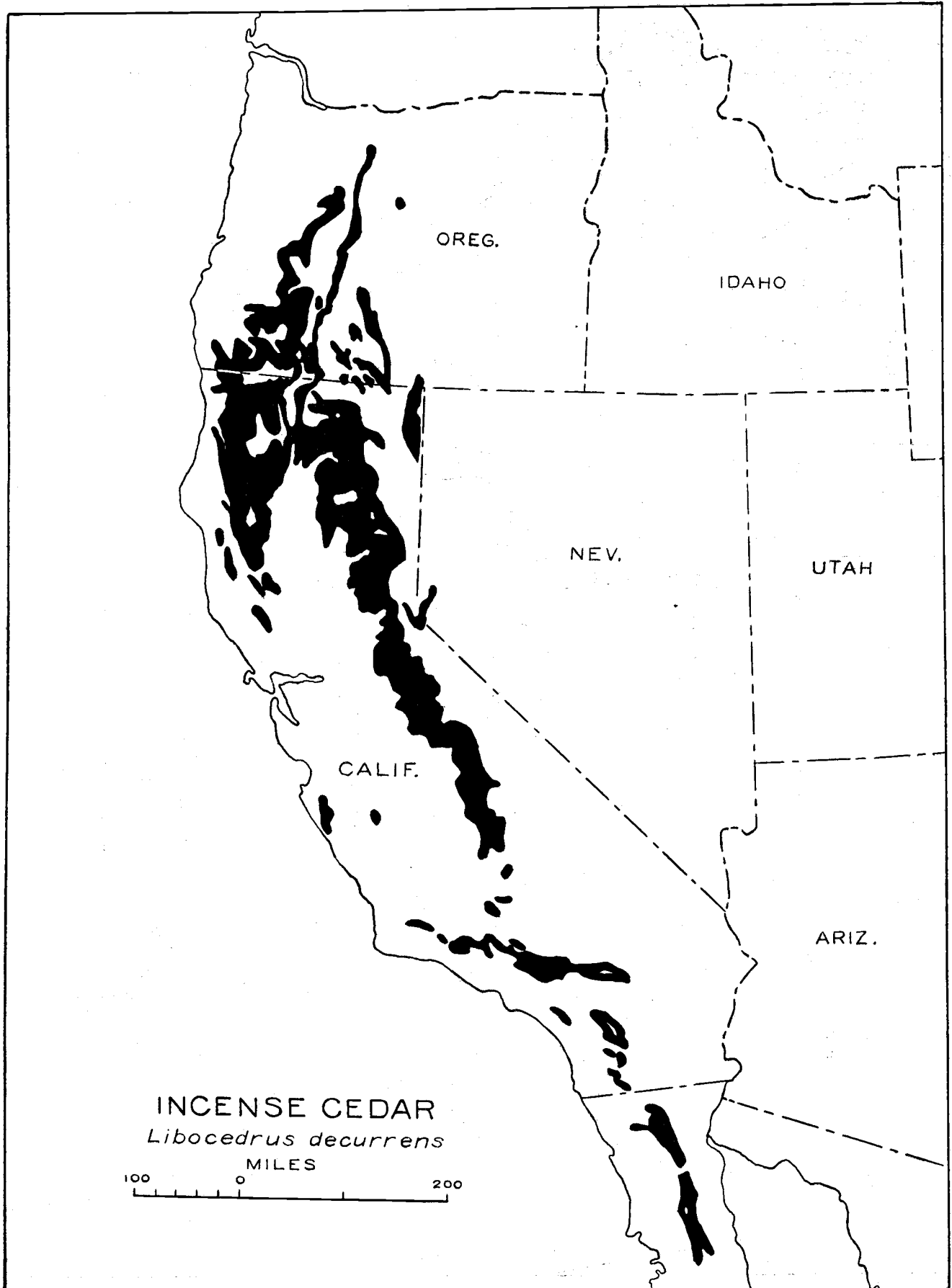
SHASTA RED FIR
Abies magnifica shastensis

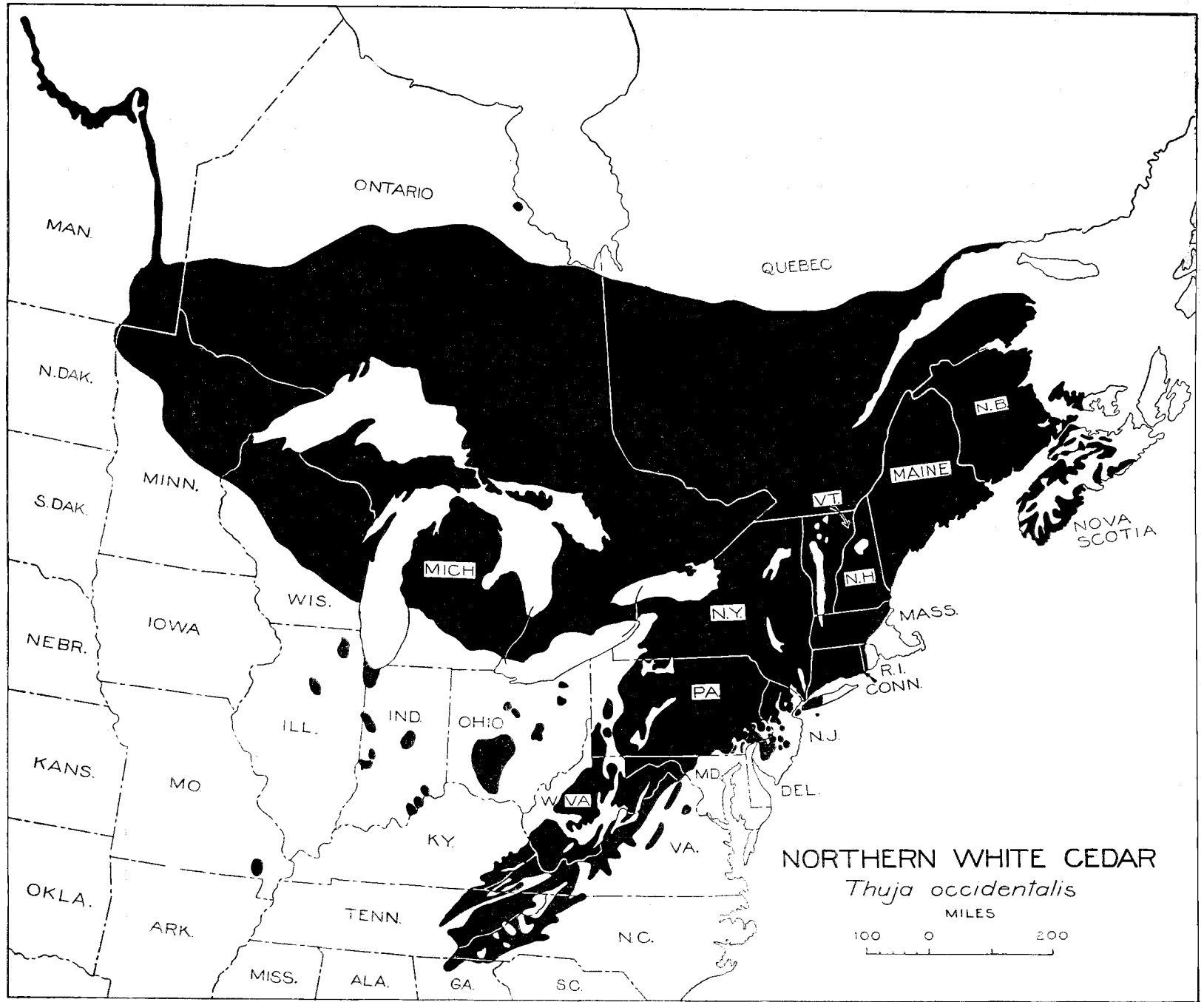










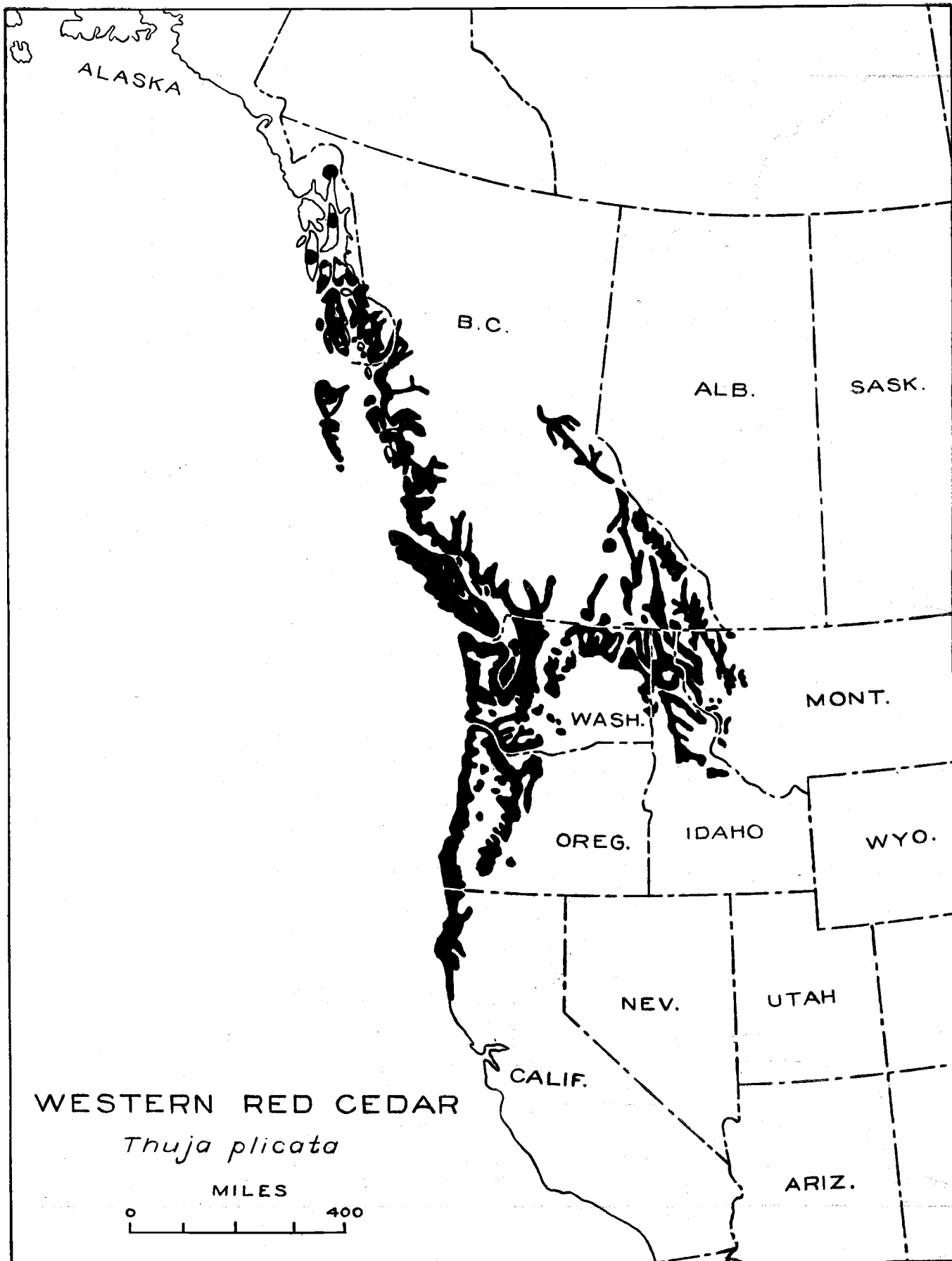


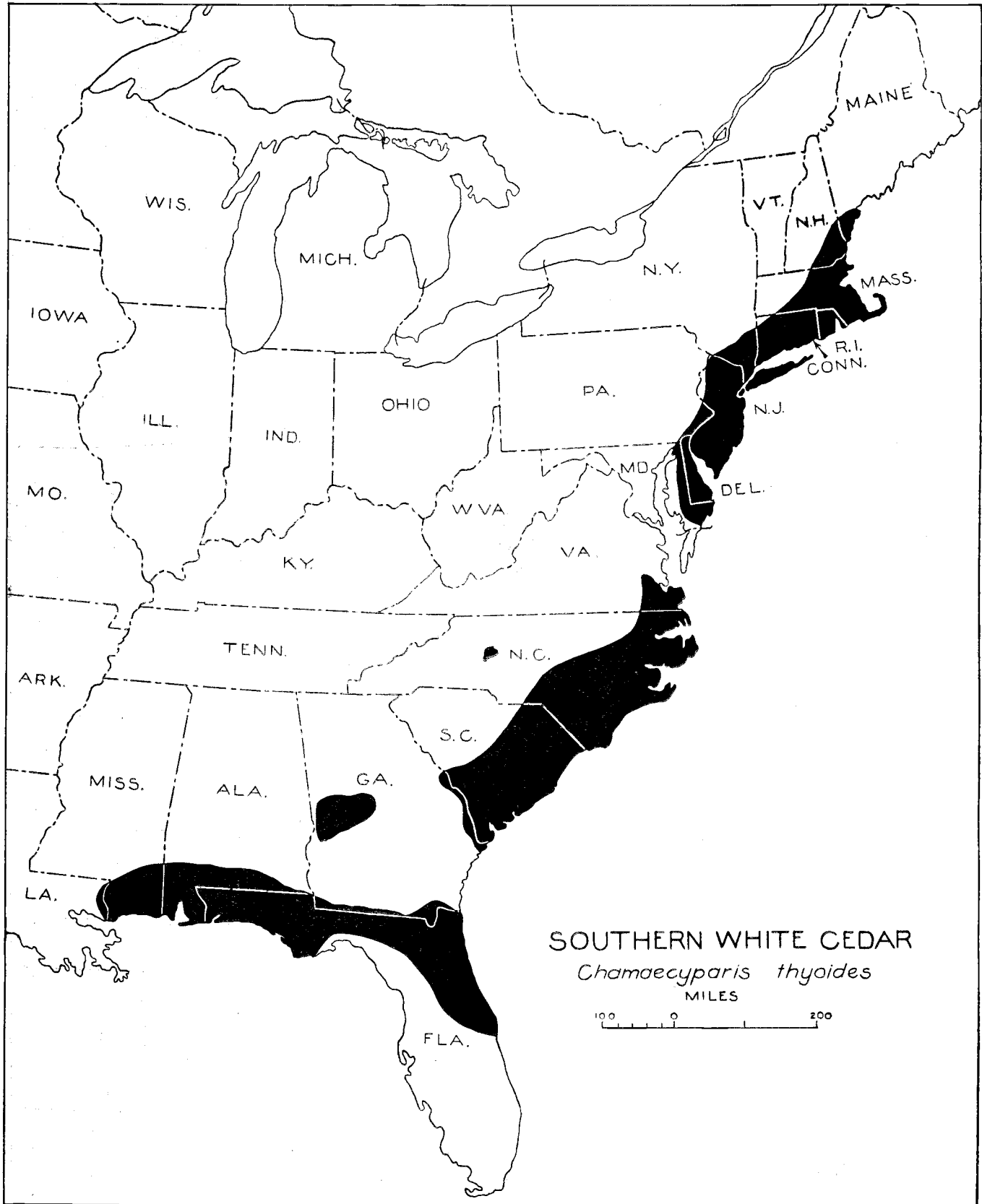
57

THUJA OCCIDENTALIS LINNAEUS

MAP 53

NORTHERN WHITE CEDAR

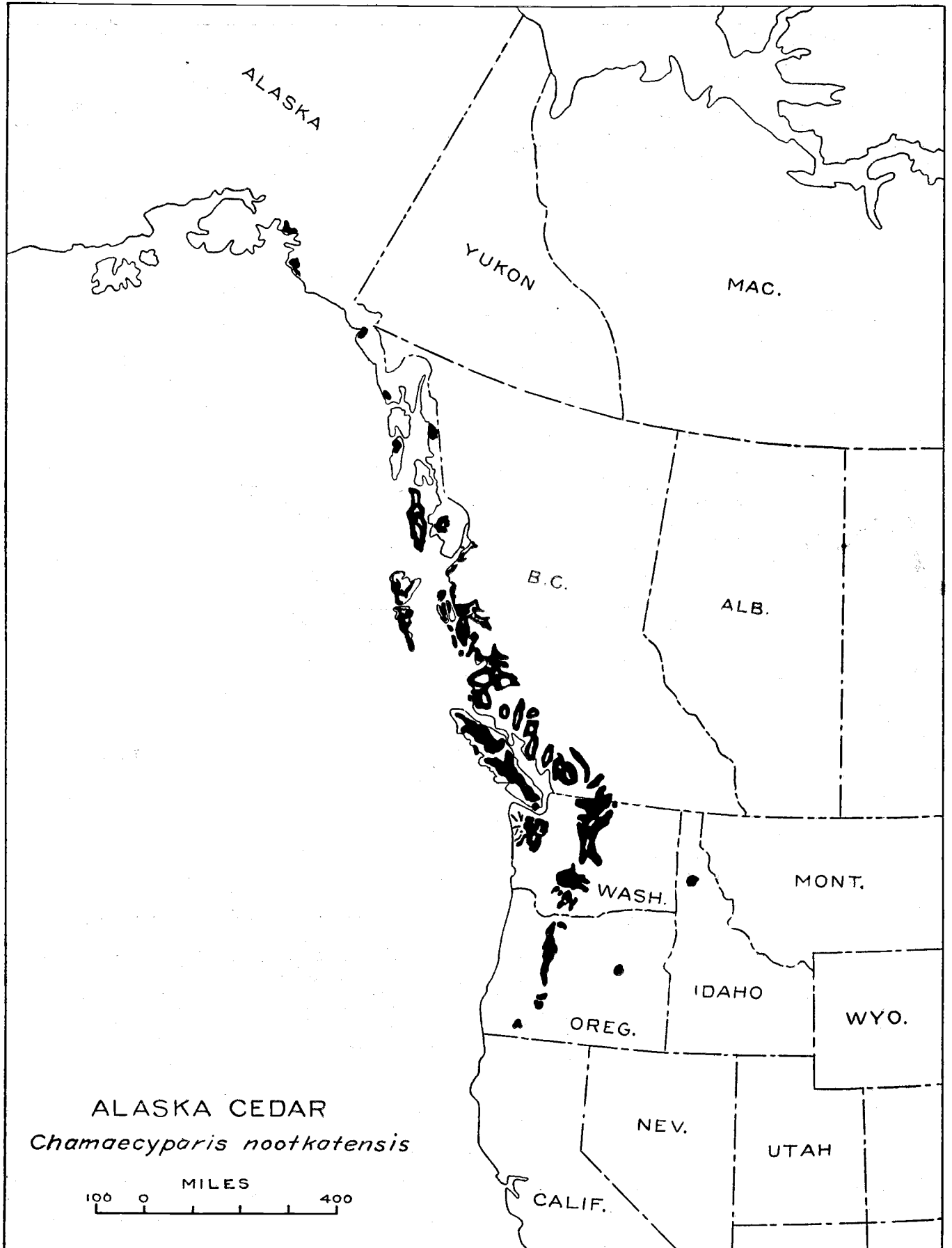




MAP 55

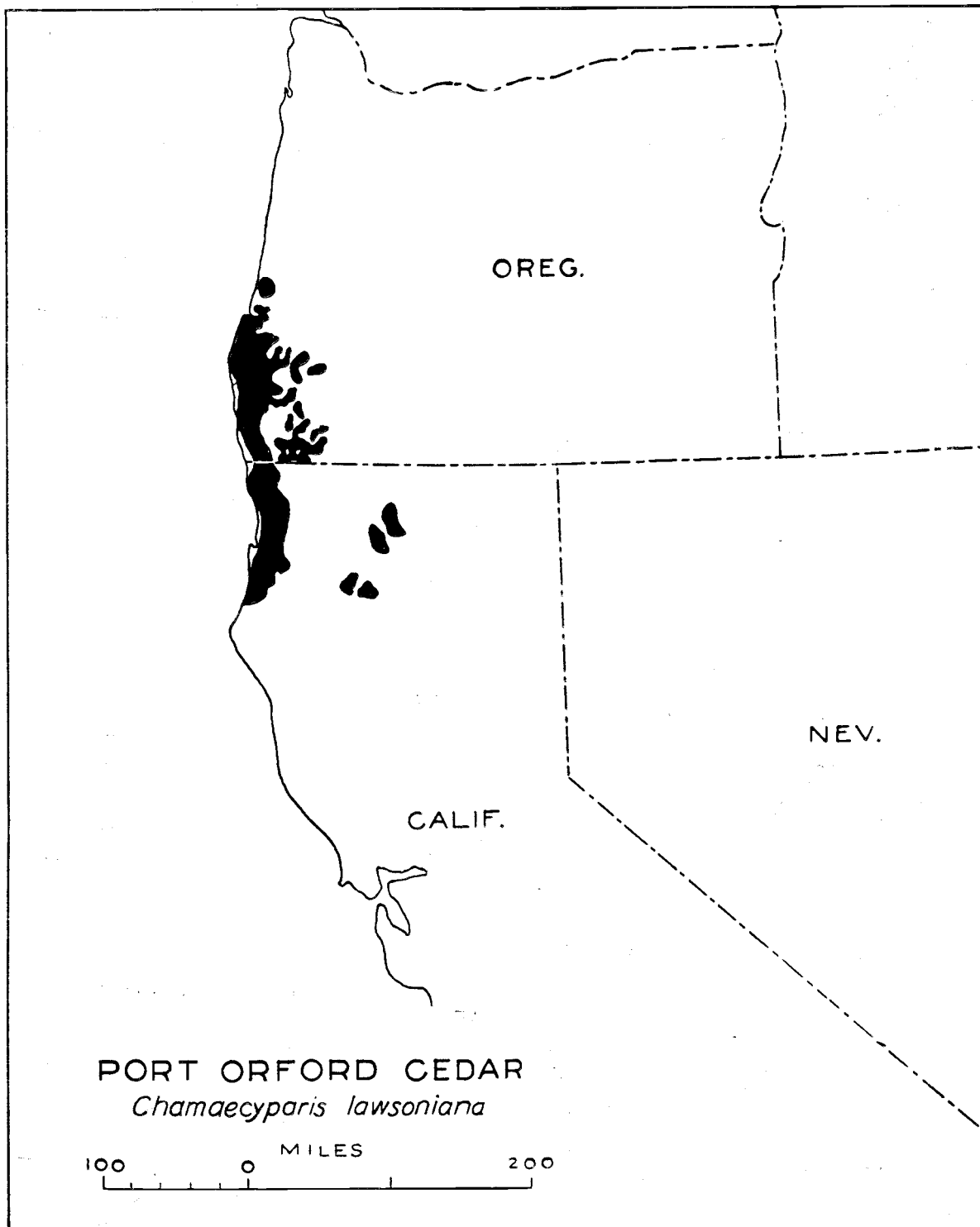
CHAMAECYPARIS THYOIDES (LINNAEUS) BRITTON, STERNS, AND POGGENBERG

SOUTHERN WHITE CEDAR

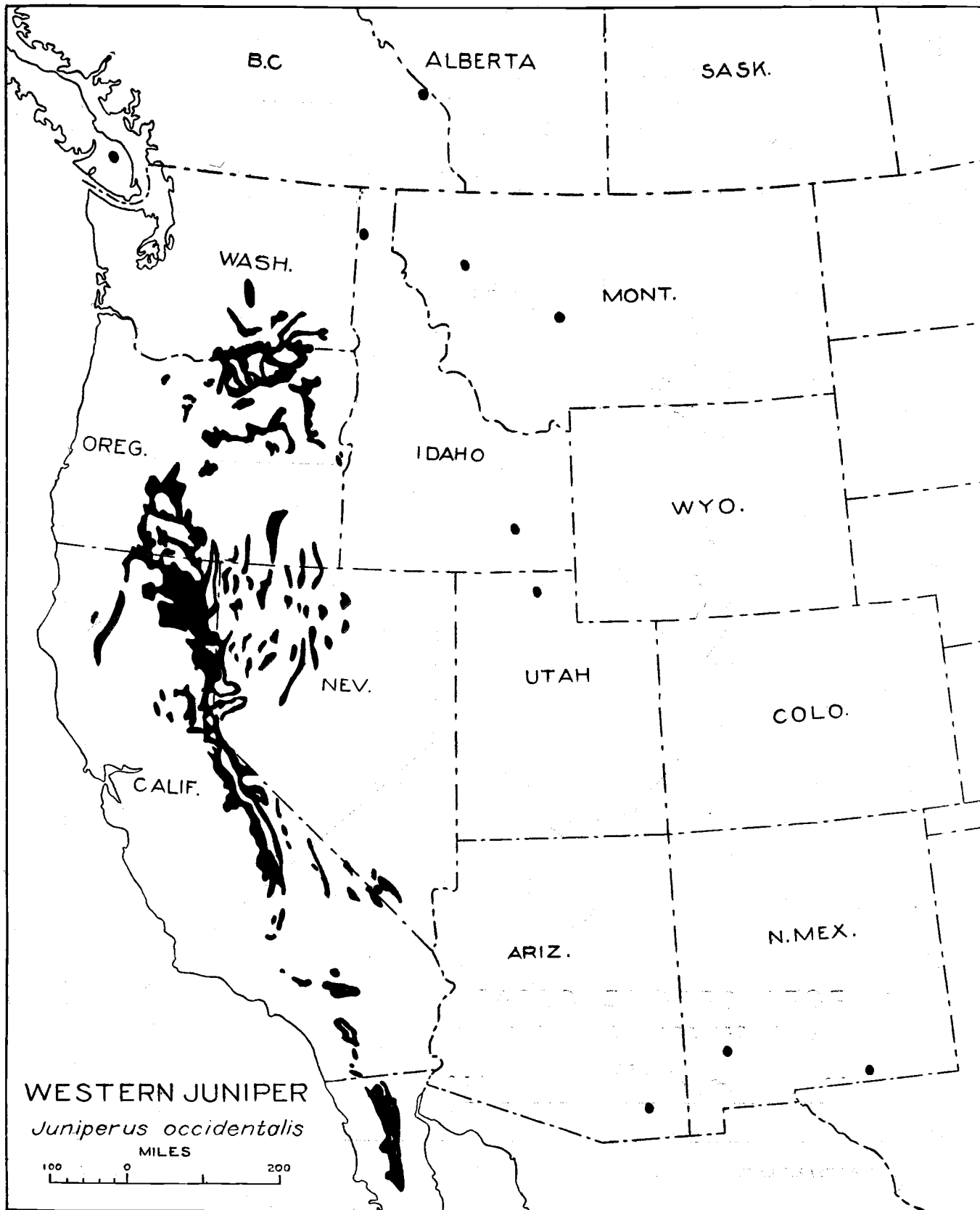


ALASKA CEDAR
Chamaecyparis nootkatensis





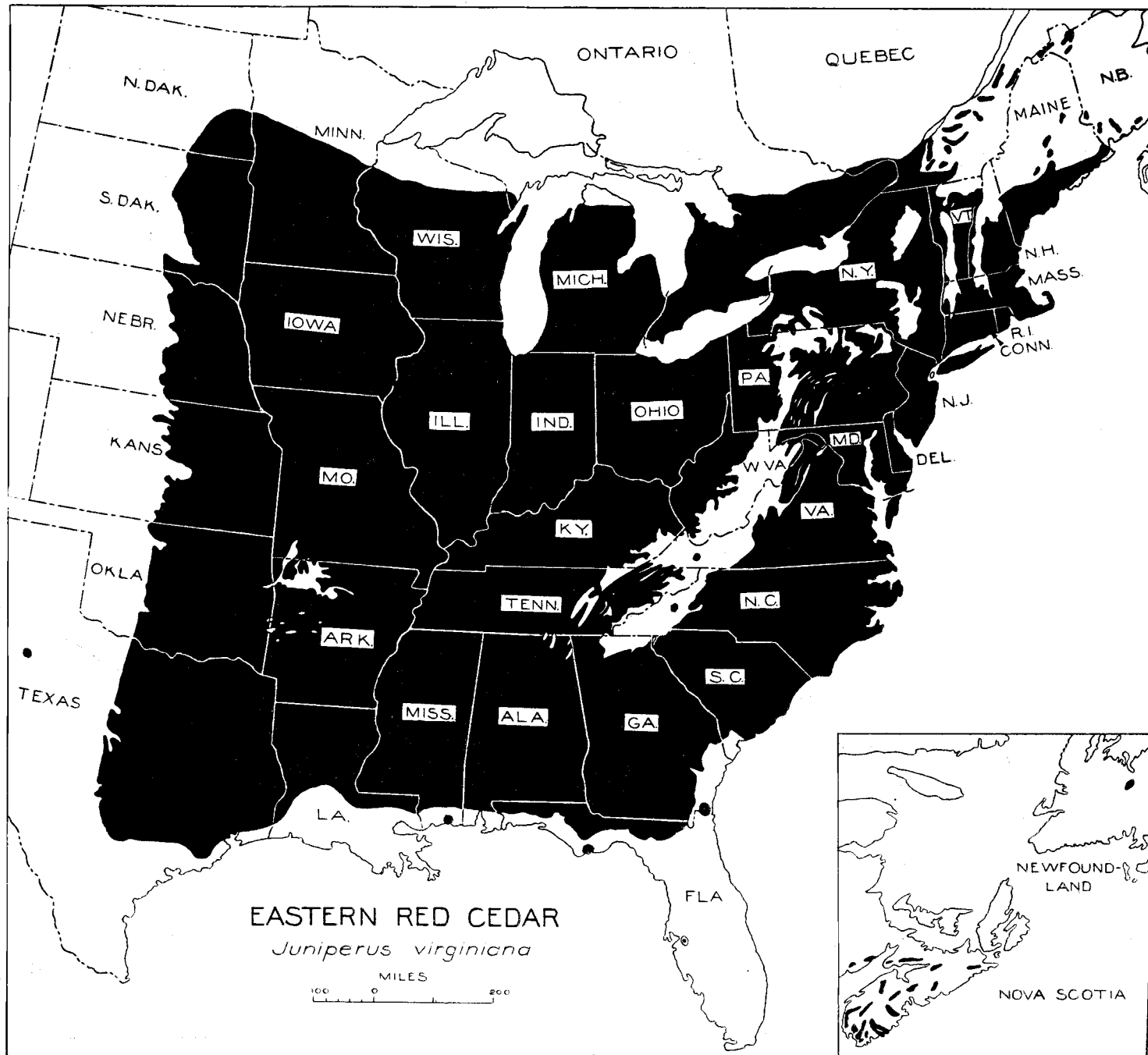
MAP 57
CHAMAECYPARIS LAWSONIANA (A. MURRAY) PARLATORE PORT ORFORD CEDAR



JUNIPERUS OCCIDENTALIS HOOKER

MAP 58

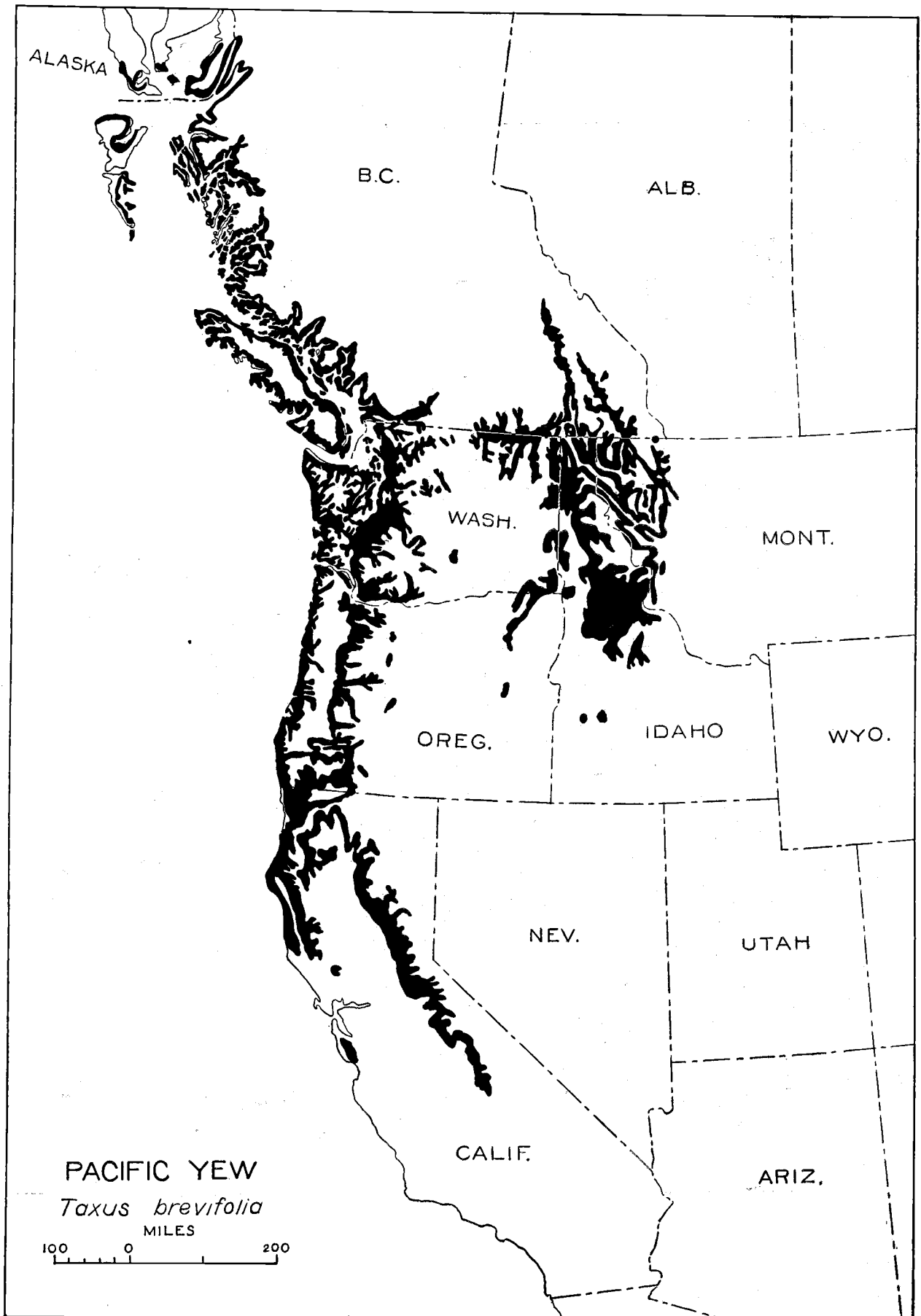
WESTERN JUNIPER



JUNIPERUS VIRGINIANA LINNAEUS

MAP 59

EASTERN RED CEDAR

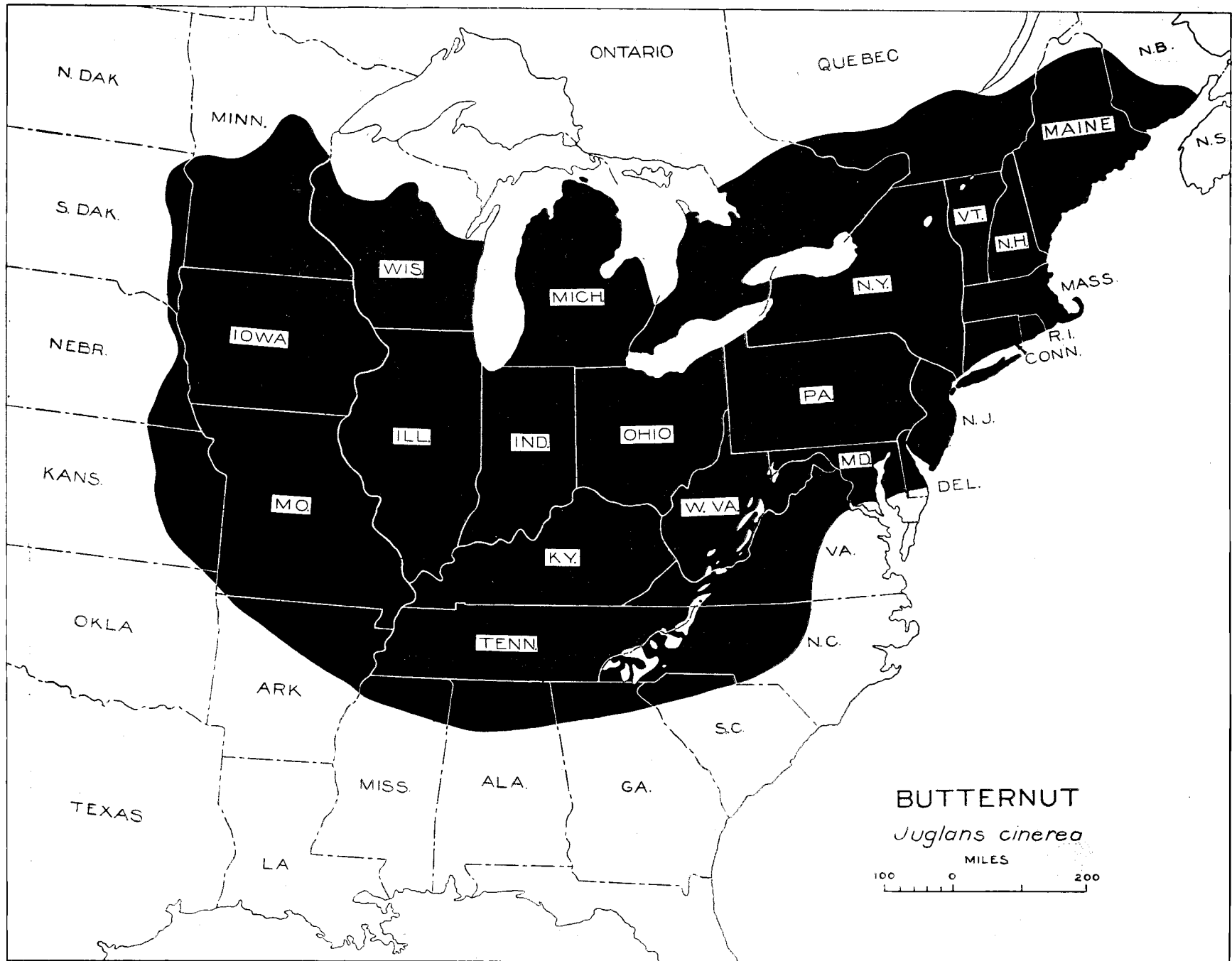


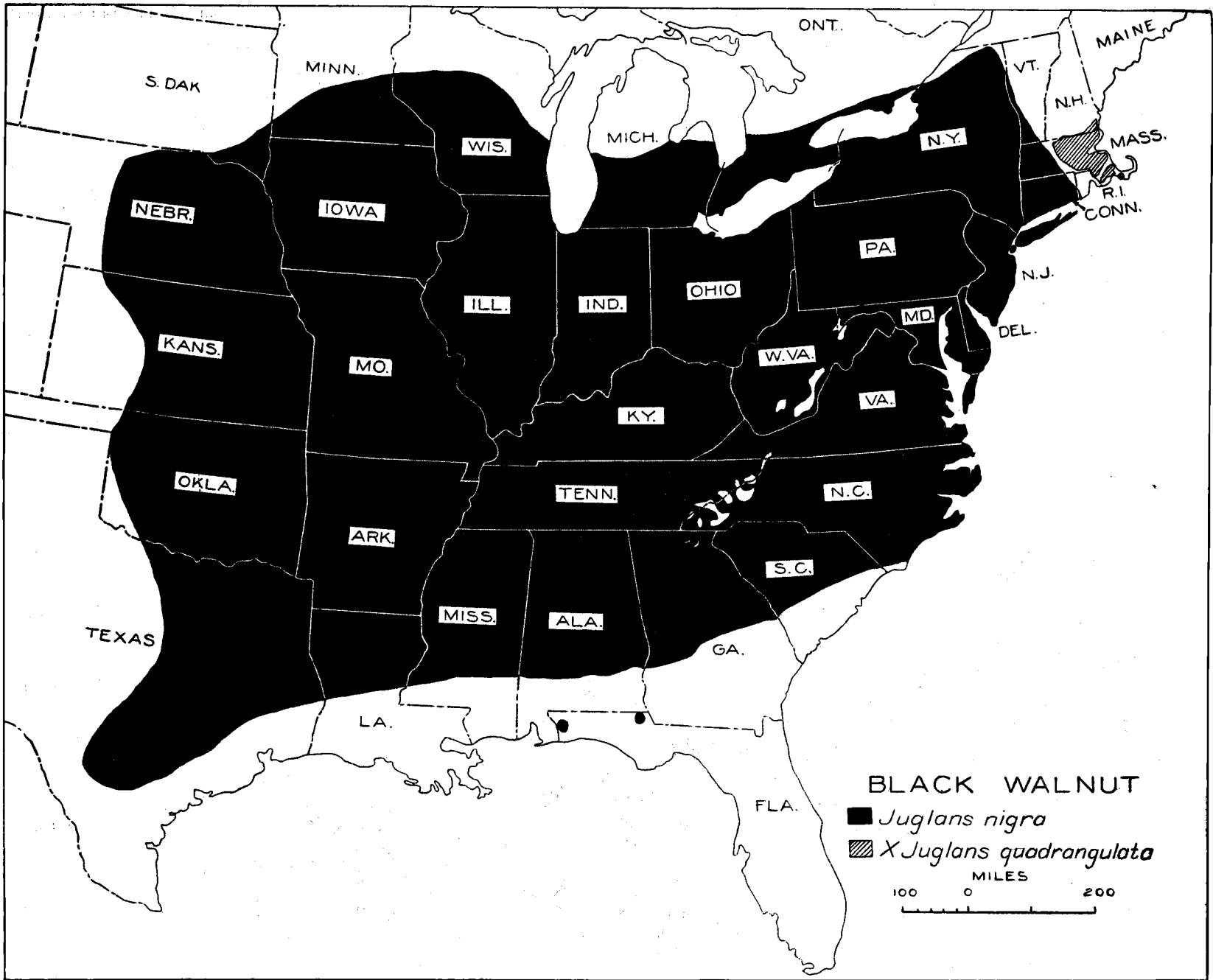
PACIFIC YEW

Taxus brevifolia

MILES

100 0 200

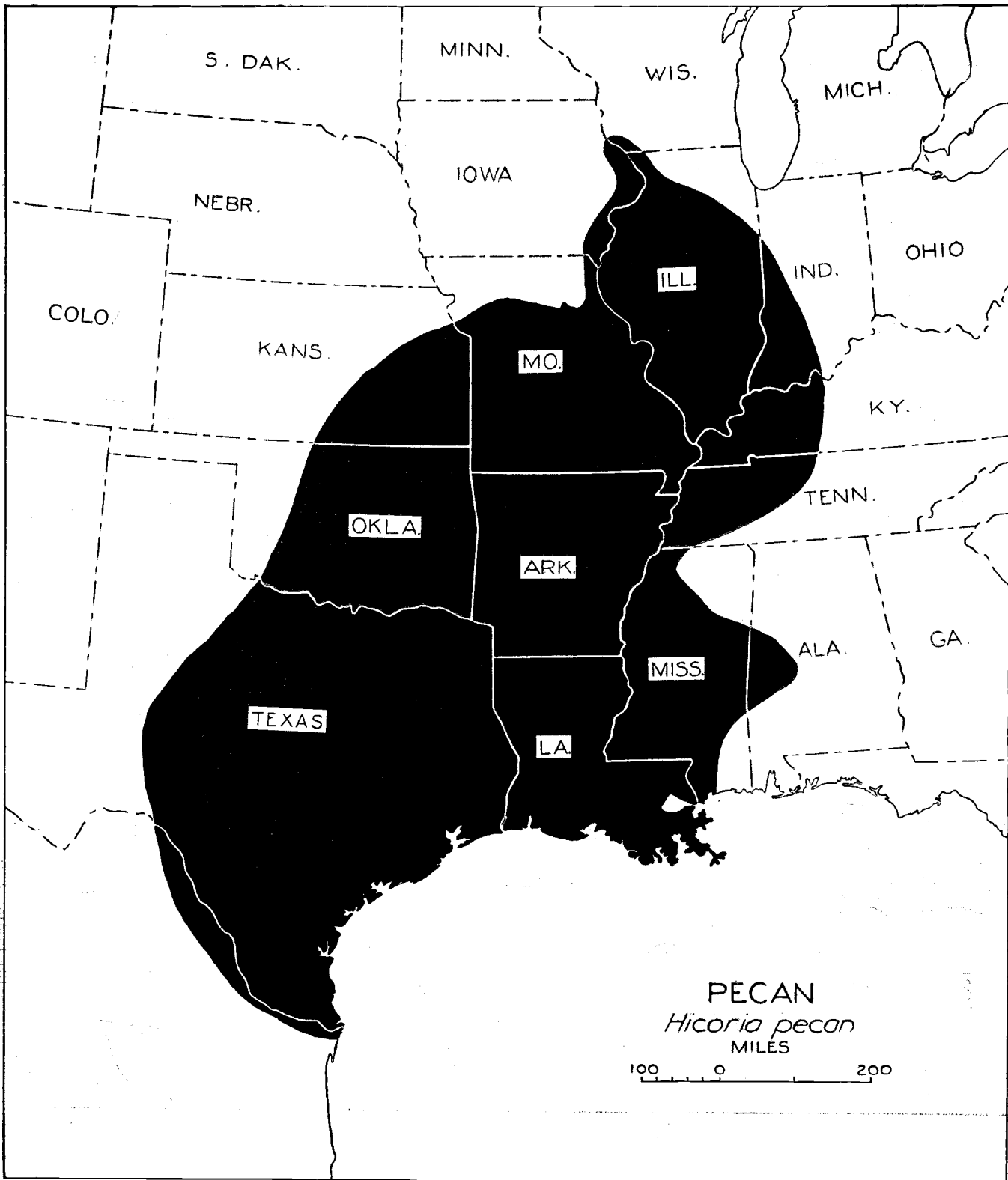


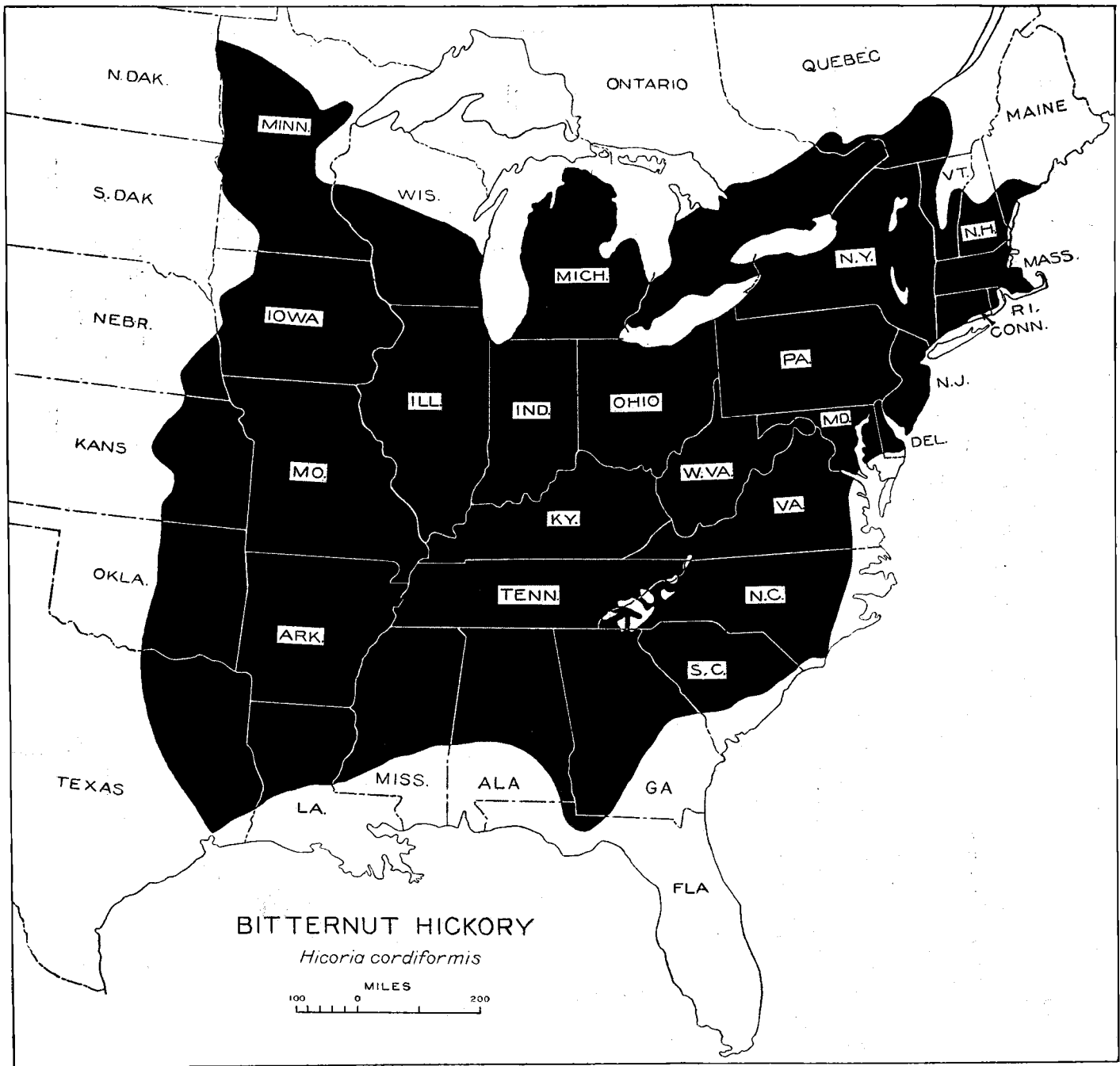


X JUGLANS QUADRANGULATA REHDER
 JUGLANS NIGRA LINNAEUS

MAP 62

BLACK WALNUT

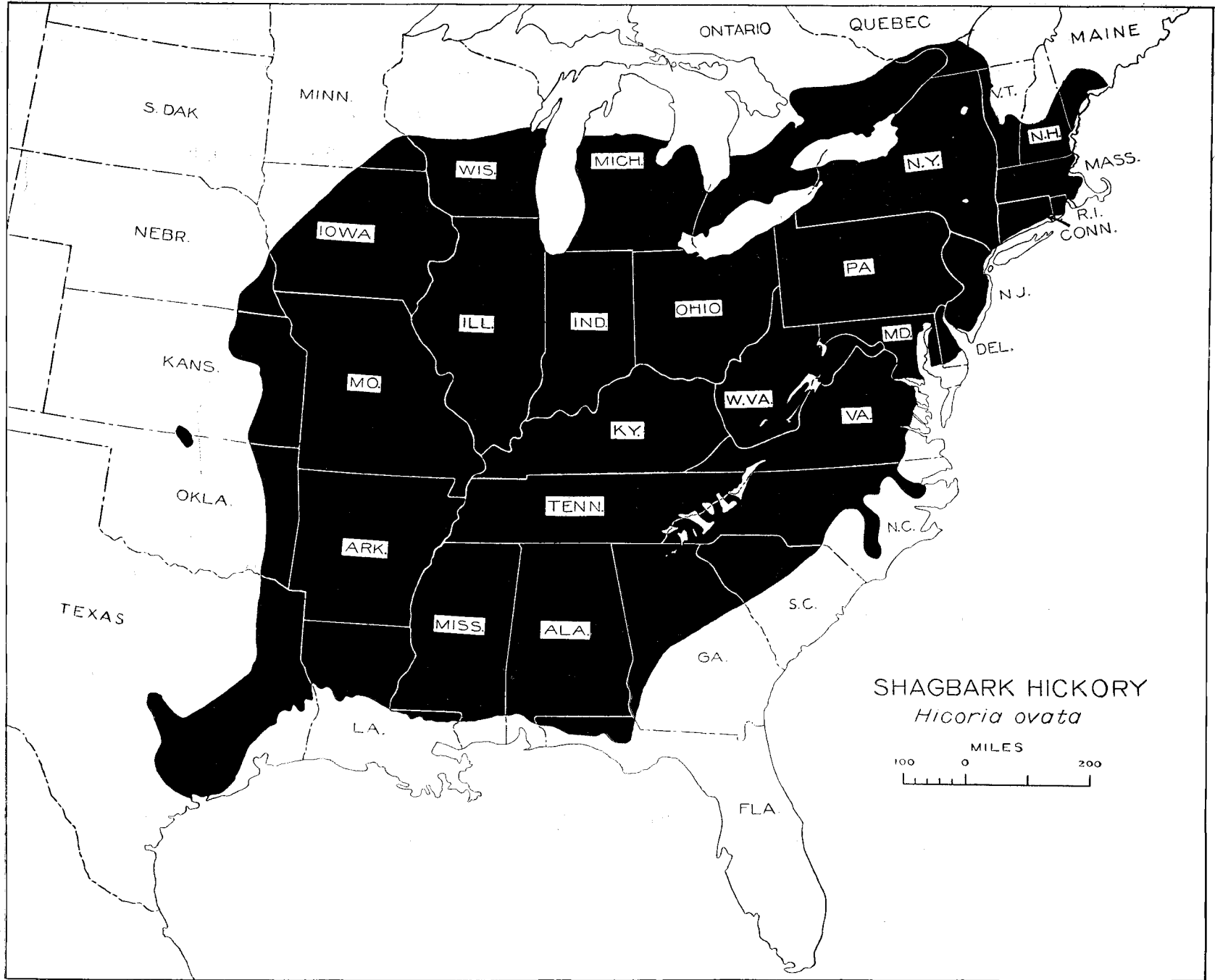




HICORIA CORDIFORMIS (WANGENHEIM) BRITTON

MAP 64

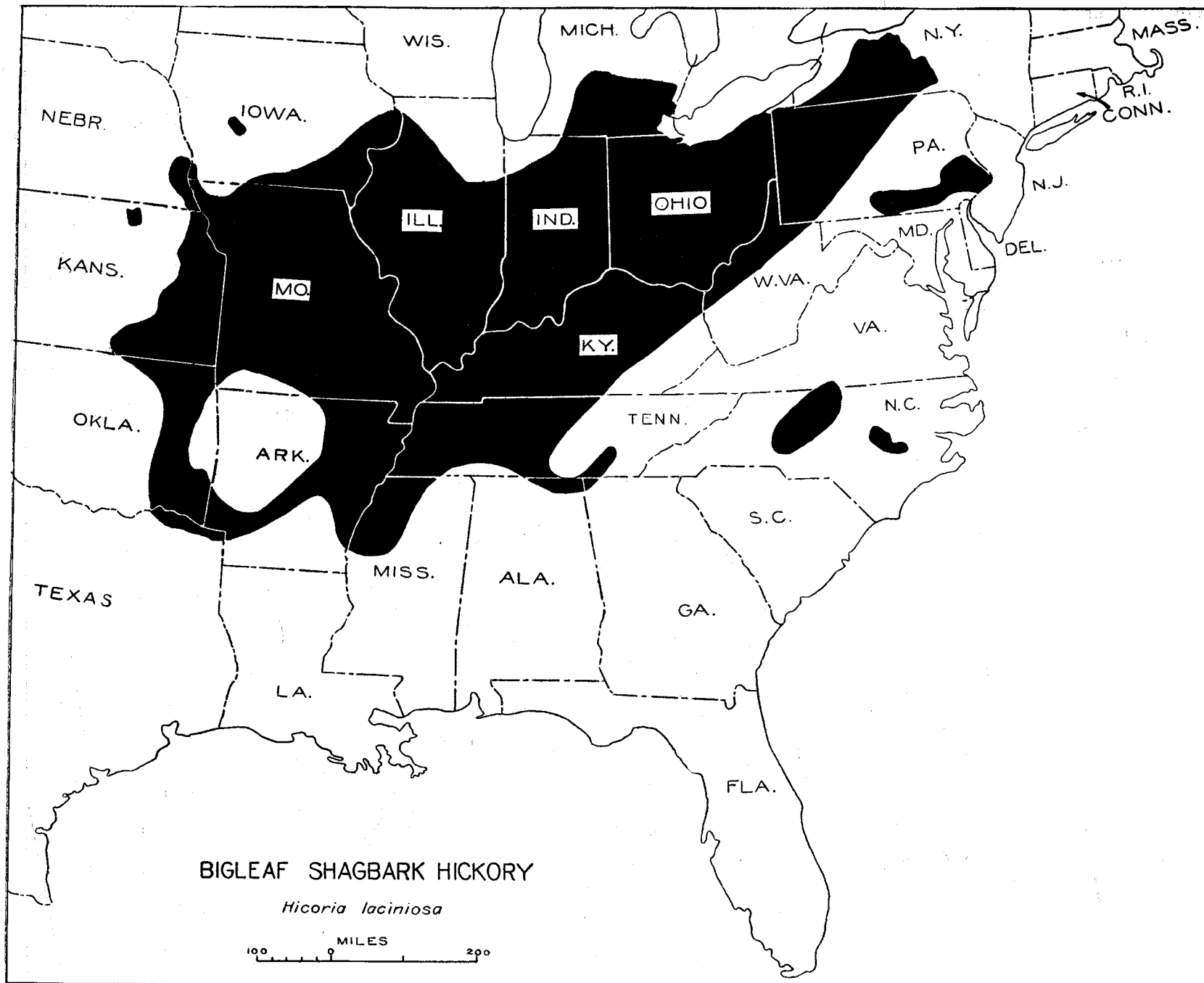
BITTERNUT HICKORY

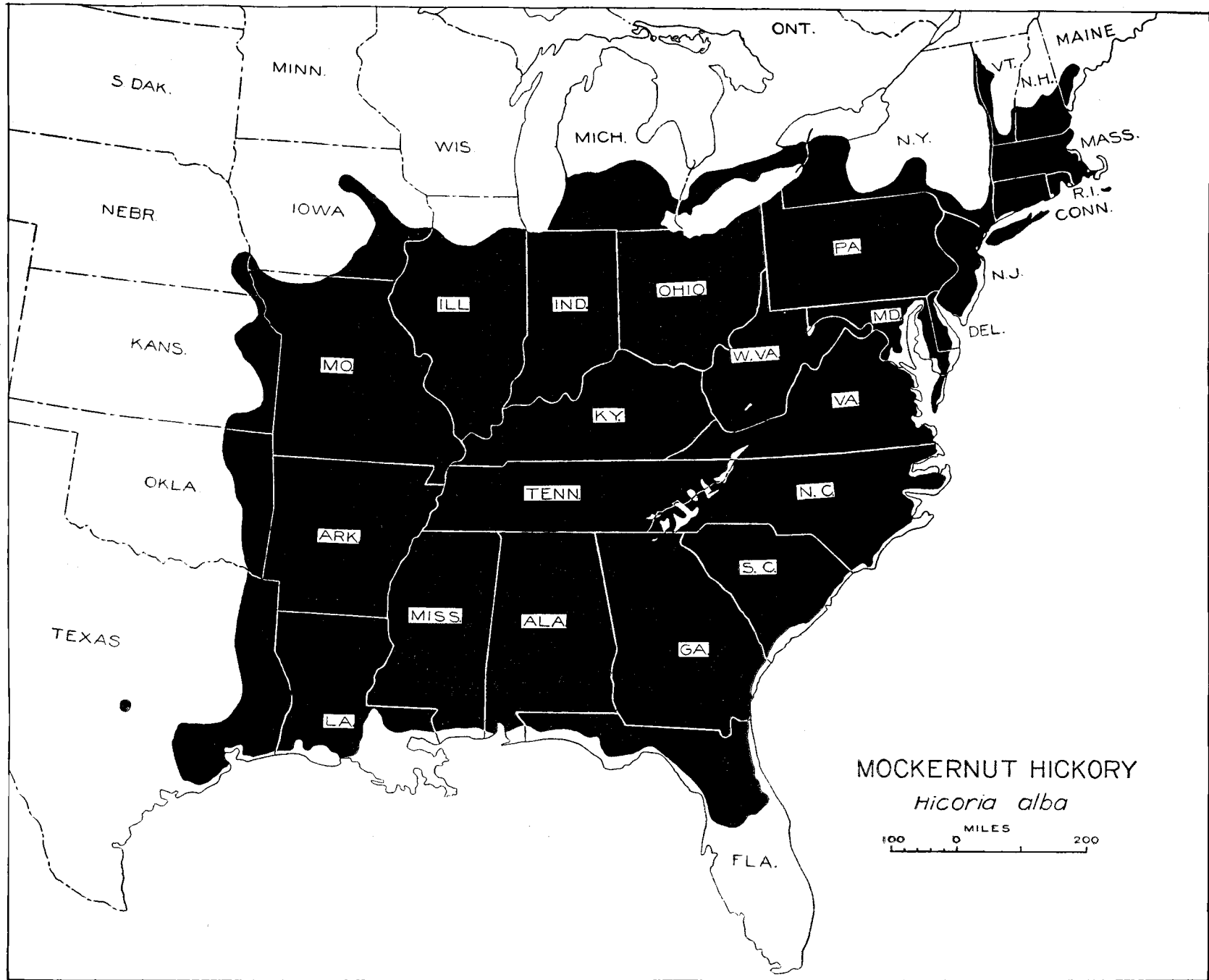


HICORIA OVATA (MILLER) BRITTON

MAP 65

SHAGBARK HICKORY

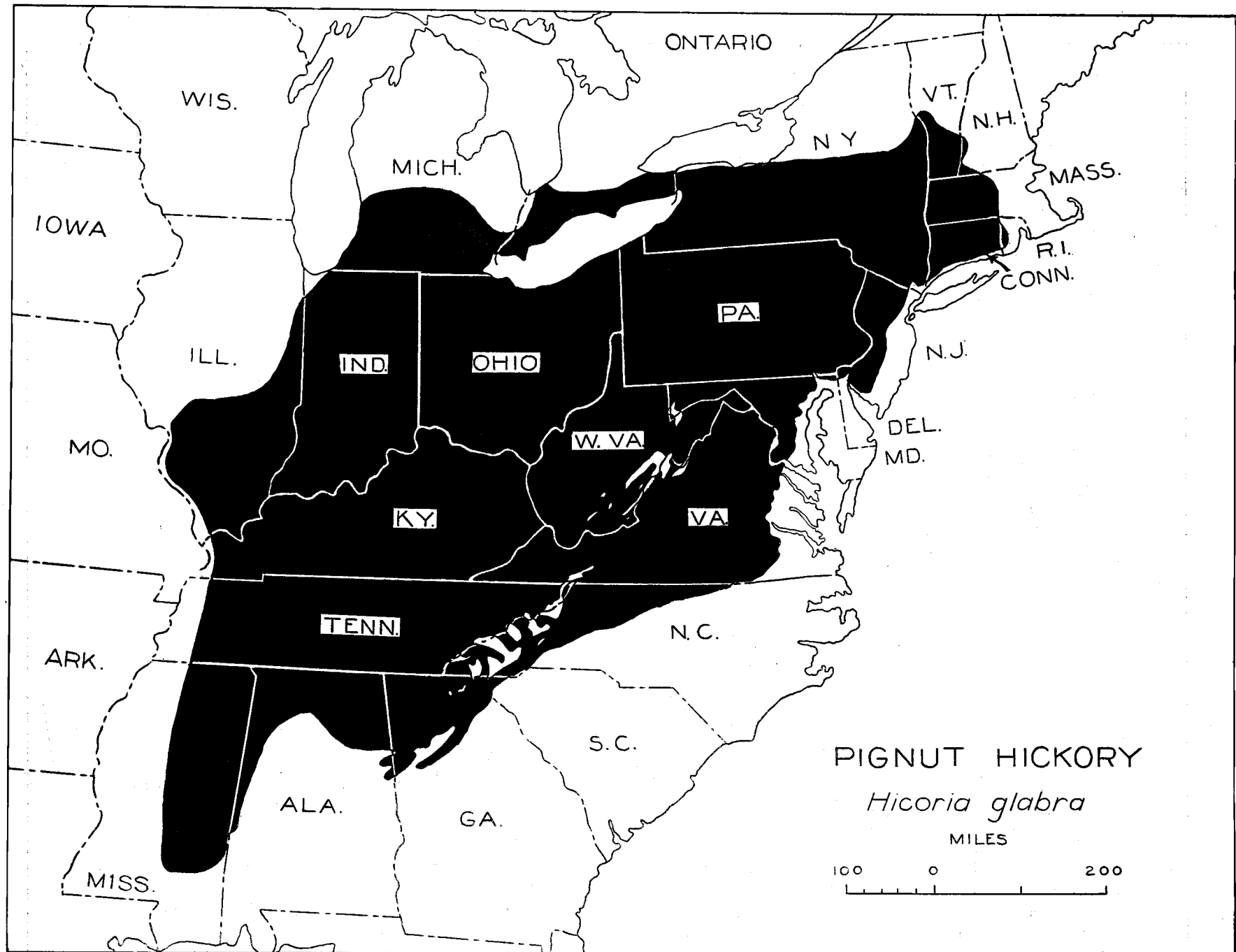


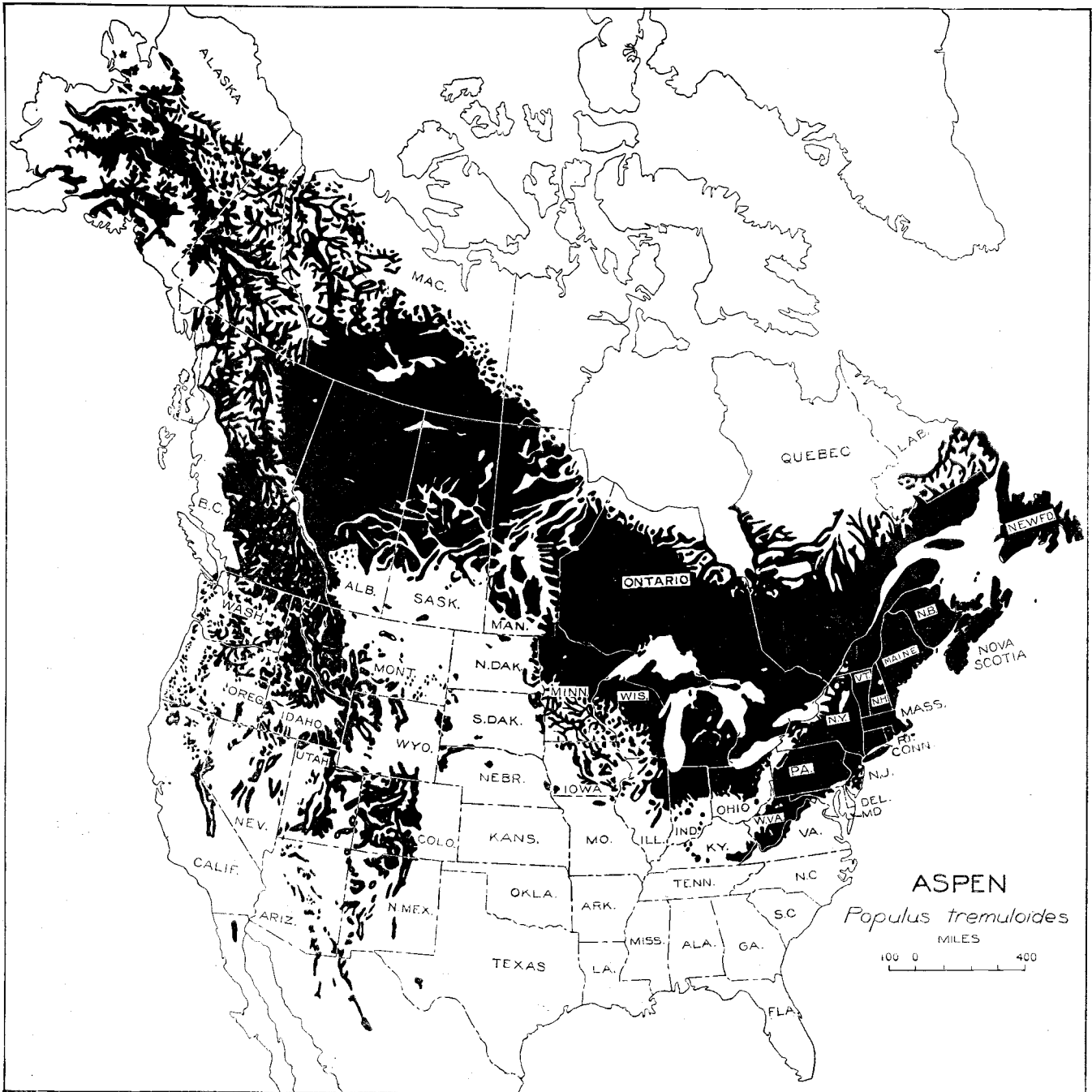


HICORIA ALBA (LINNAEUS) BRITTON

MAP 67

MOCKERNUT HICKORY



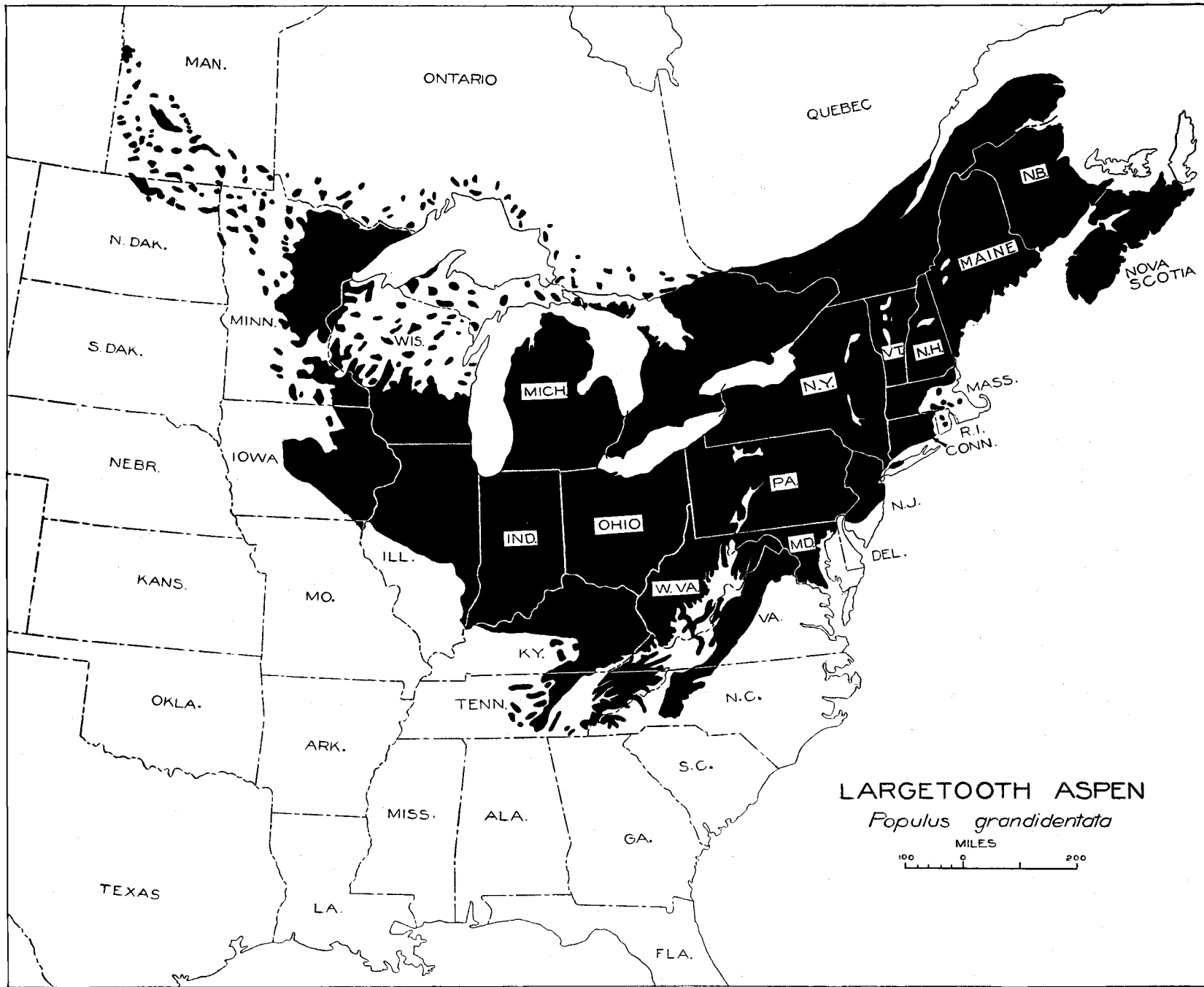


POPULUS TREMULOIDES MICHAUX

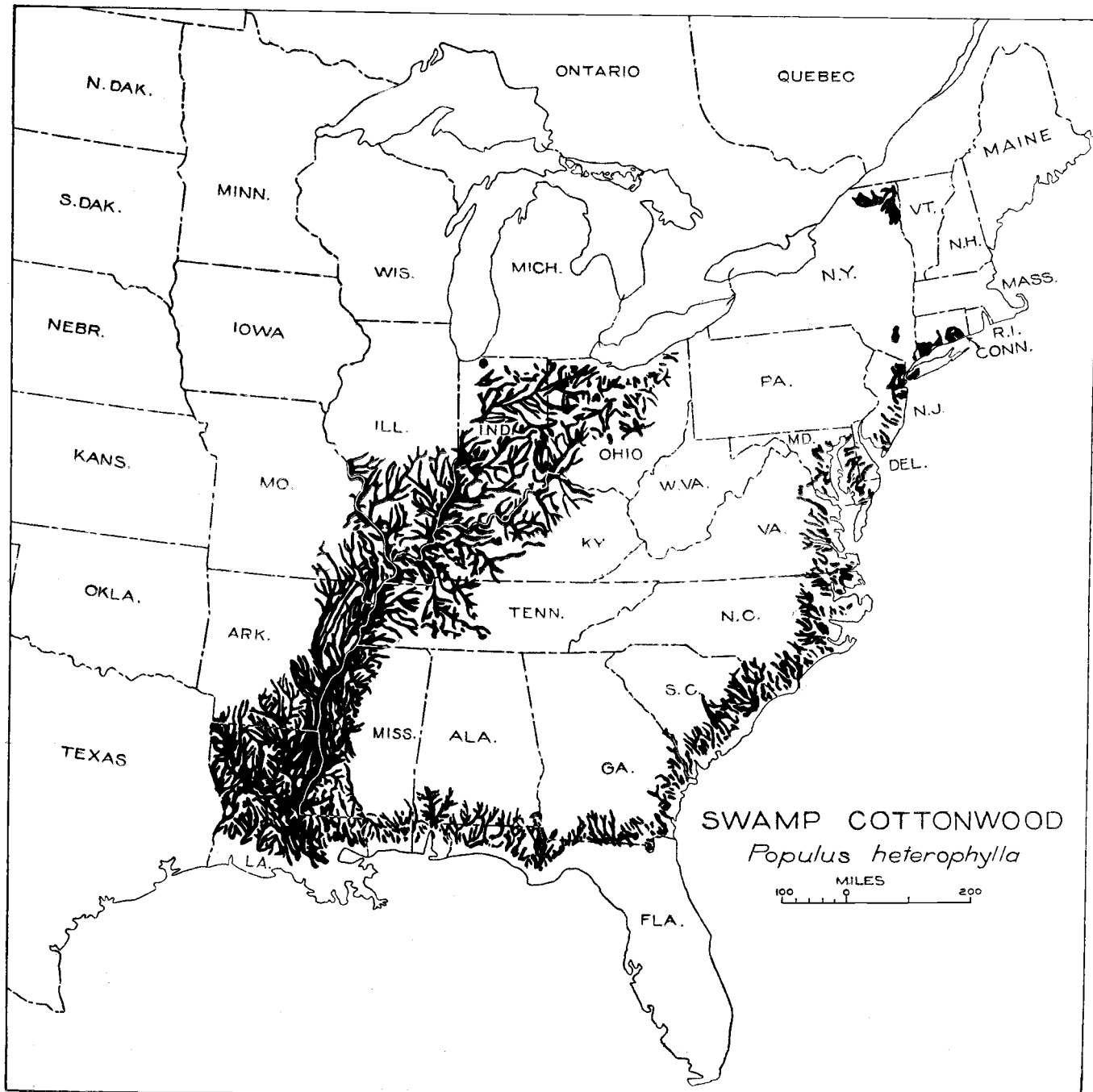
MAP 69

ASPEN

(Distribution of aspen is shown as one species, although dendrologists separate *Populus tremuloides* Michaux from *Populus tremuloides aurea* (Tidestrom) Daniels, the latter extending westward from Saskatchewan to the valley of the Yukon River and southward in the western part of the United States and Mexico.)



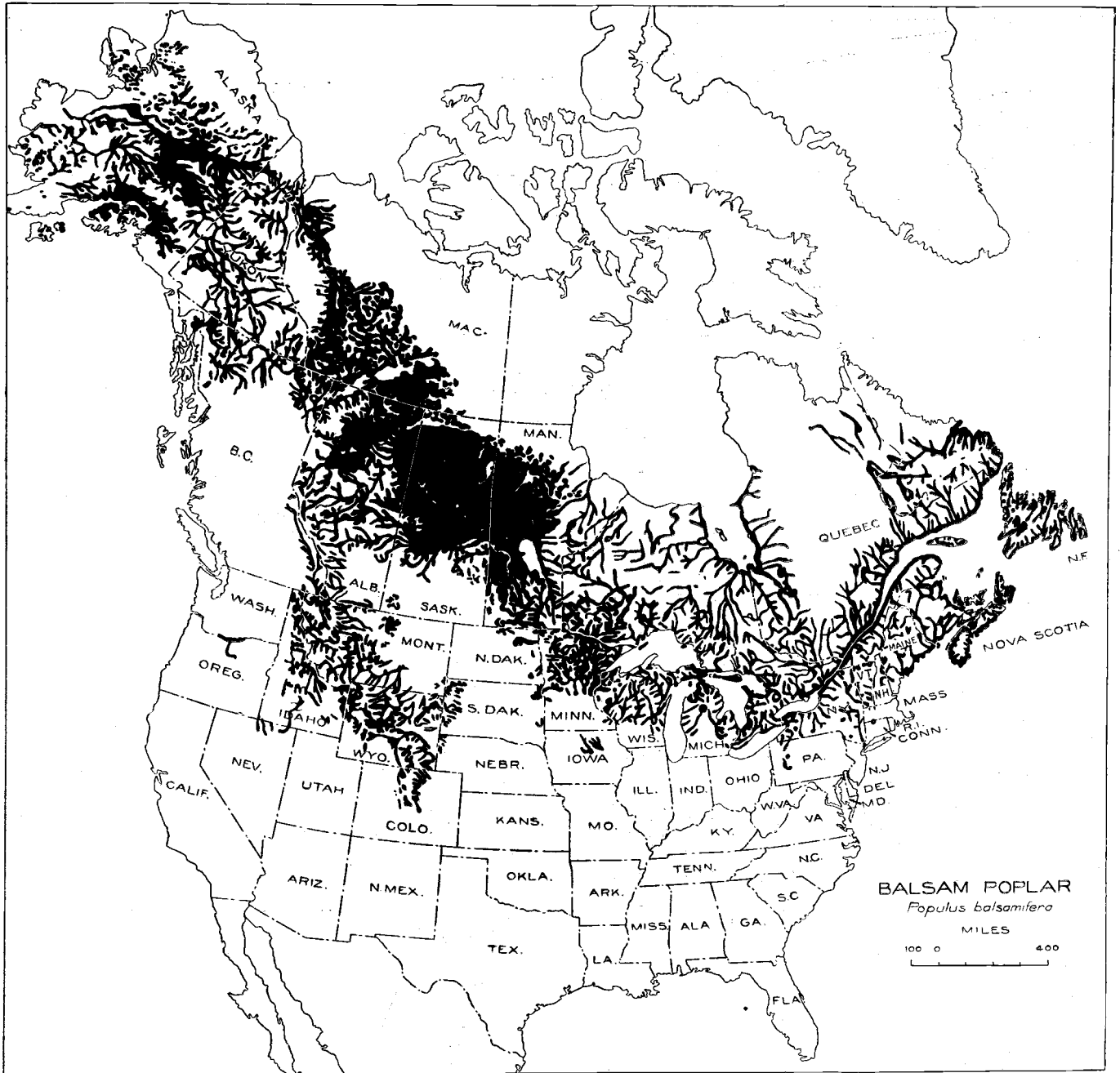
74



POPULUS HETEROPHYLLA LINNAEUS

MAP 71

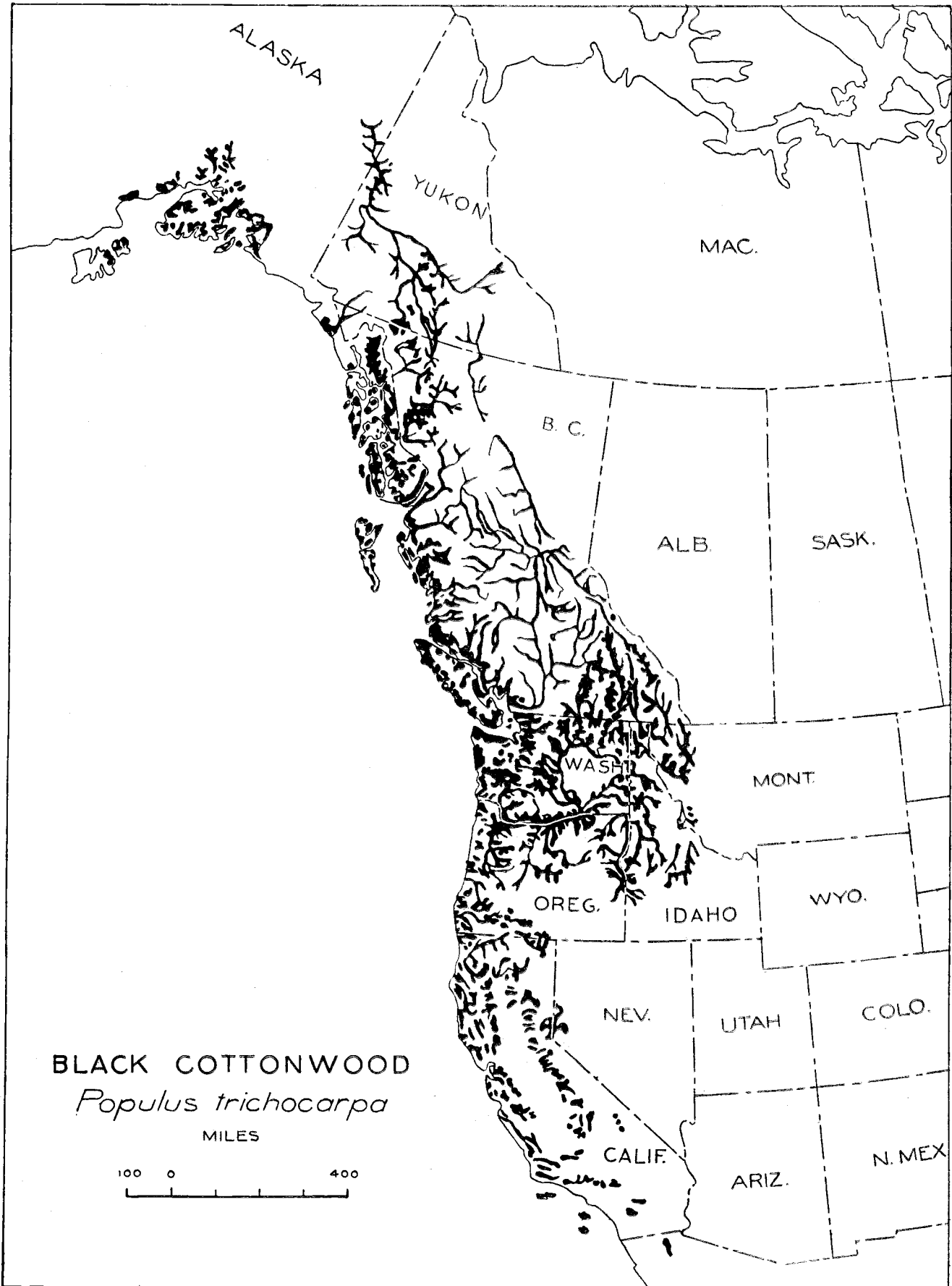
SWAMP COTTONWOOD



POPULUS BALSAMIFERA LINNAEUS

MAP 72

BALSAM POPLAR

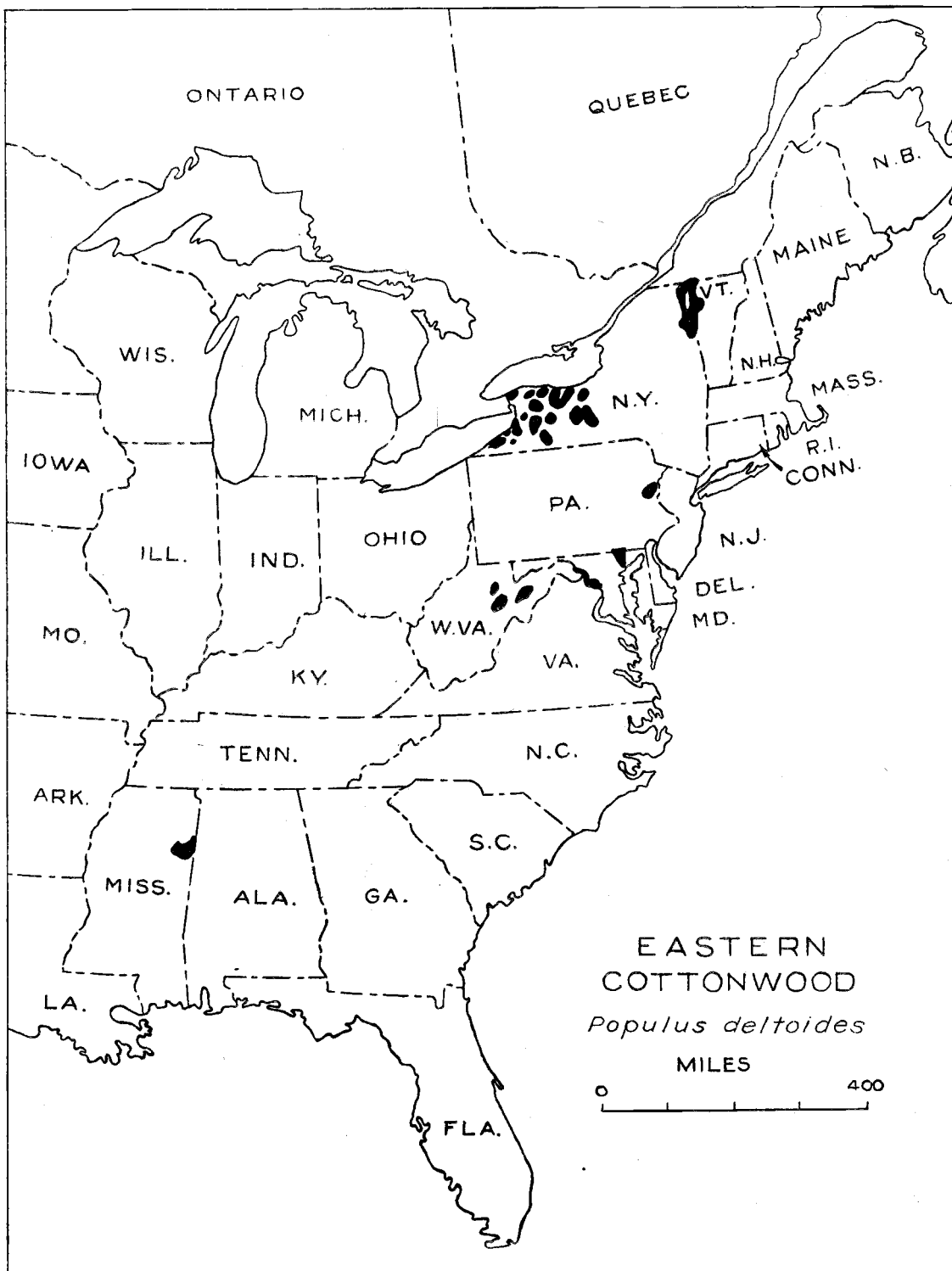


POPULUS TRICHOCARPA TORREY AND GRAY

MAP 73

BLACK COTTONWOOD

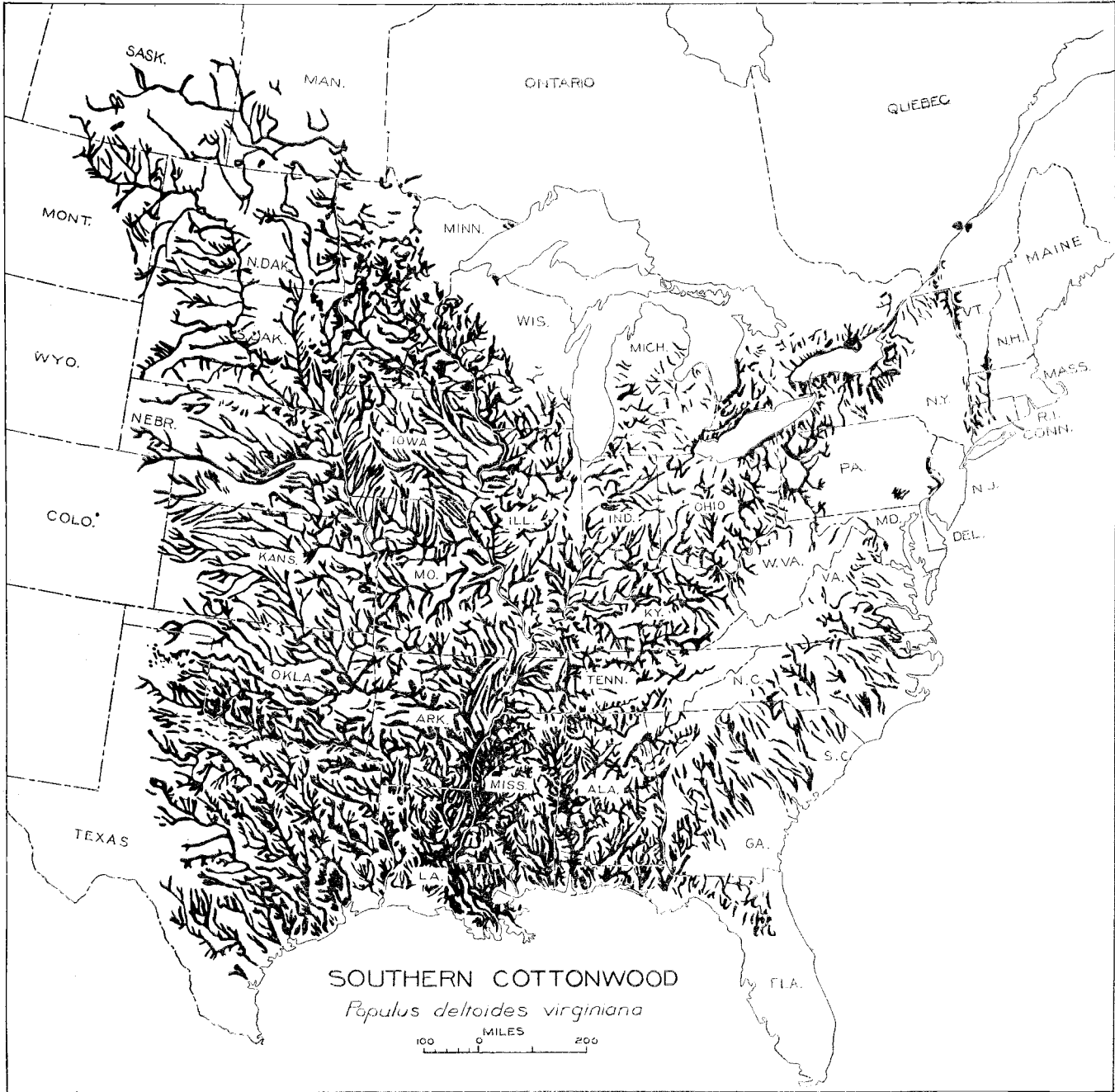
(Distribution of black cottonwood is shown as one species, although dendrologists separate black cottonwood (*Populus trichocarpa* Torrey and Gray) from the northern black cottonwood (*Populus trichocarpa hastata* Henry), the latter extending northward from the California line and into Nevada.)



POPULUS DELTOIDES MARSHALL

MAP 74

EASTERN COTTONWOOD



MAP 75

POPULUS DELTOIDES VIRGINIANA (CASTIGLIONI) SUDWORTH

SOUTHERN COTTONWOOD

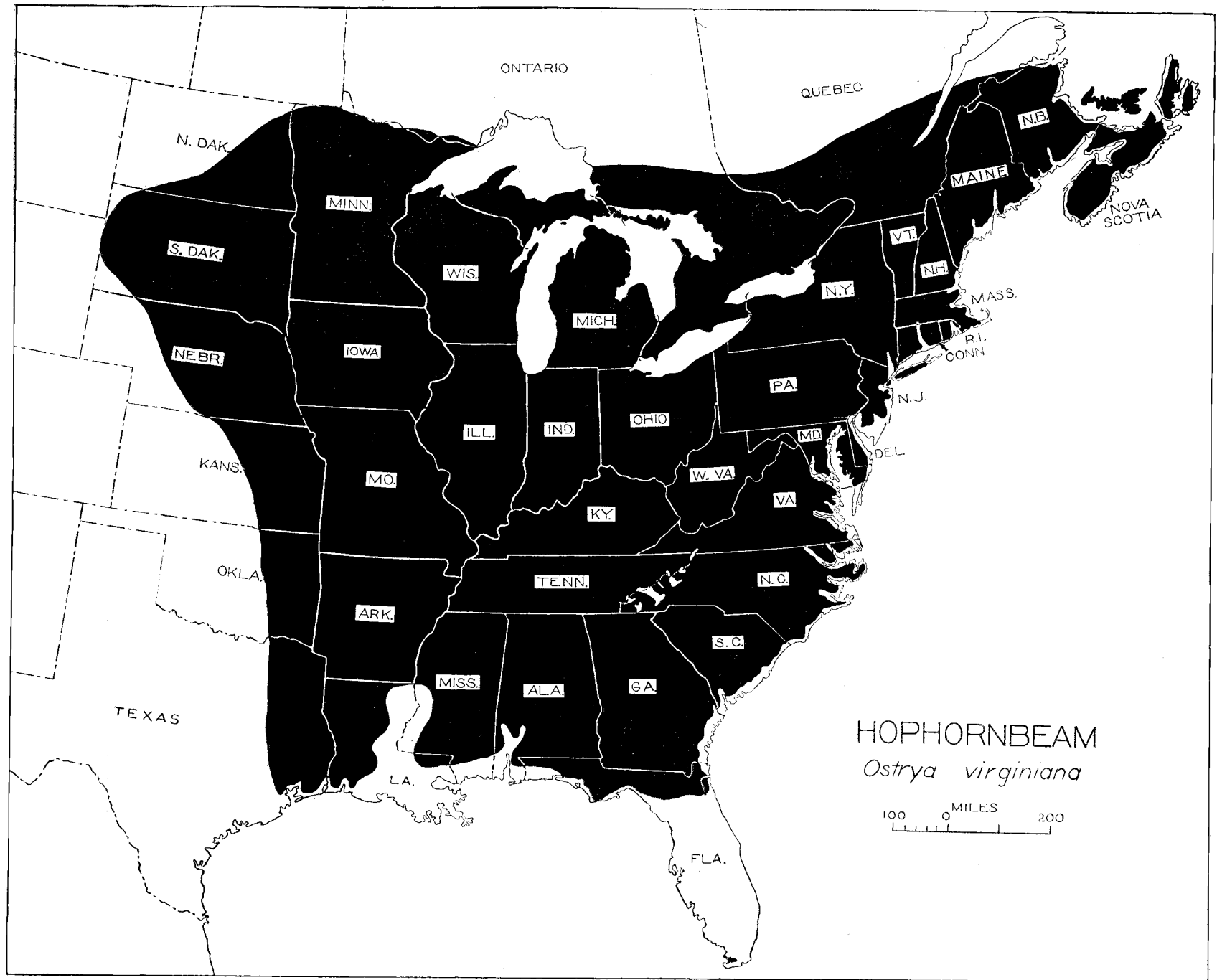


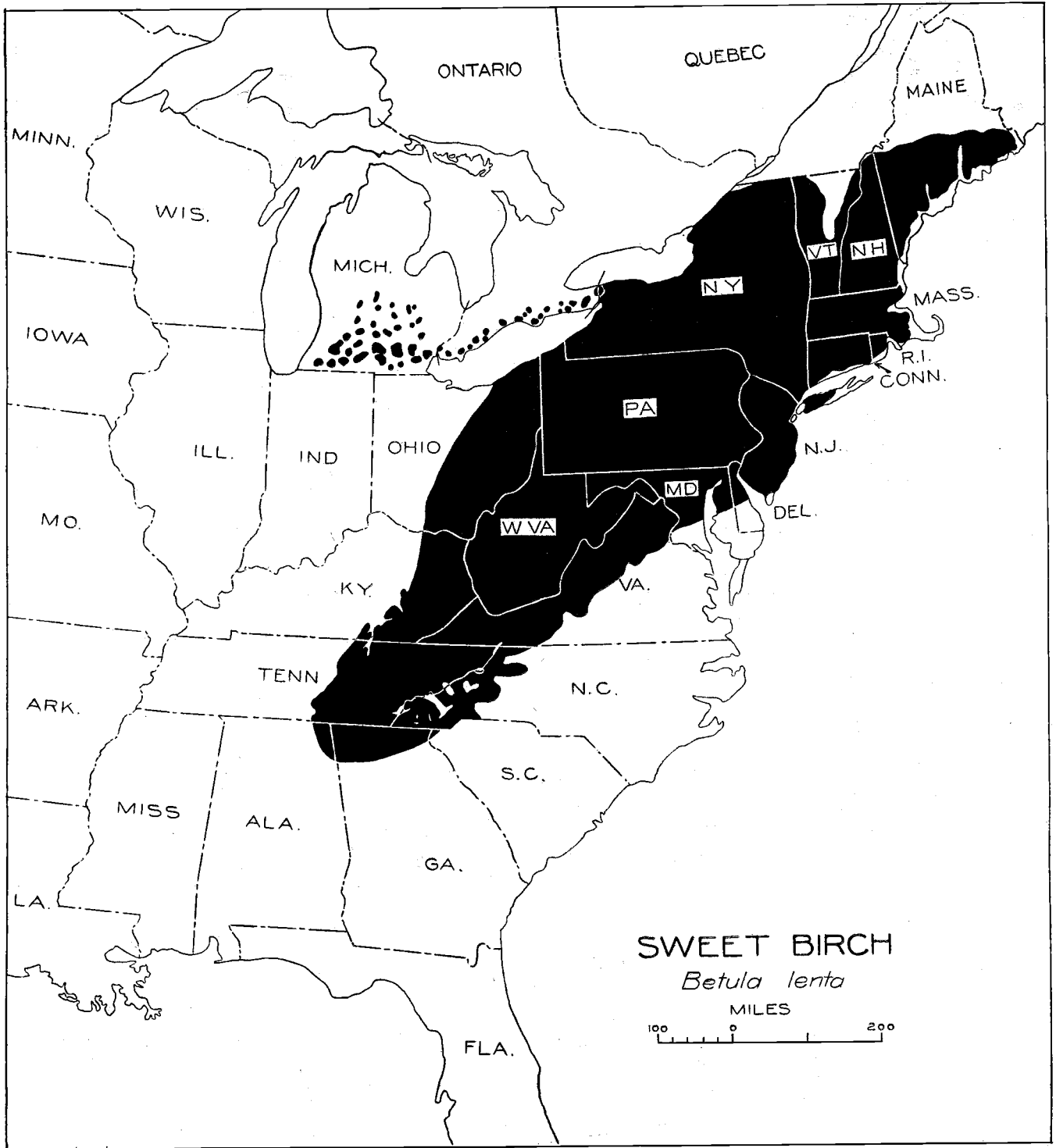


SALIX AMYGDALOIDES ANDERSSON

MAP 77

PEACHLEAF WILLOW

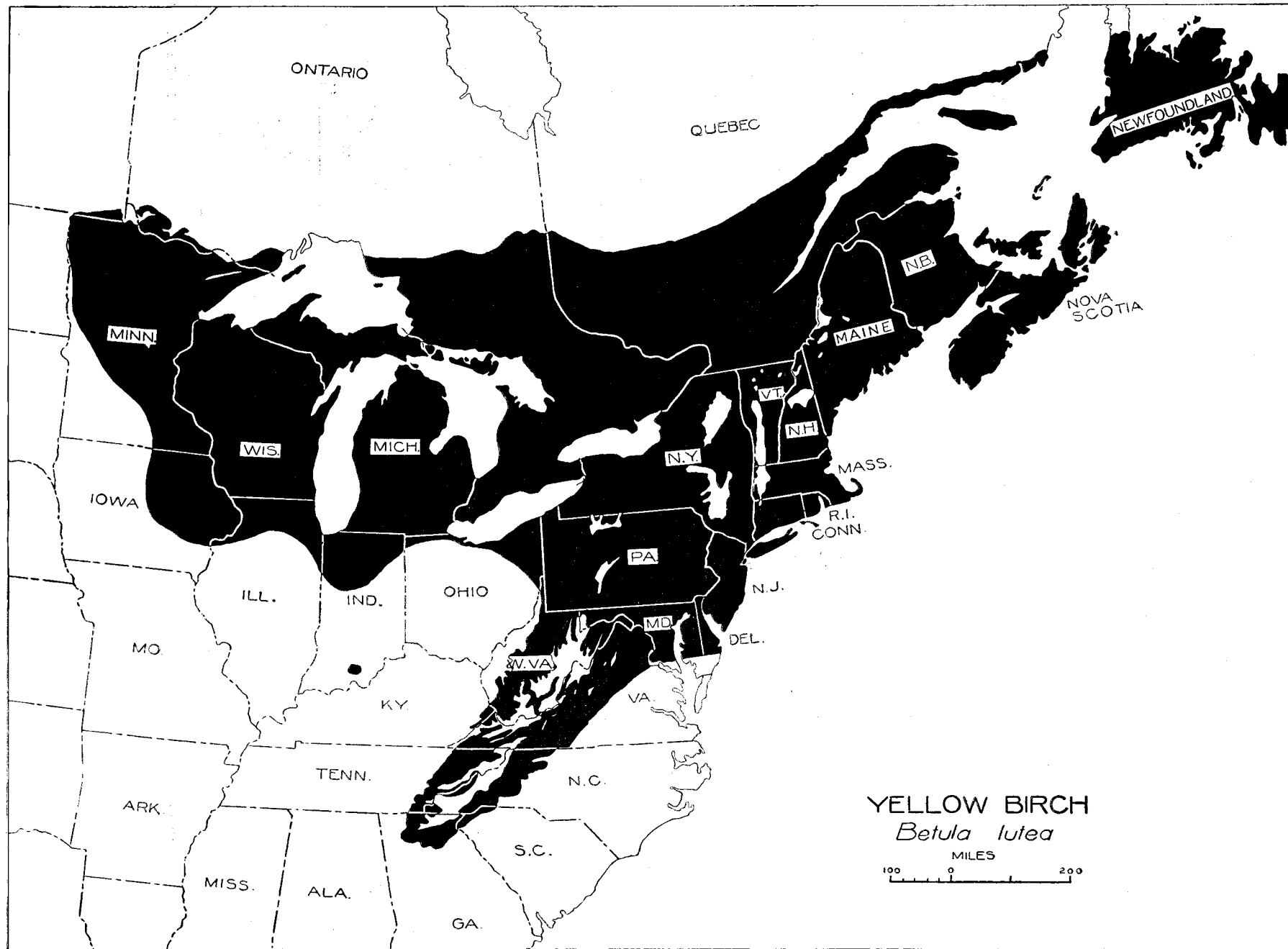




BETULA LENTA LINNAEUS

MAP 80

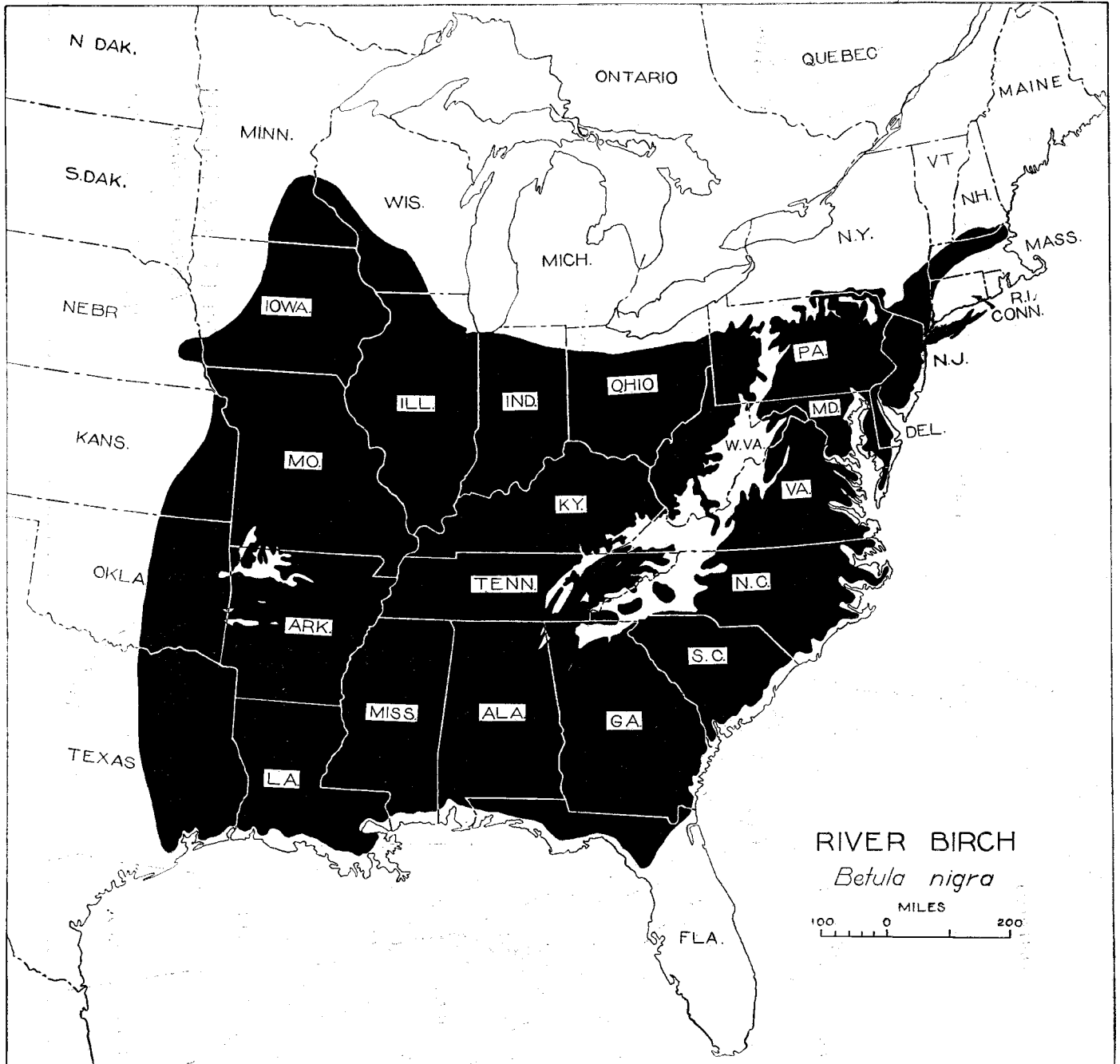
SWEET BIRCH



BETULA LUTEA MICHAUX FILIUS

MAP 81

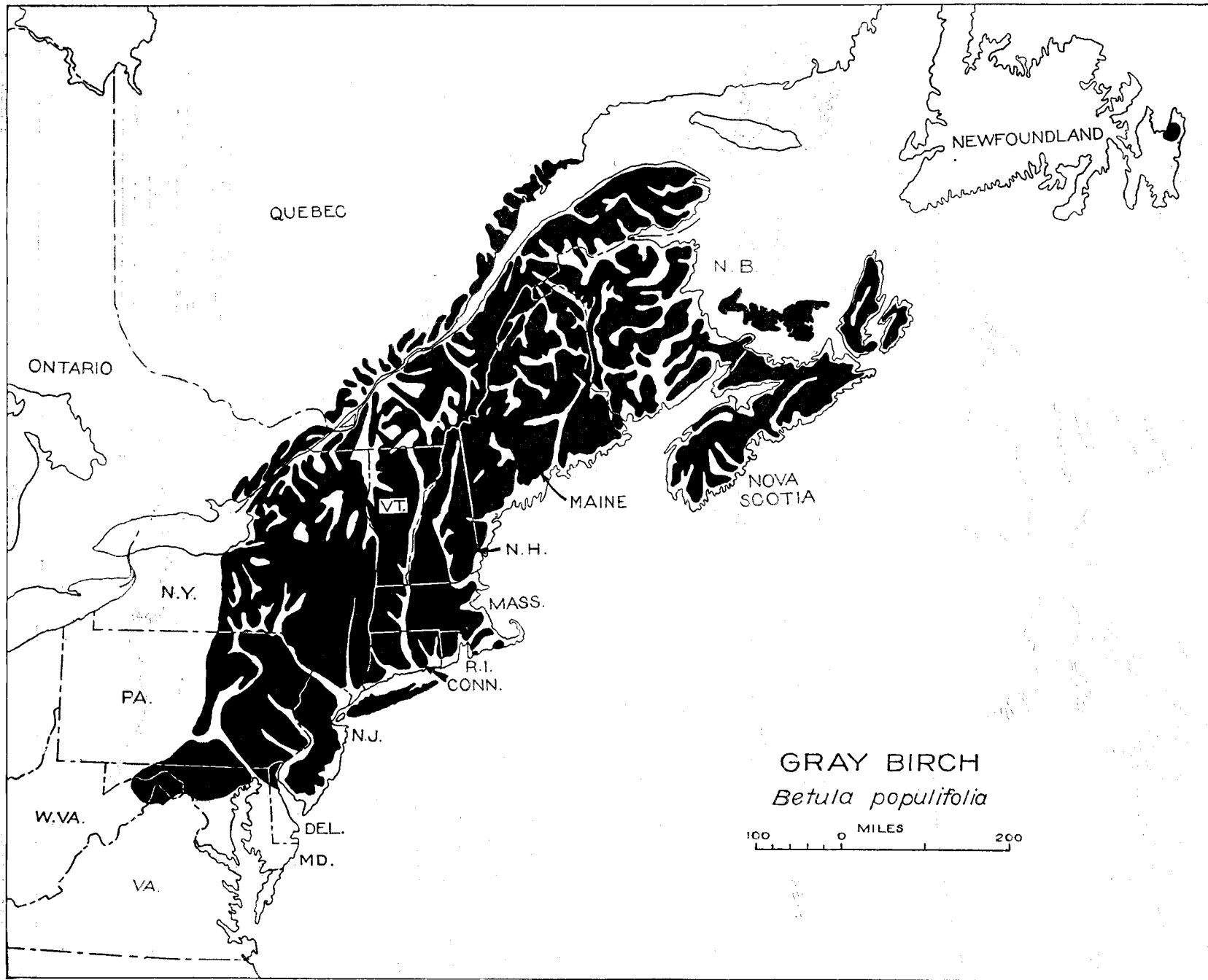
YELLOW BIRCH



BETULA NIGRA LINNAEUS

MAP 82

RIVER BIRCH

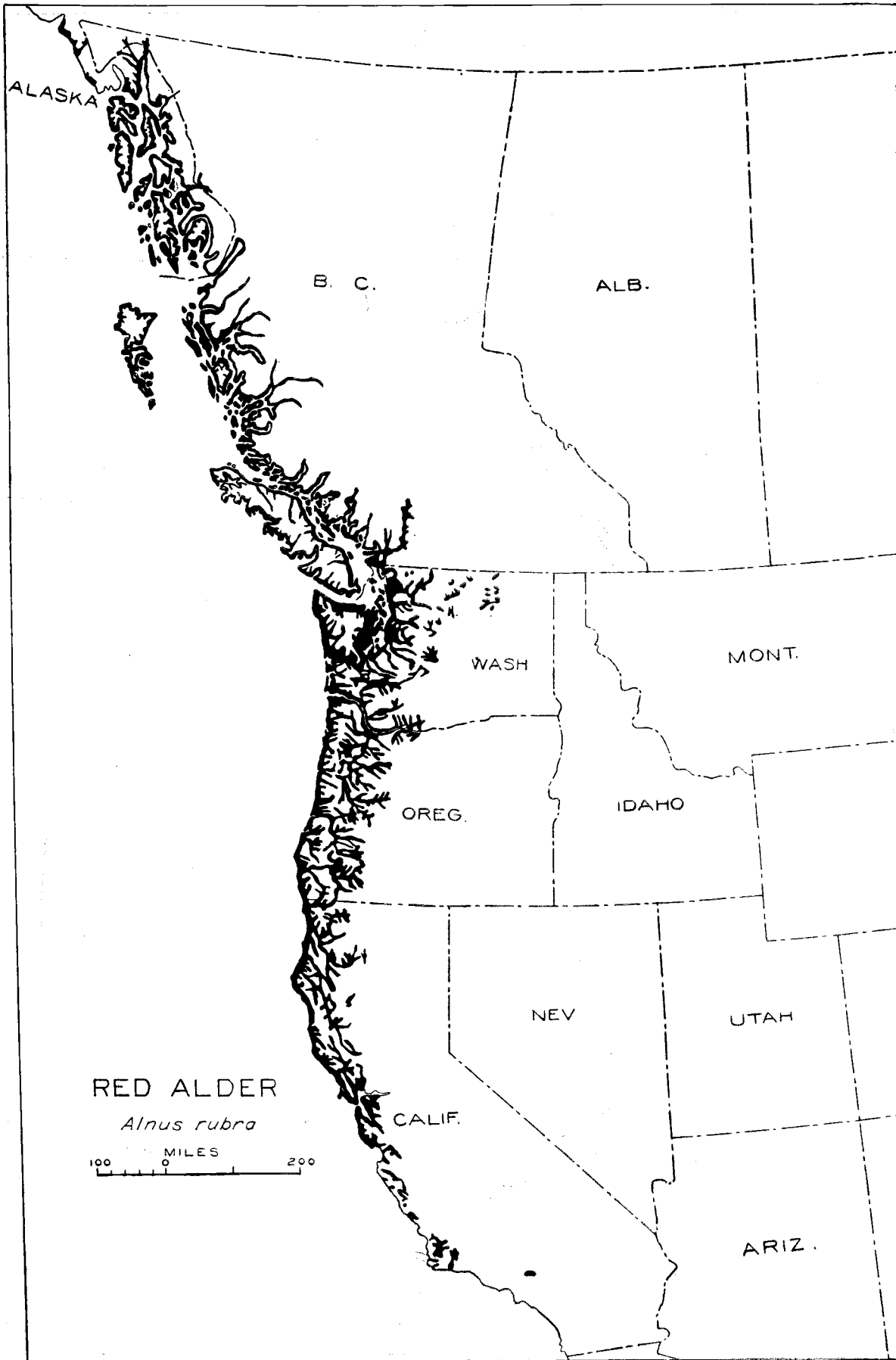


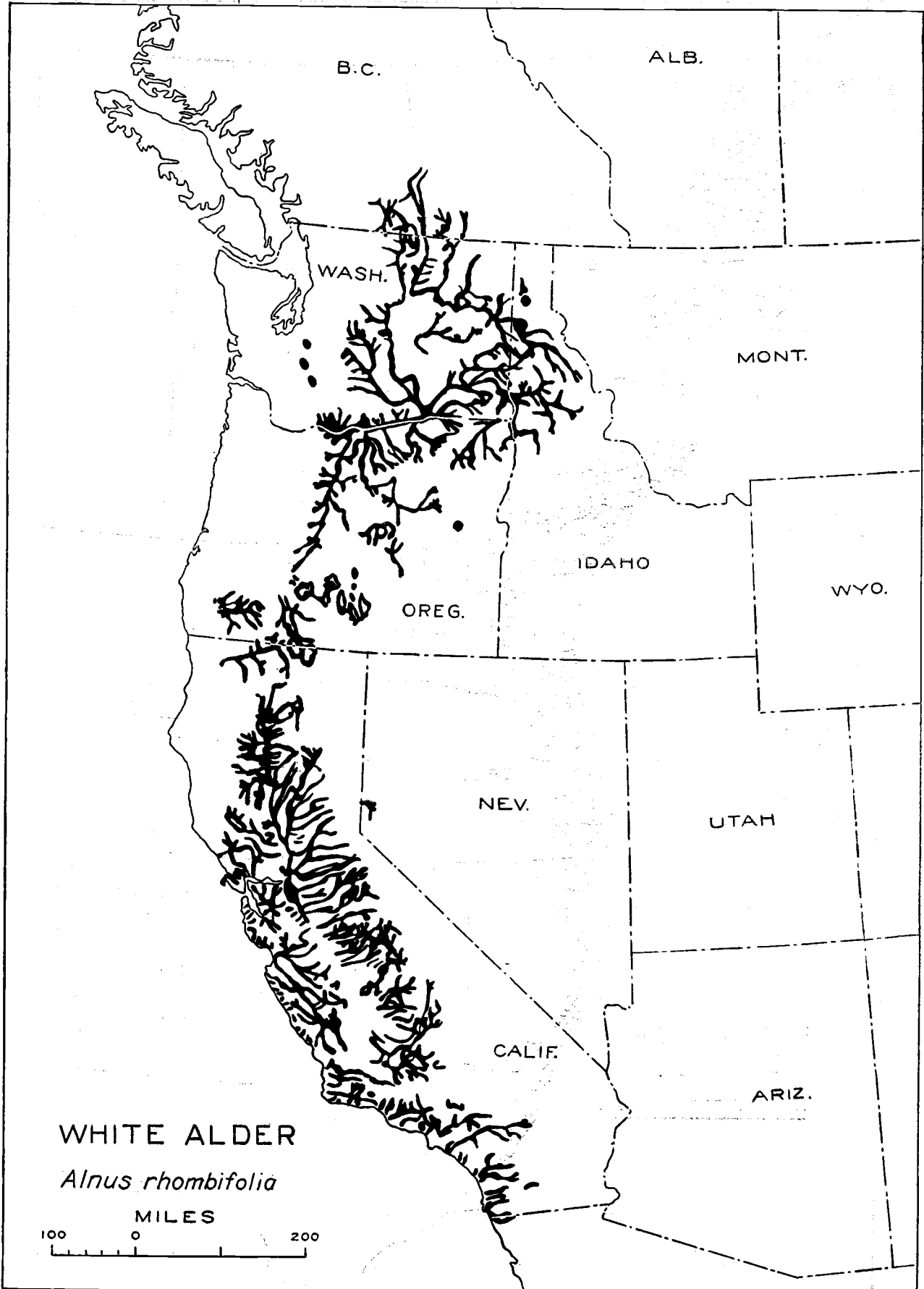
BETULA POPULIFOLIA MARSHALL

MAP 83

GRAY BIRCH





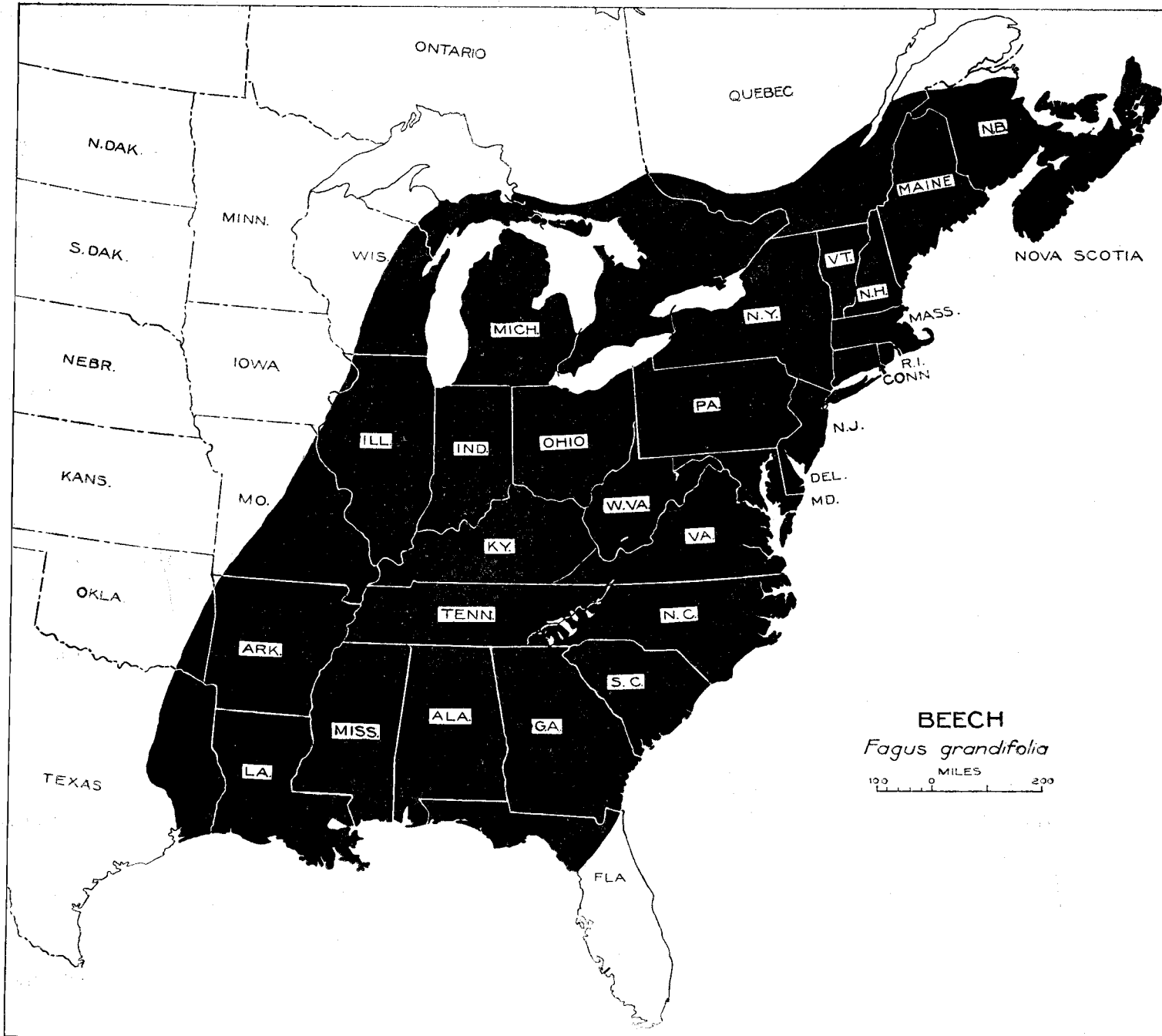


WHITE ALDER

Alnus rhombifolia

MILES

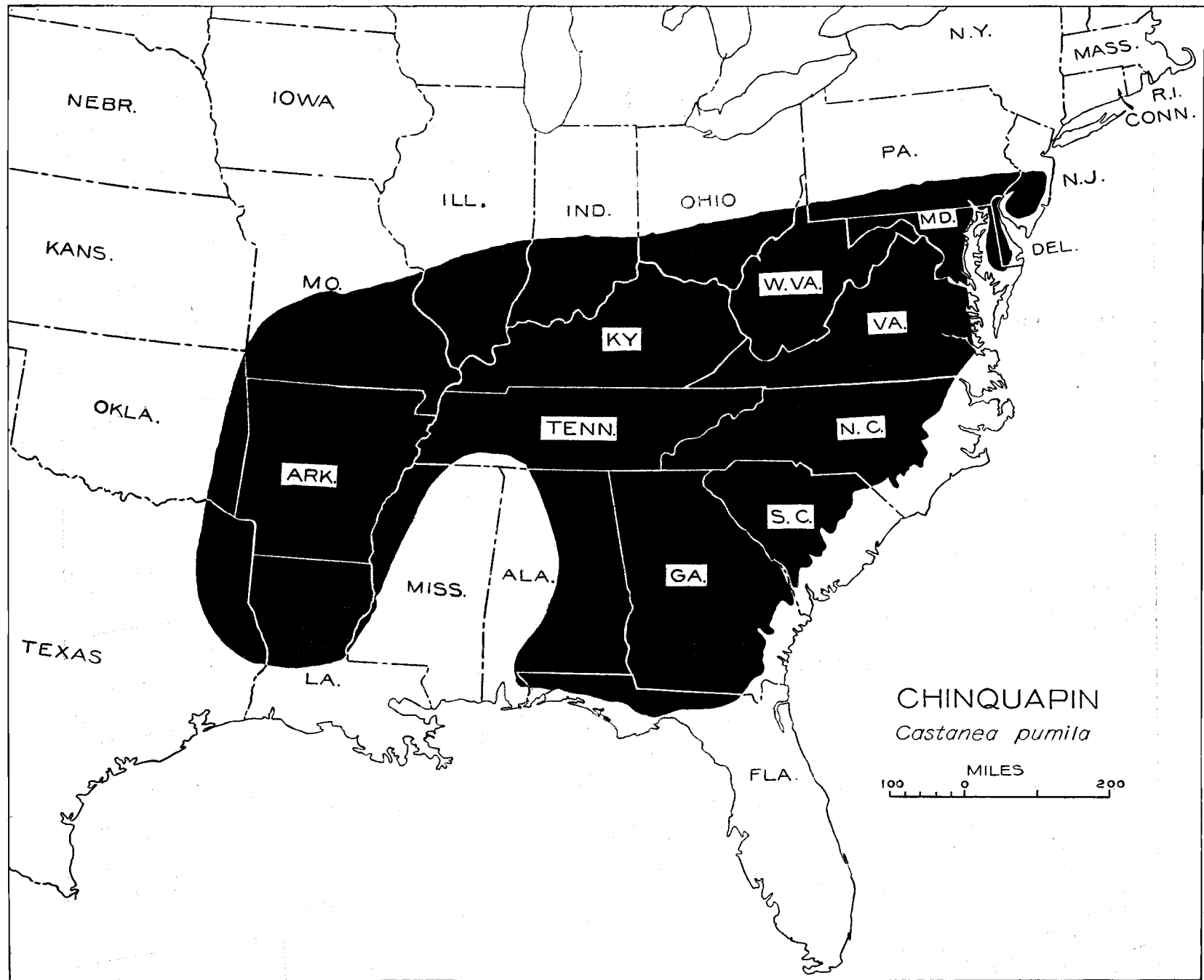
100 0 200

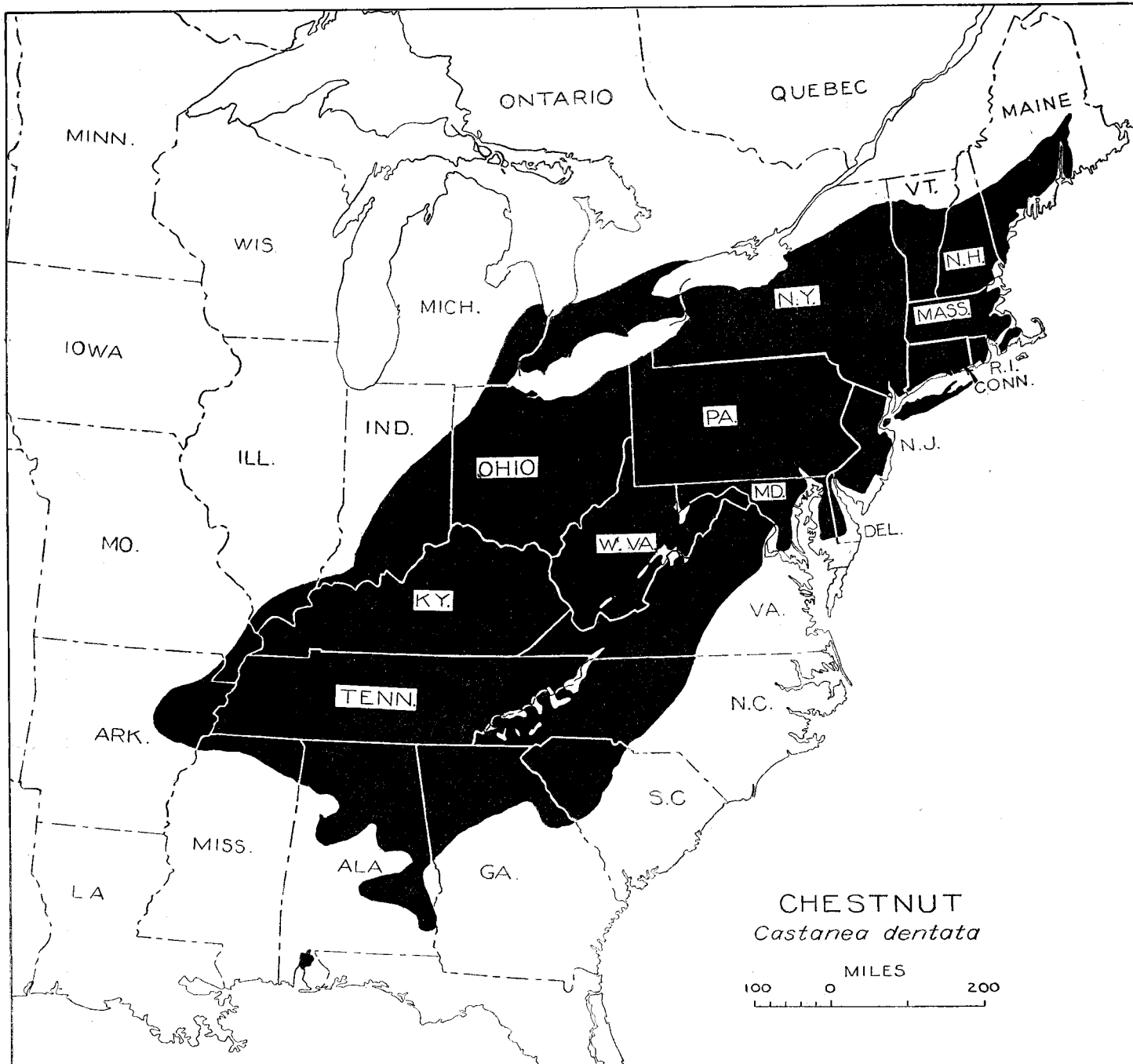


FAGUS GRANDIFOLIA EHRHART

MAP 87

BEECH

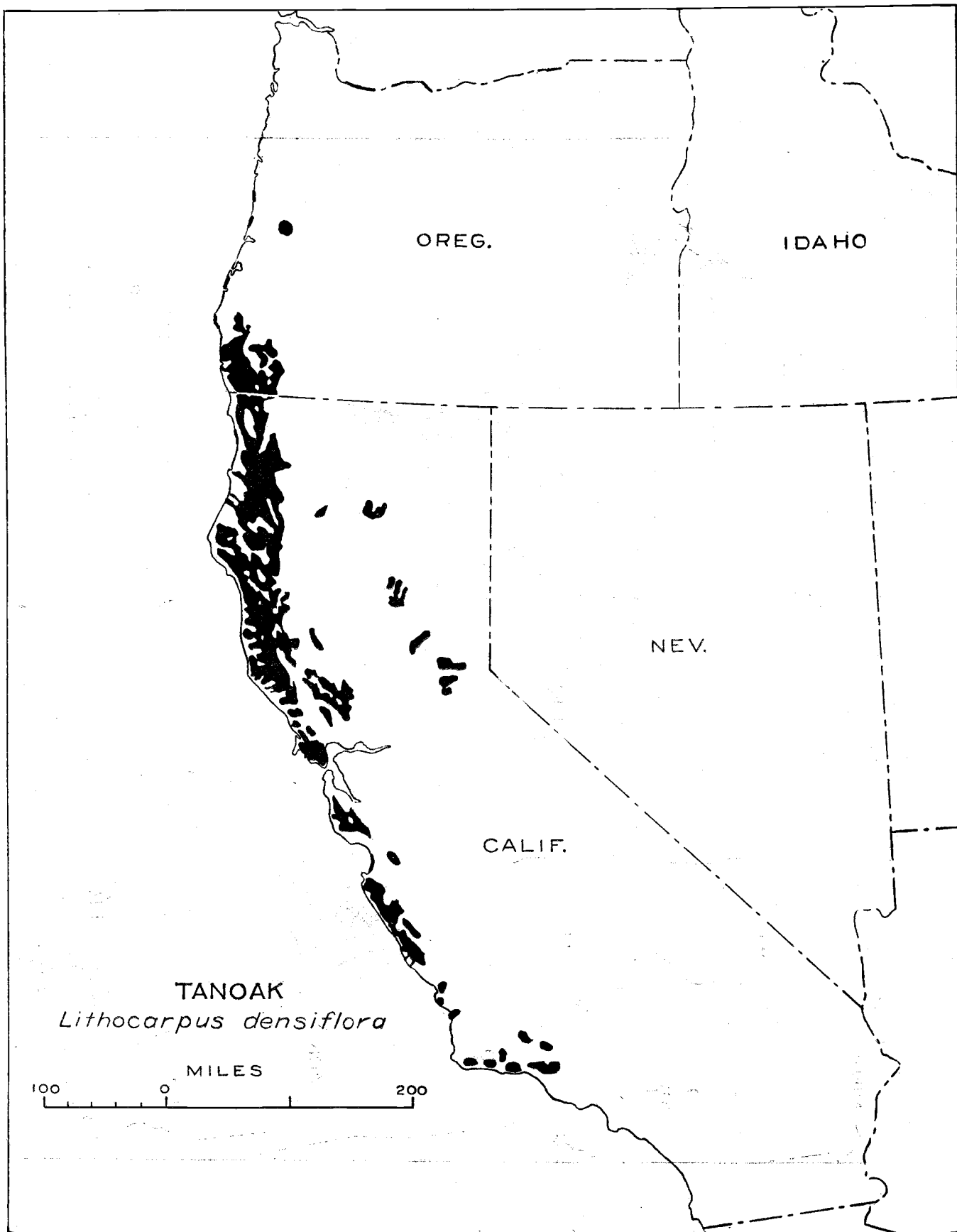




CASTANEA DENTATA (MARSHALL) BORKHAUSEN

MAP 89

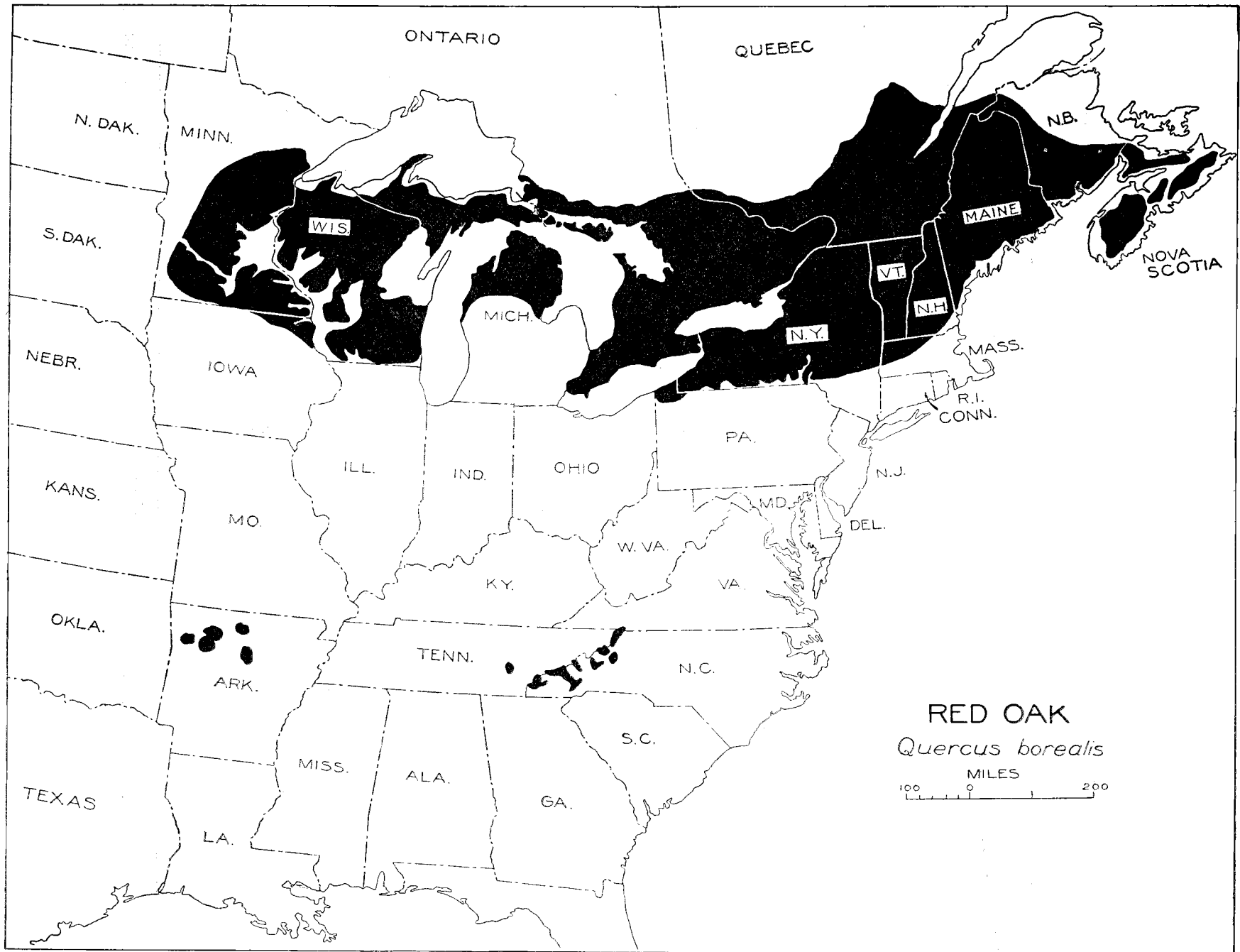
CHESTNUT



MAP 90

LITHOCARPUS DENSIFLORA (HOOKER AND ARNOTT) REHDER

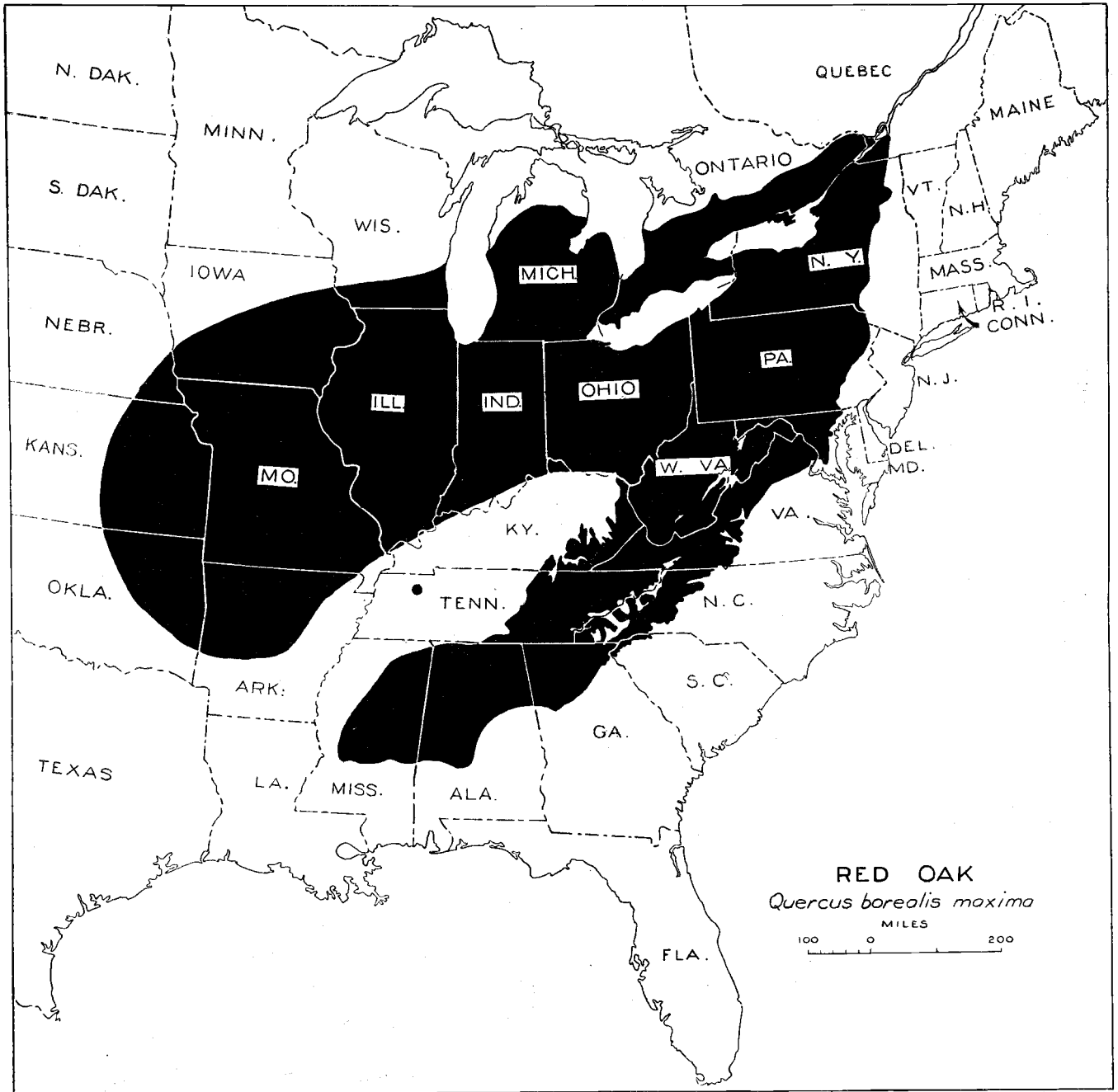
TANOAK



QUERCUS BOREALIS MICHAUX FILIUS

MAP 91

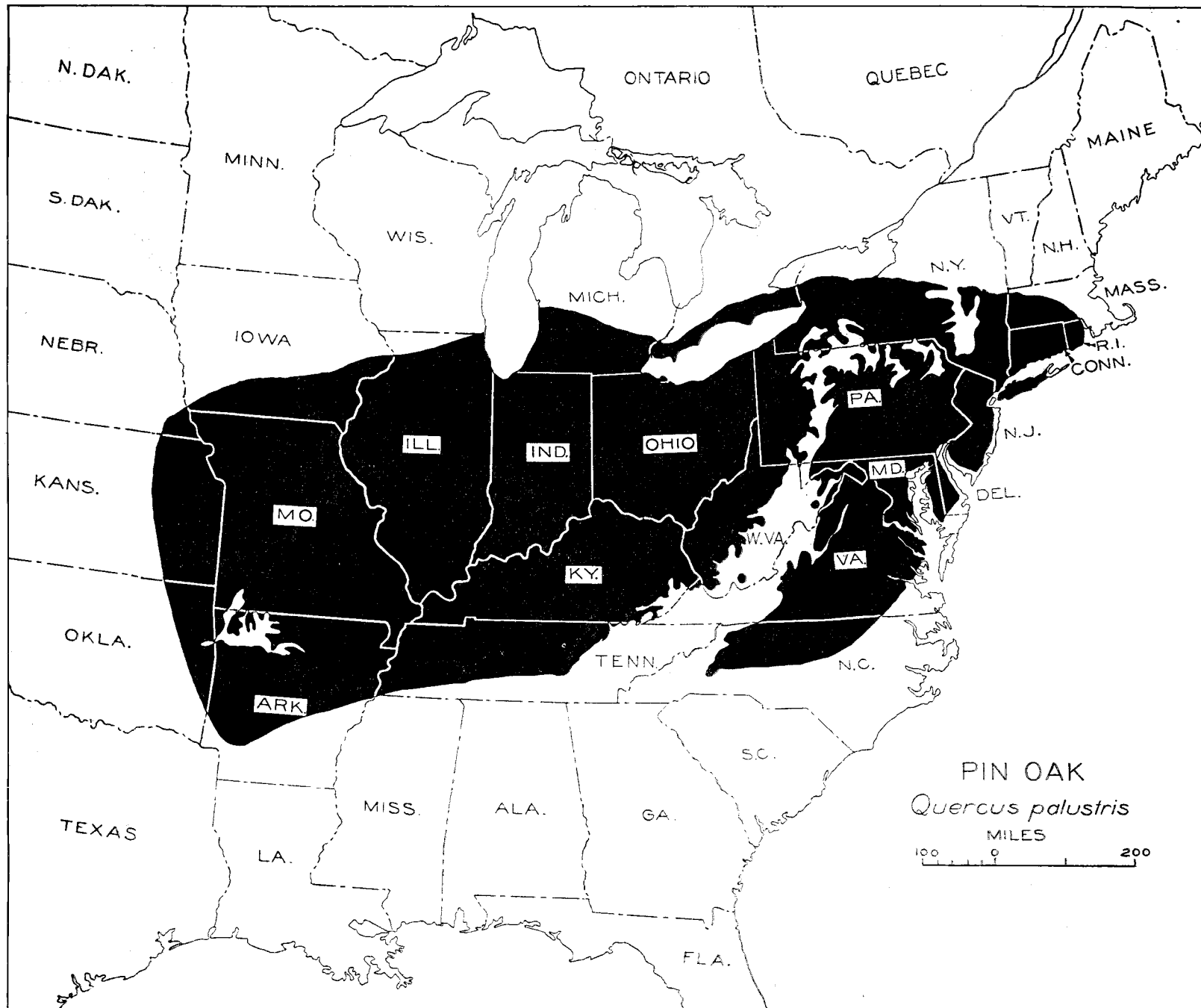
RED OAK

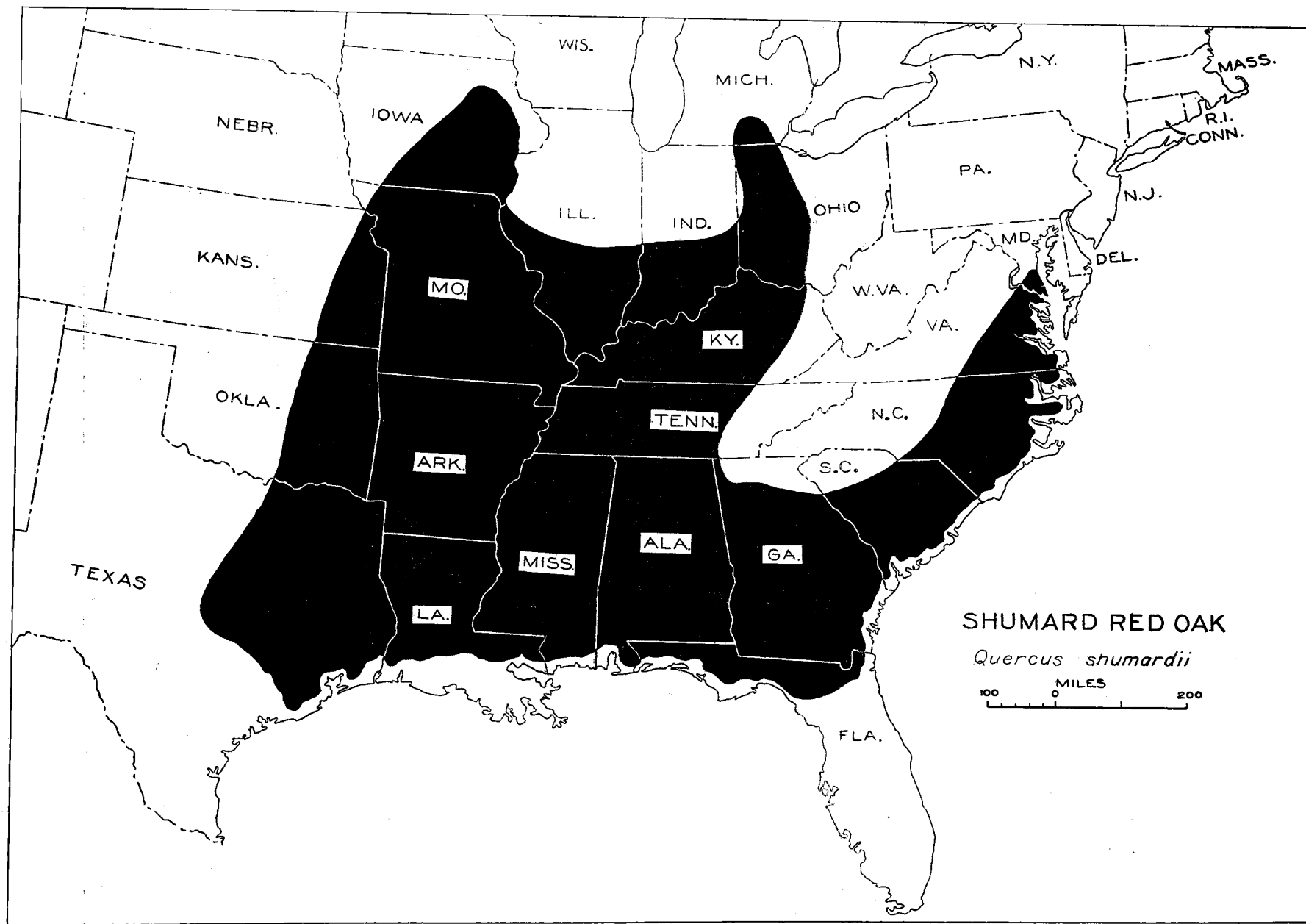


QUERCUS BOREALIS MAXIMA (MARSHALL) ASHE

MAP 92

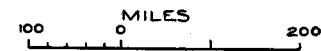
RED OAK

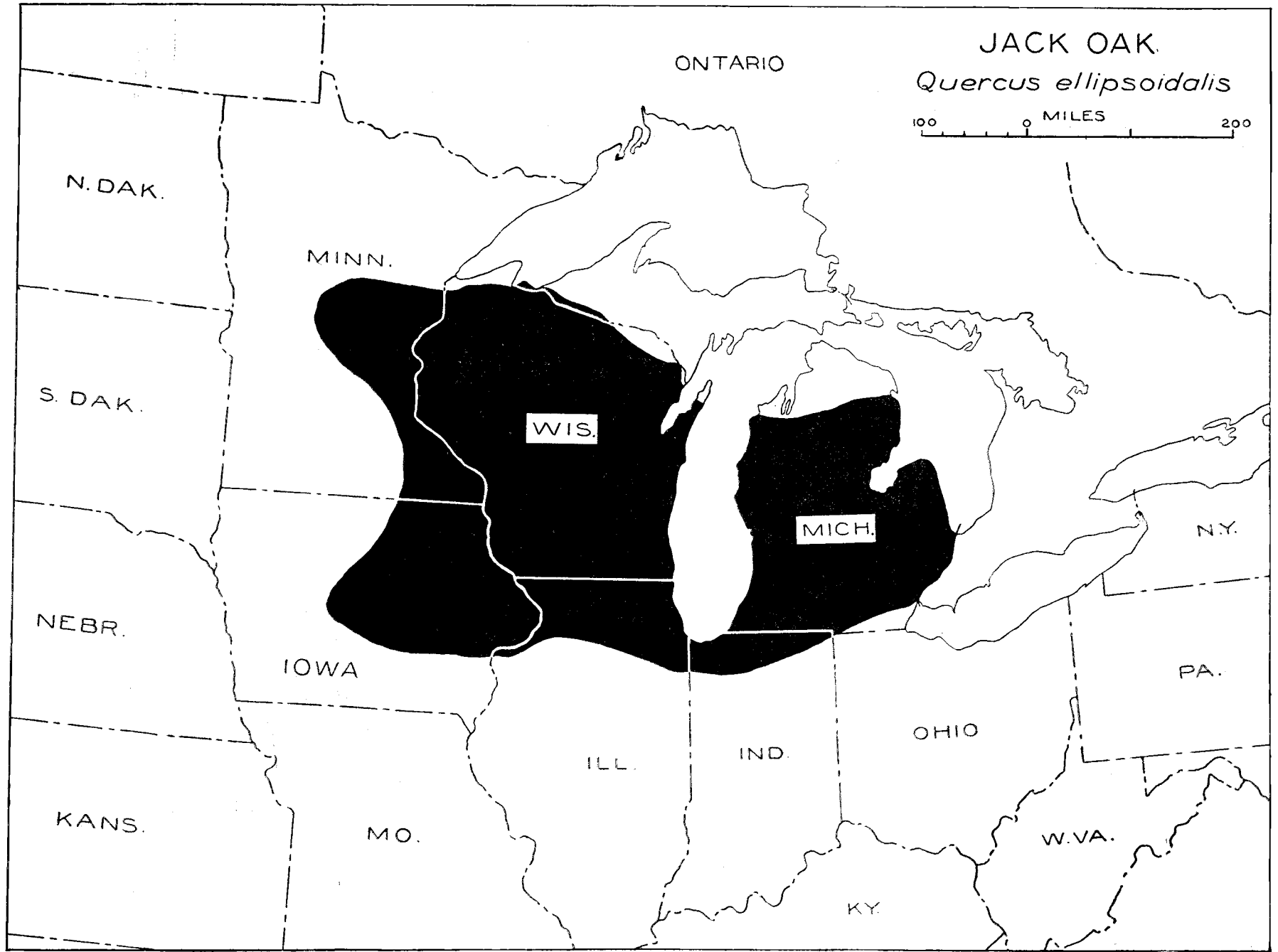




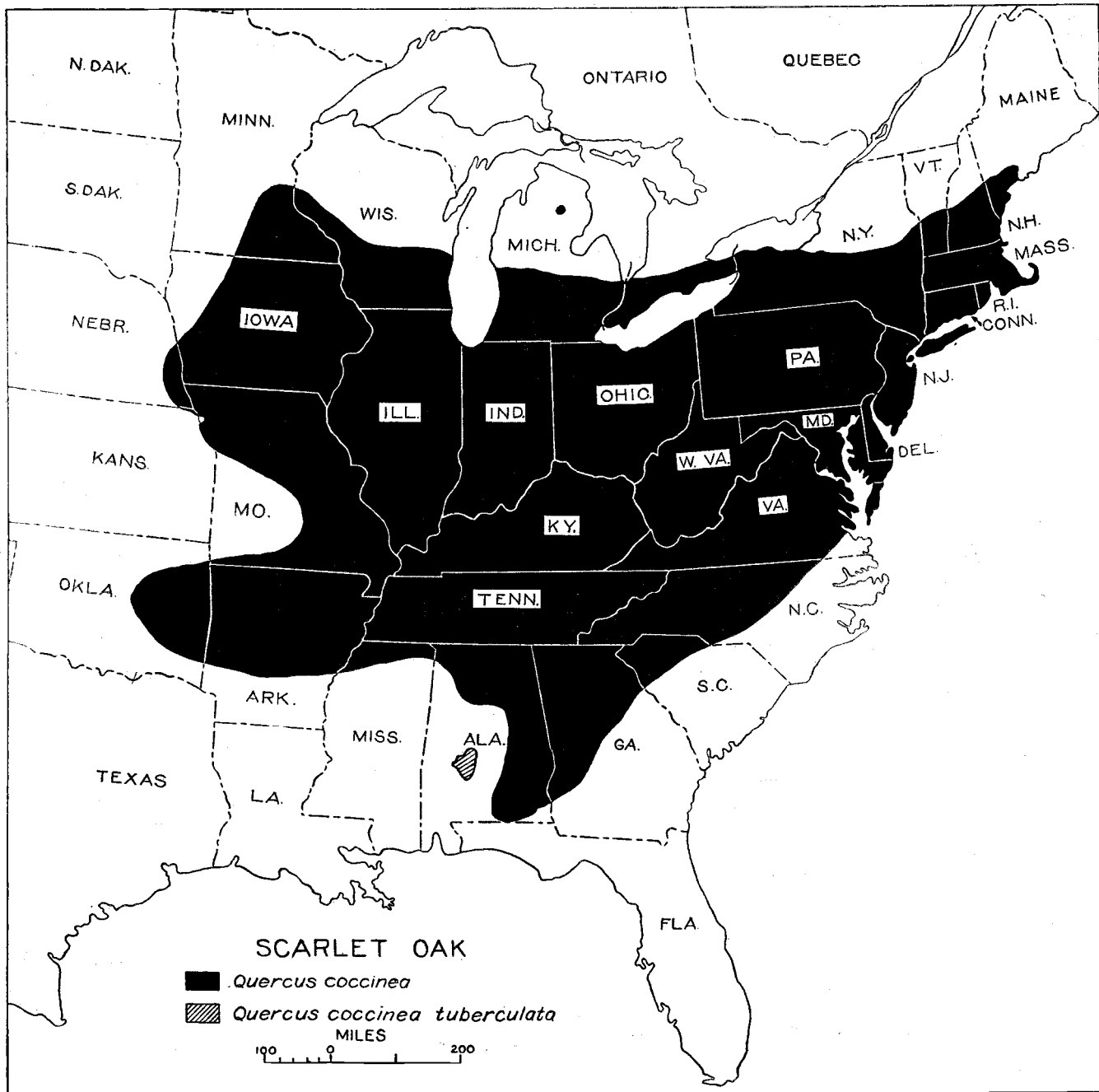
SHUMARD RED OAK

Quercus shumardii





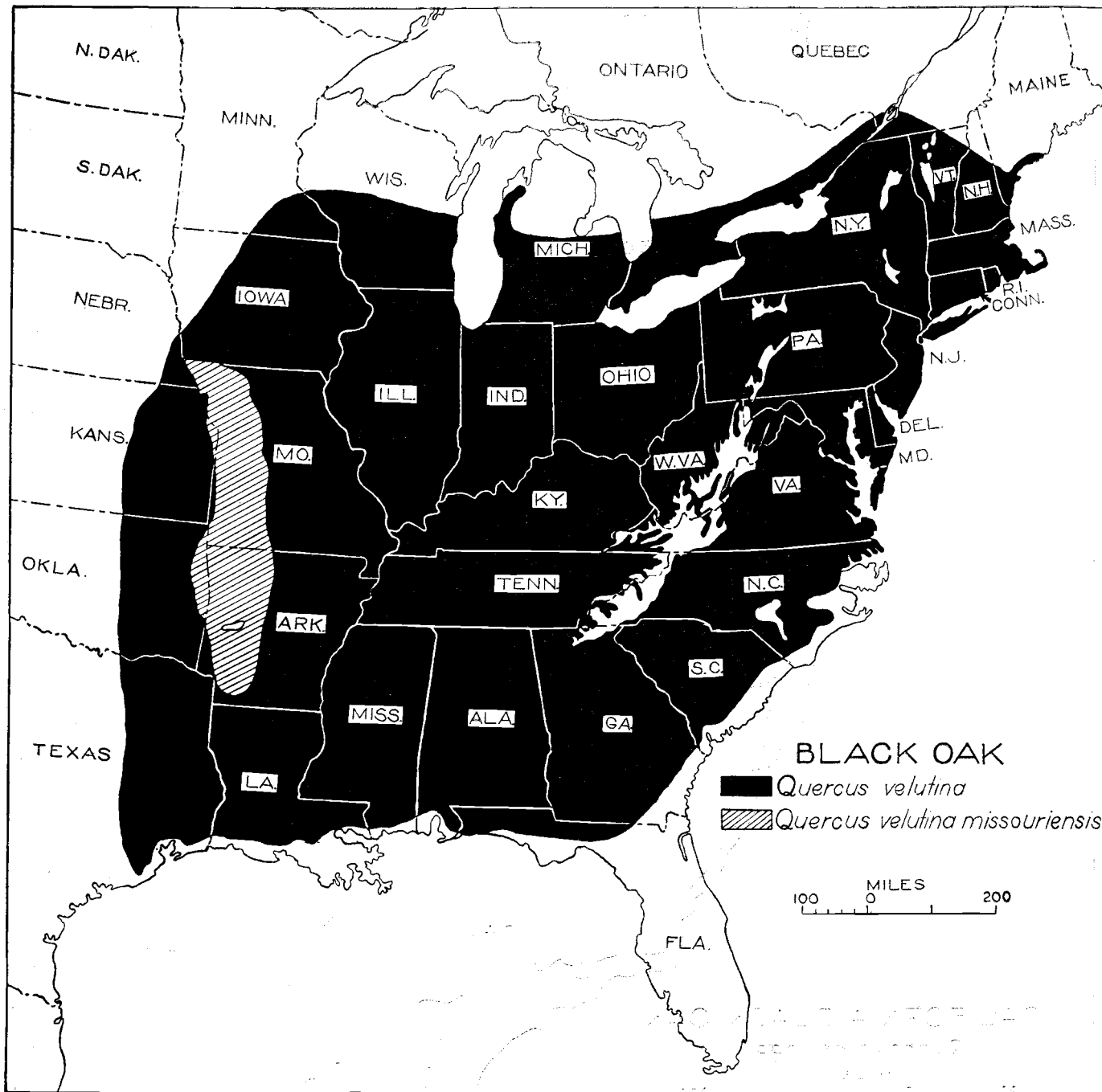
66



QUERCUS COCCINEA MUENCHHAUSEN
QUERCUS COCCINEA TUBERCULATA SARGENT

MAP 96

SCARLET OAK
SCARLET OAK



QUERCUS VELUTINA LA MARCK
QUERCUS VELUTINA MISSOURIENSIS SARGENT

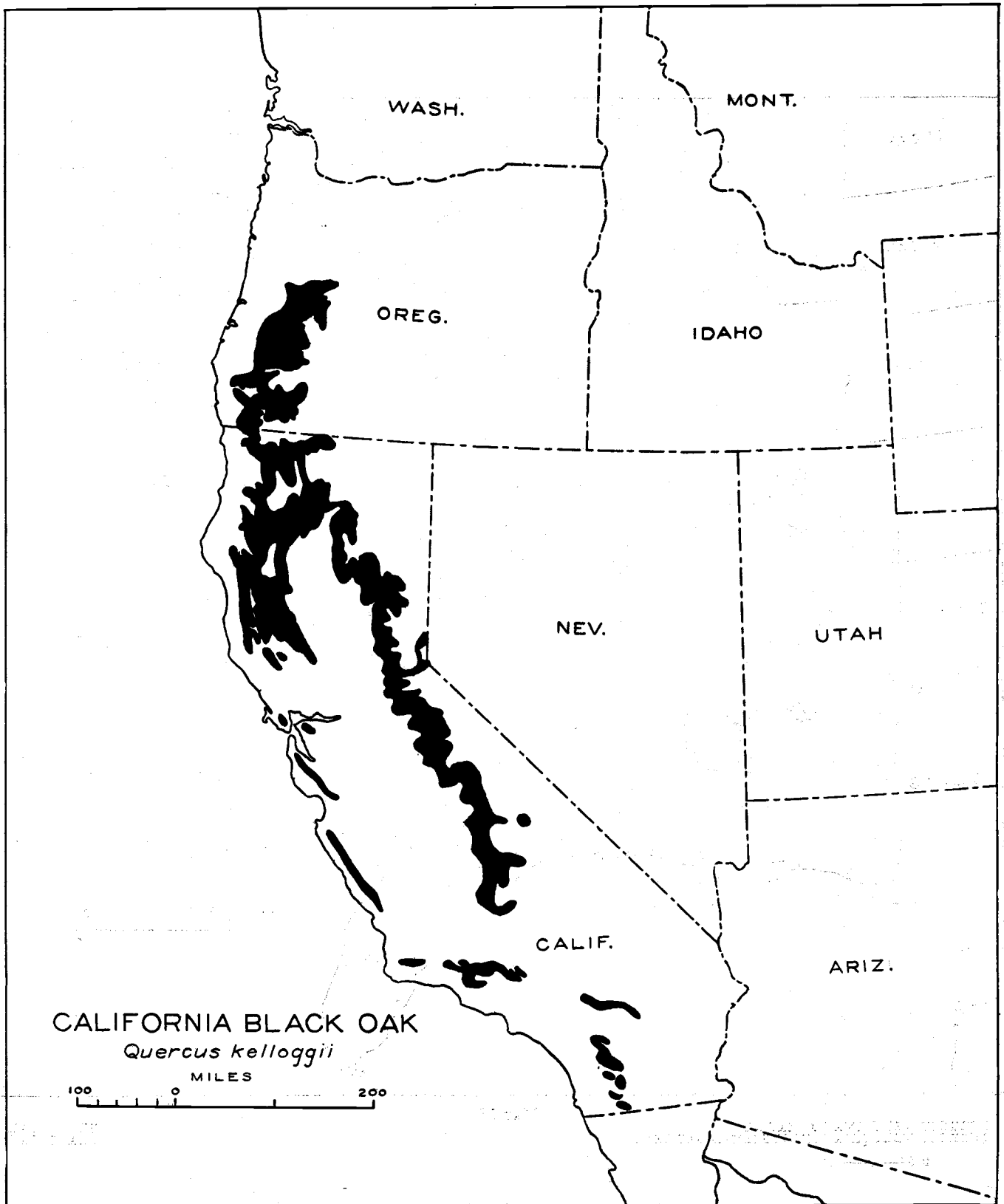
MAP 97

BLACK OAK
BLACK OAK

2399-38-14

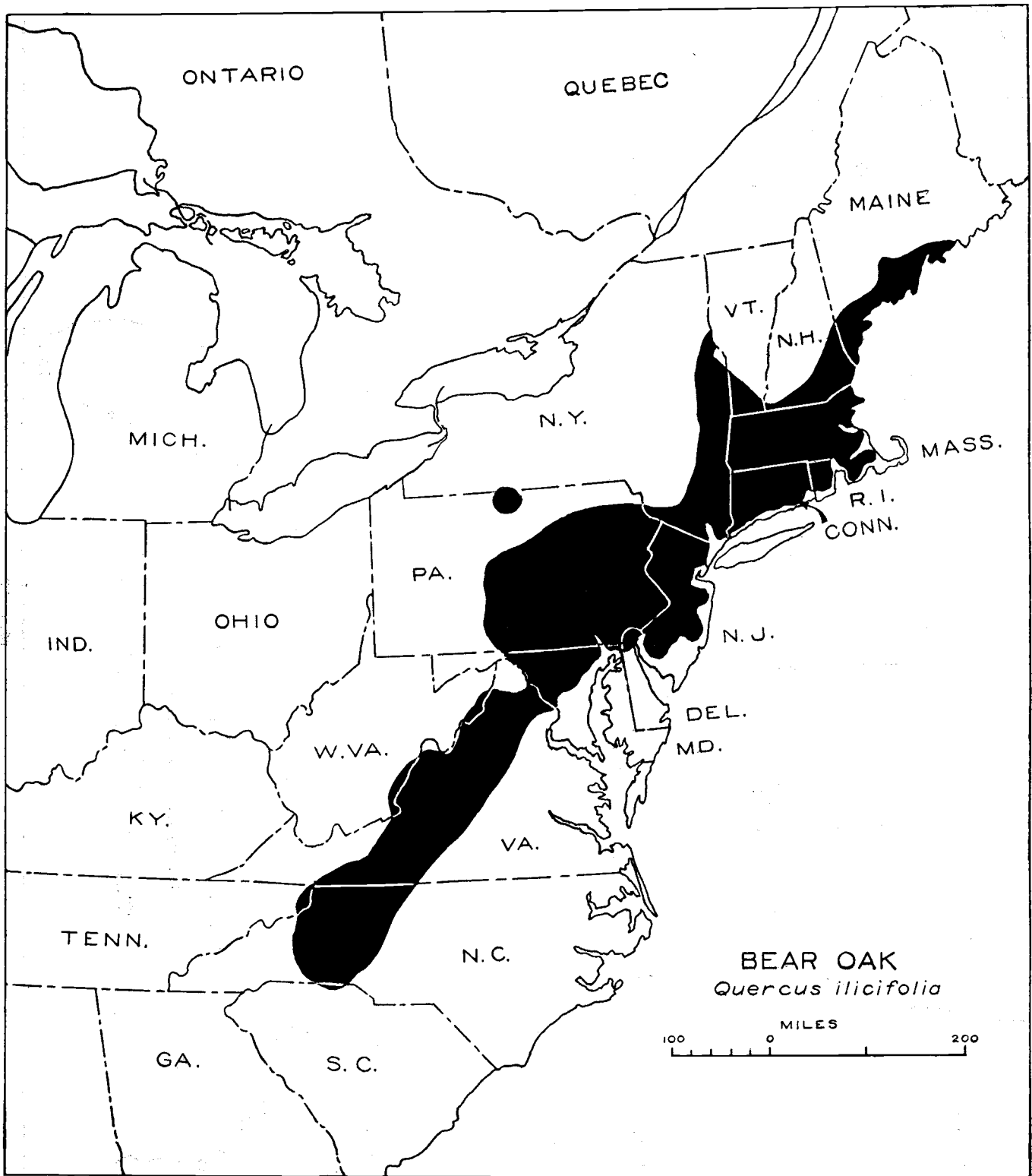
SC 7411

FRANKLIN COUNTY, MISSOURI



CALIFORNIA BLACK OAK
Quercus kelloggii

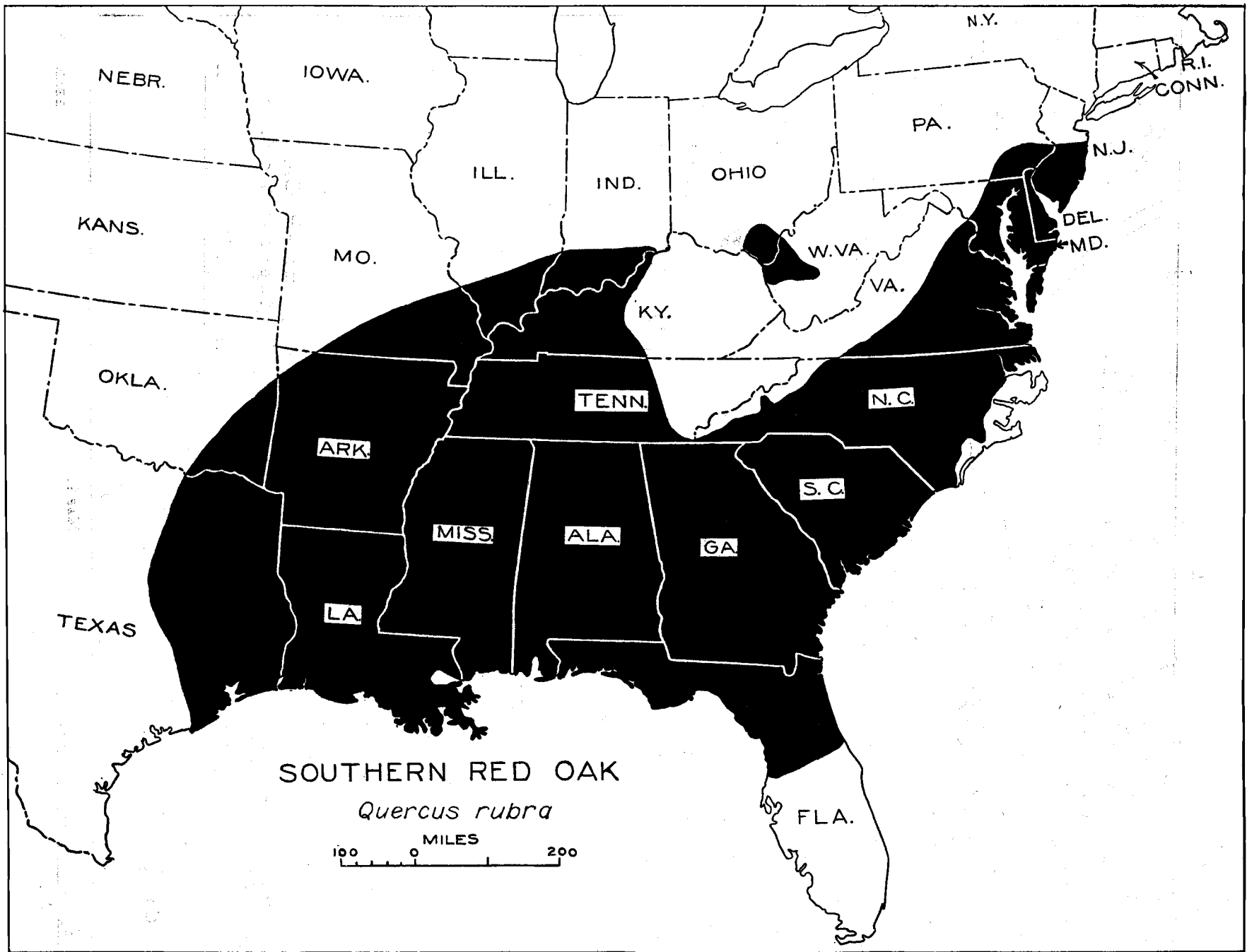
MILES
100 0 200

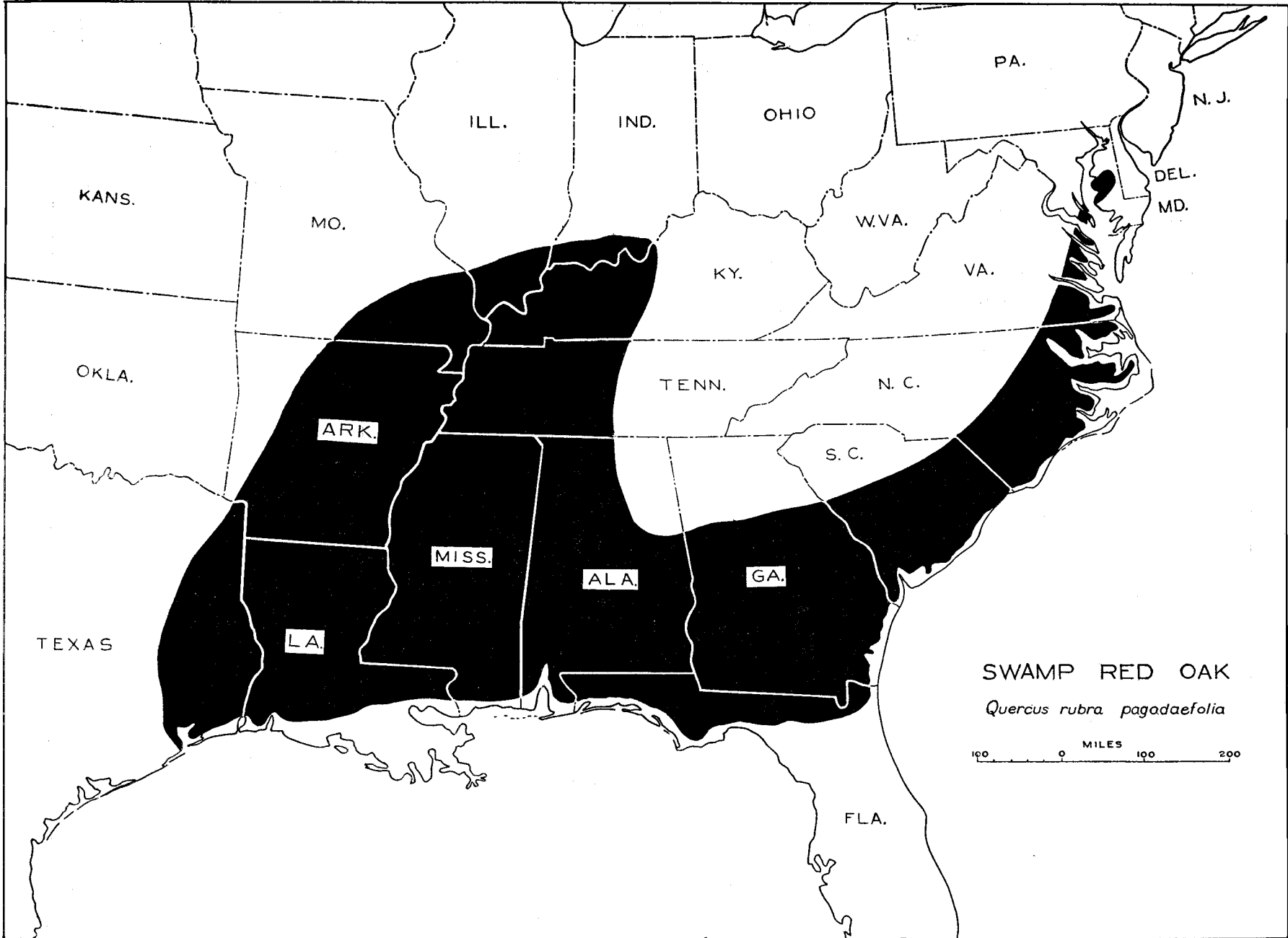


QUERCUS ILICIFOLIA WANGENHEIM

MAP 99

BEAR OAK

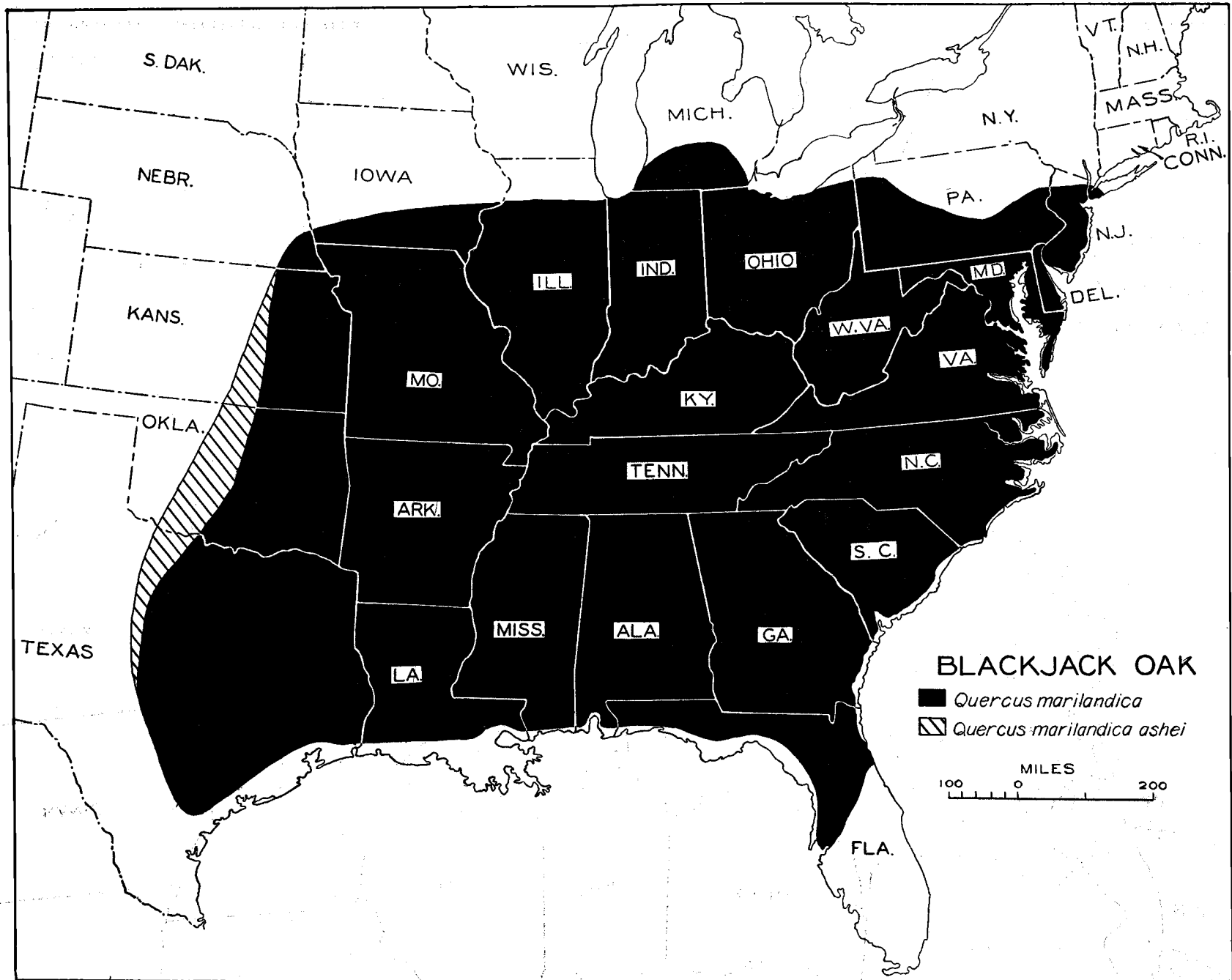




QUERCUS RUBRA PAGODAEFOLIA (ELLIOTT) ASHE

MAP 101

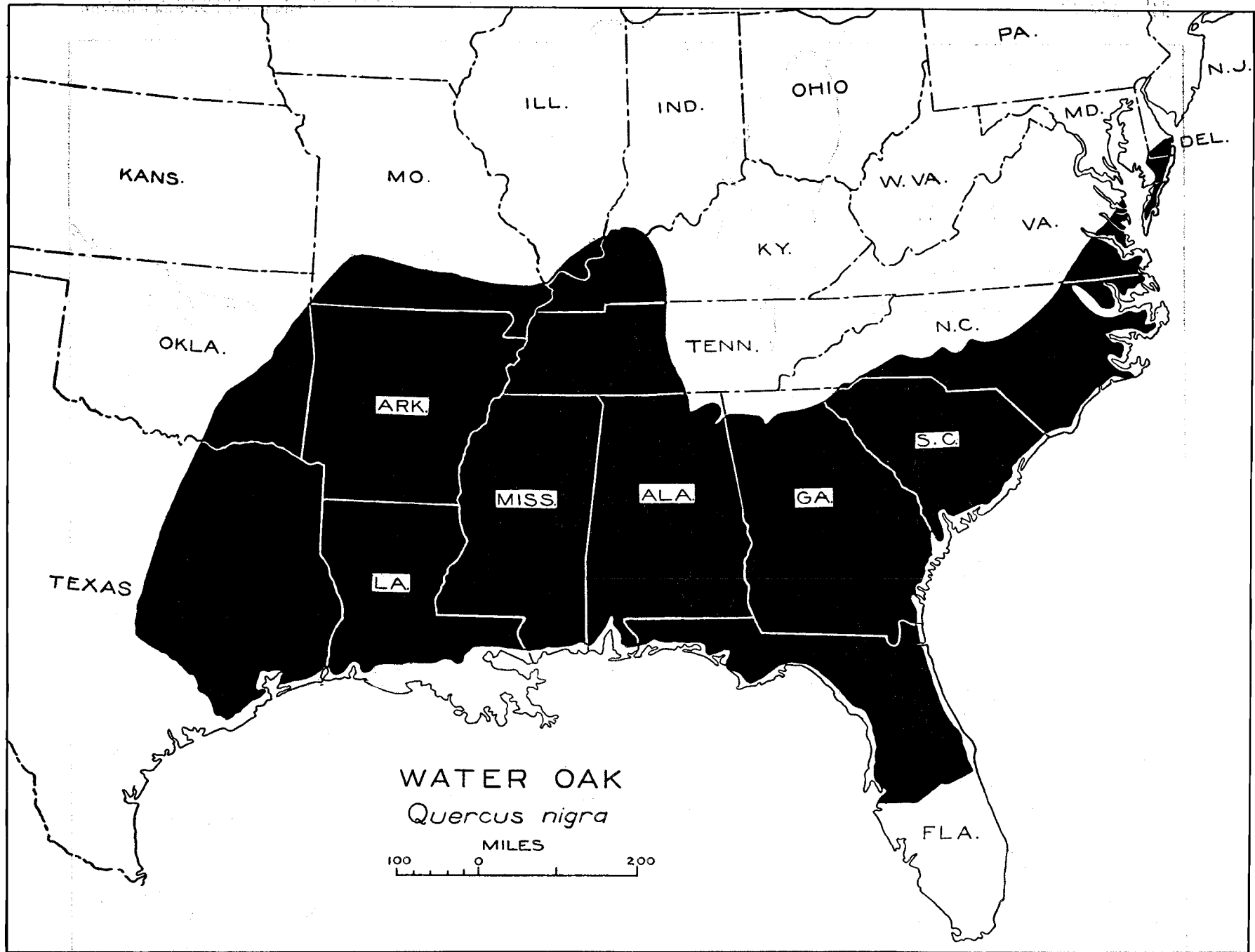
SWAMP RED OAK

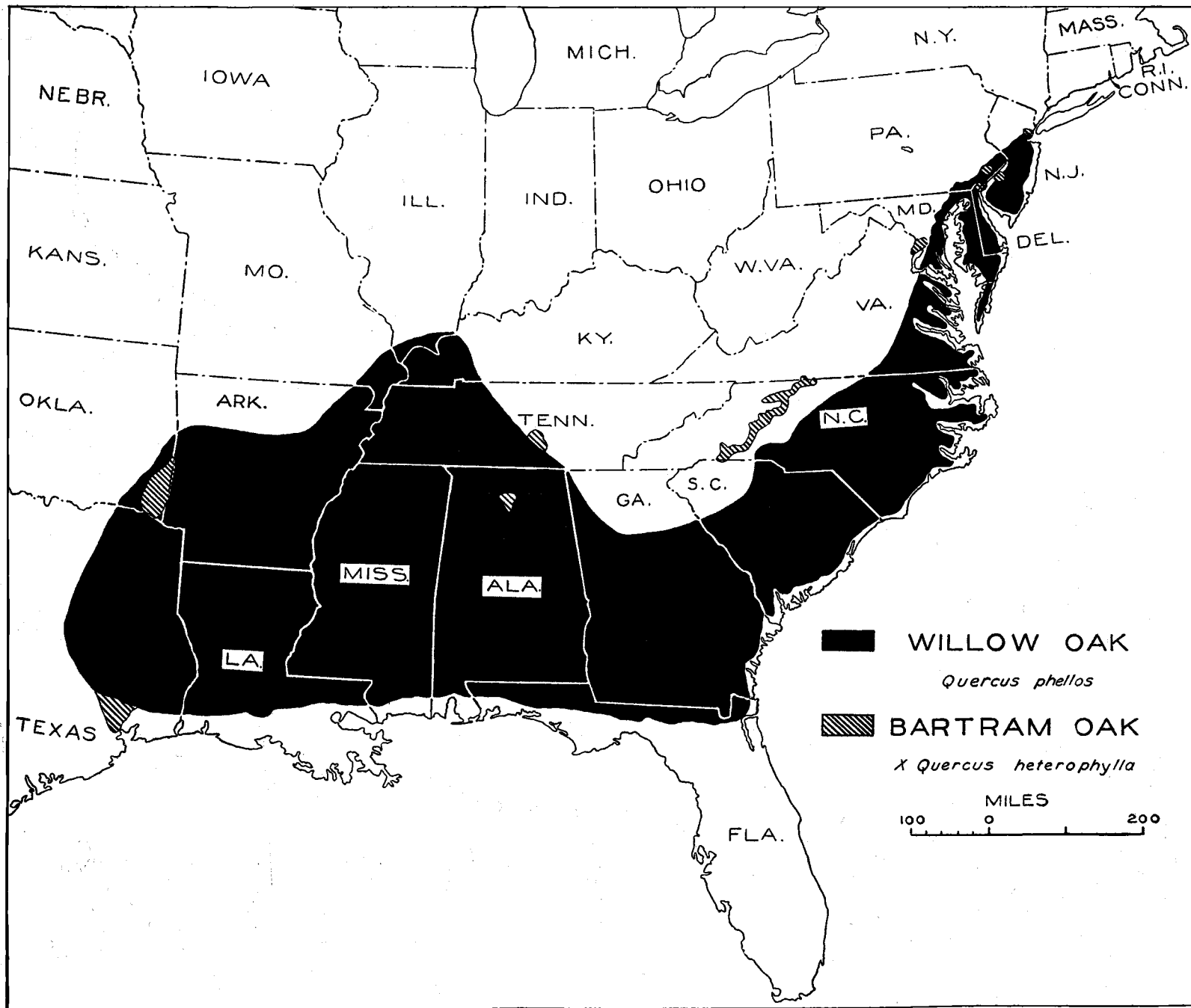


QUERCUS MARILANDICA MUENCHHAUSEN
 QUERCUS MARILANDICA ASHEI SUDWORTH

MAP 102

BLACKJACKET OAK
 BLACKJACKET OAK

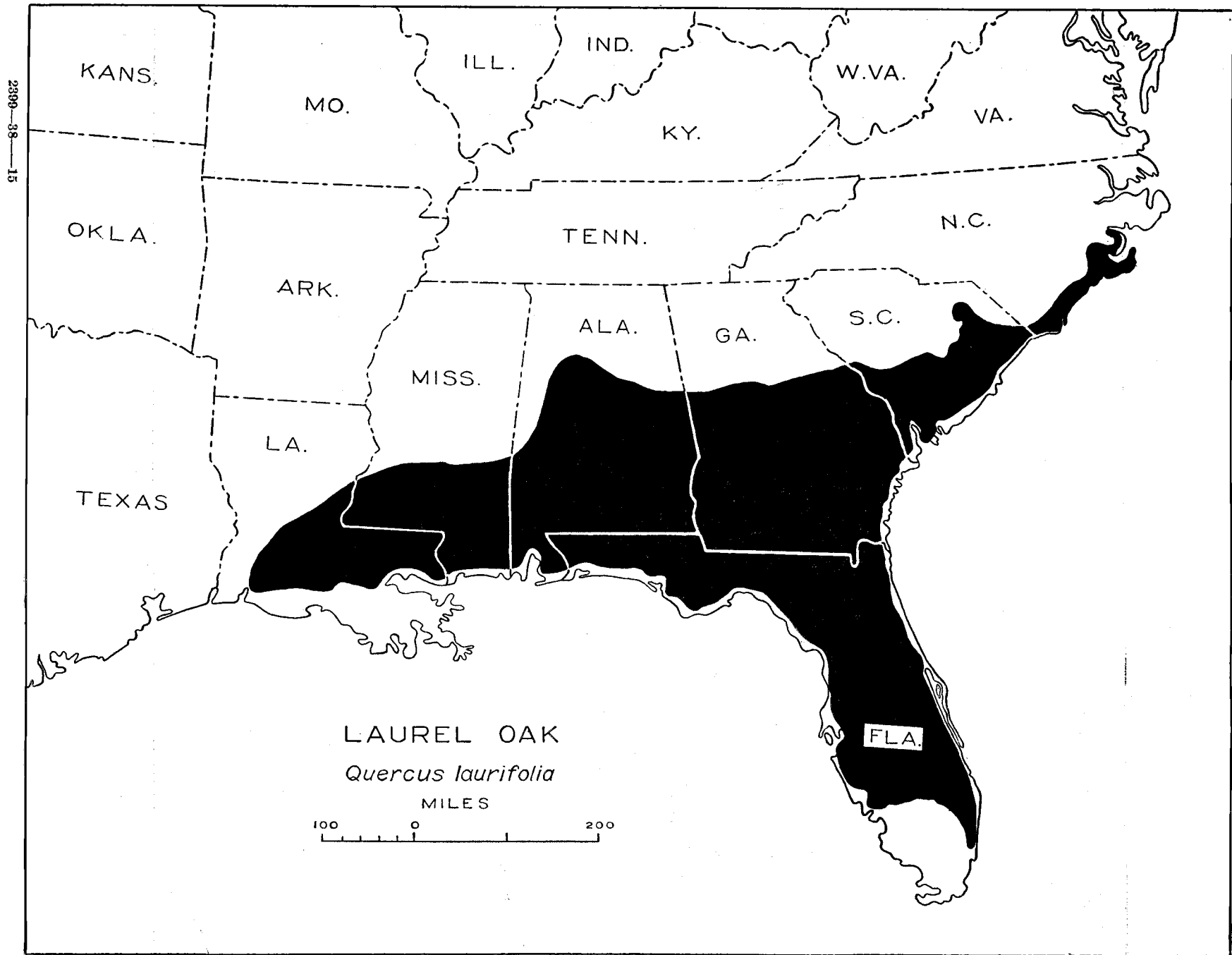


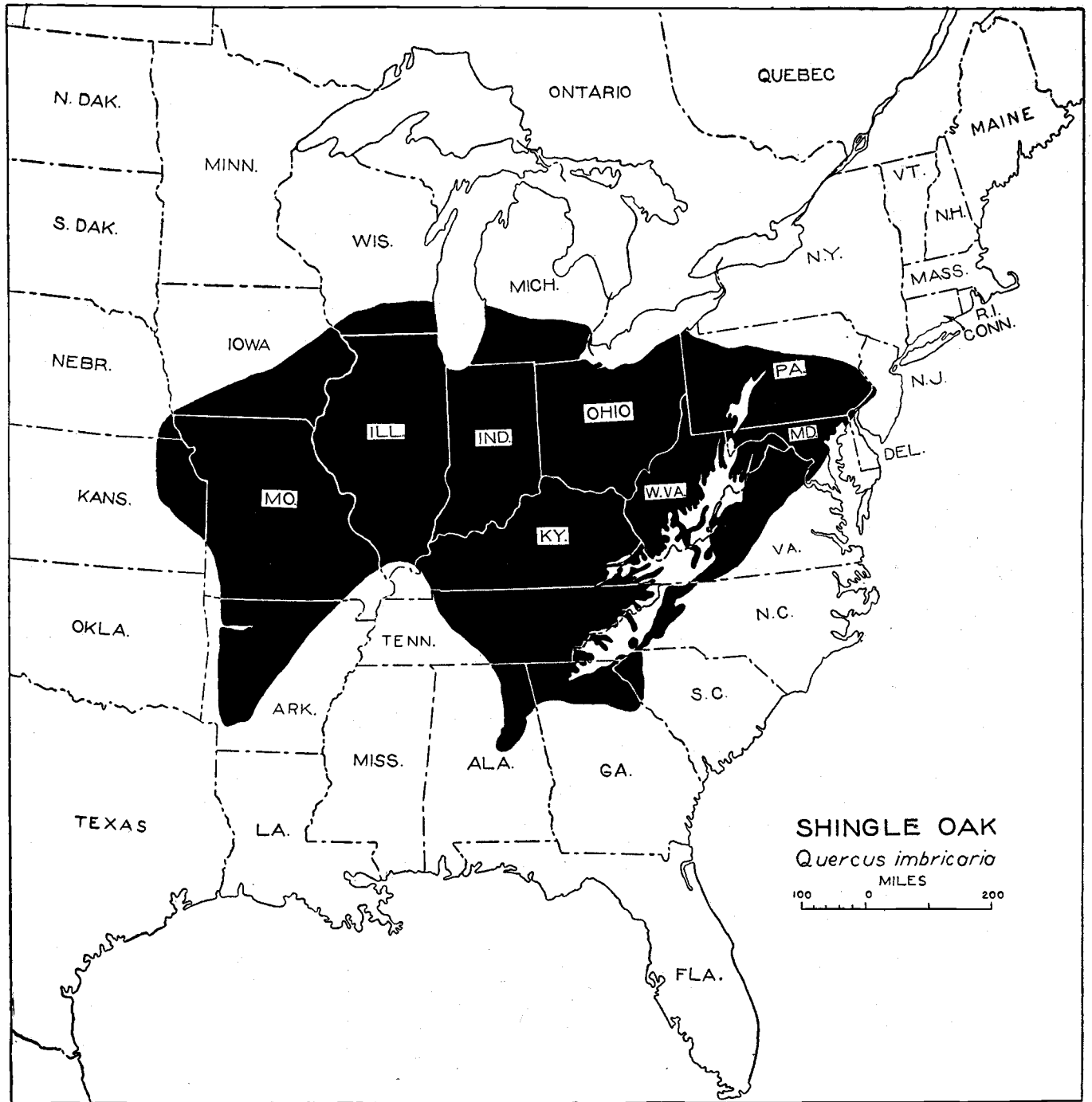


QUERCUS PHELLOS LINNAEUS
X QUERCUS HETEROPHYLLA MICHAUX FILIUS

MAP 104

WILLOW OAK
BARTRAM OAK

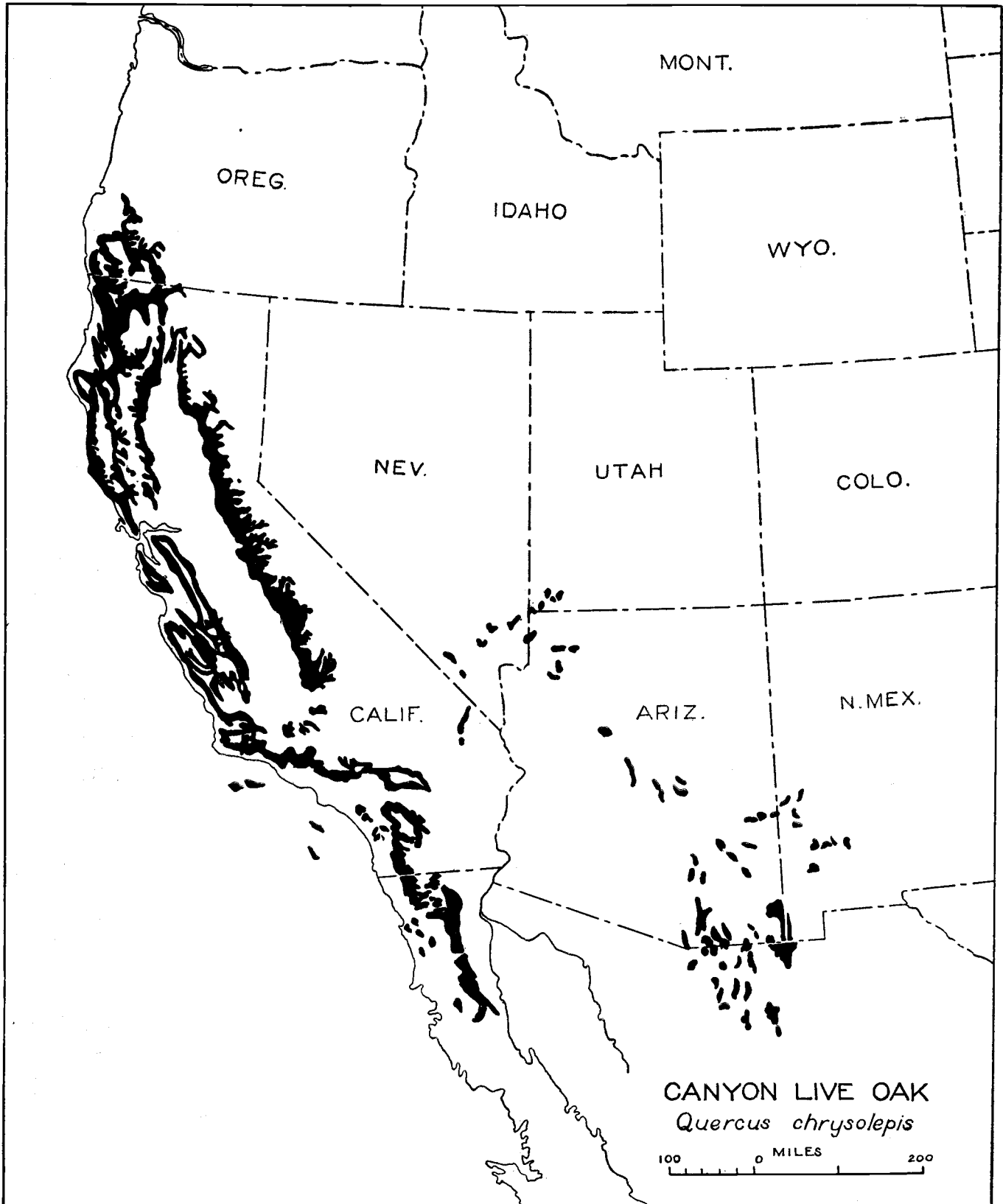


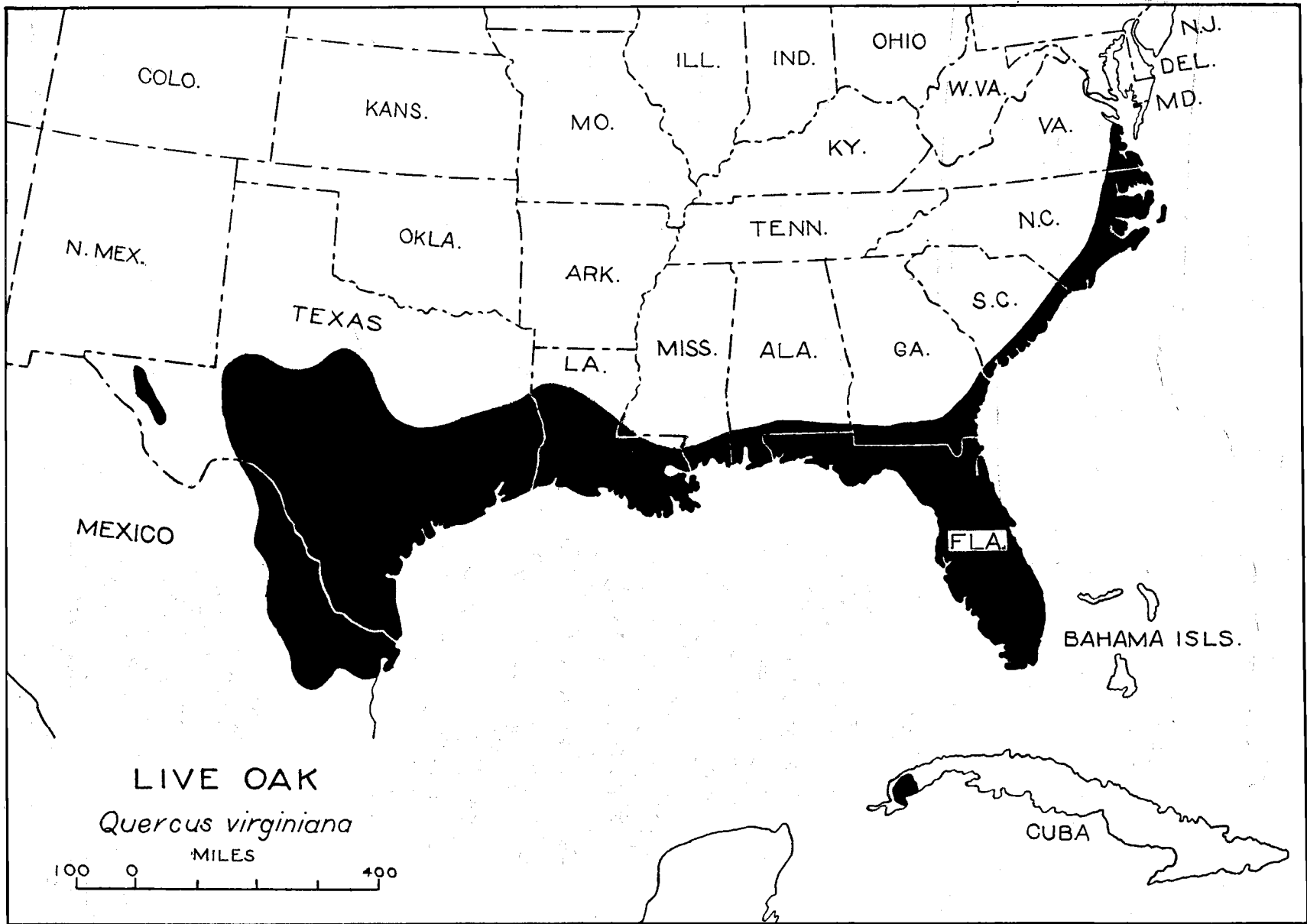


QUERCUS IMBRICARIA MICHAUX

MAP 106

SHINGLE OAK

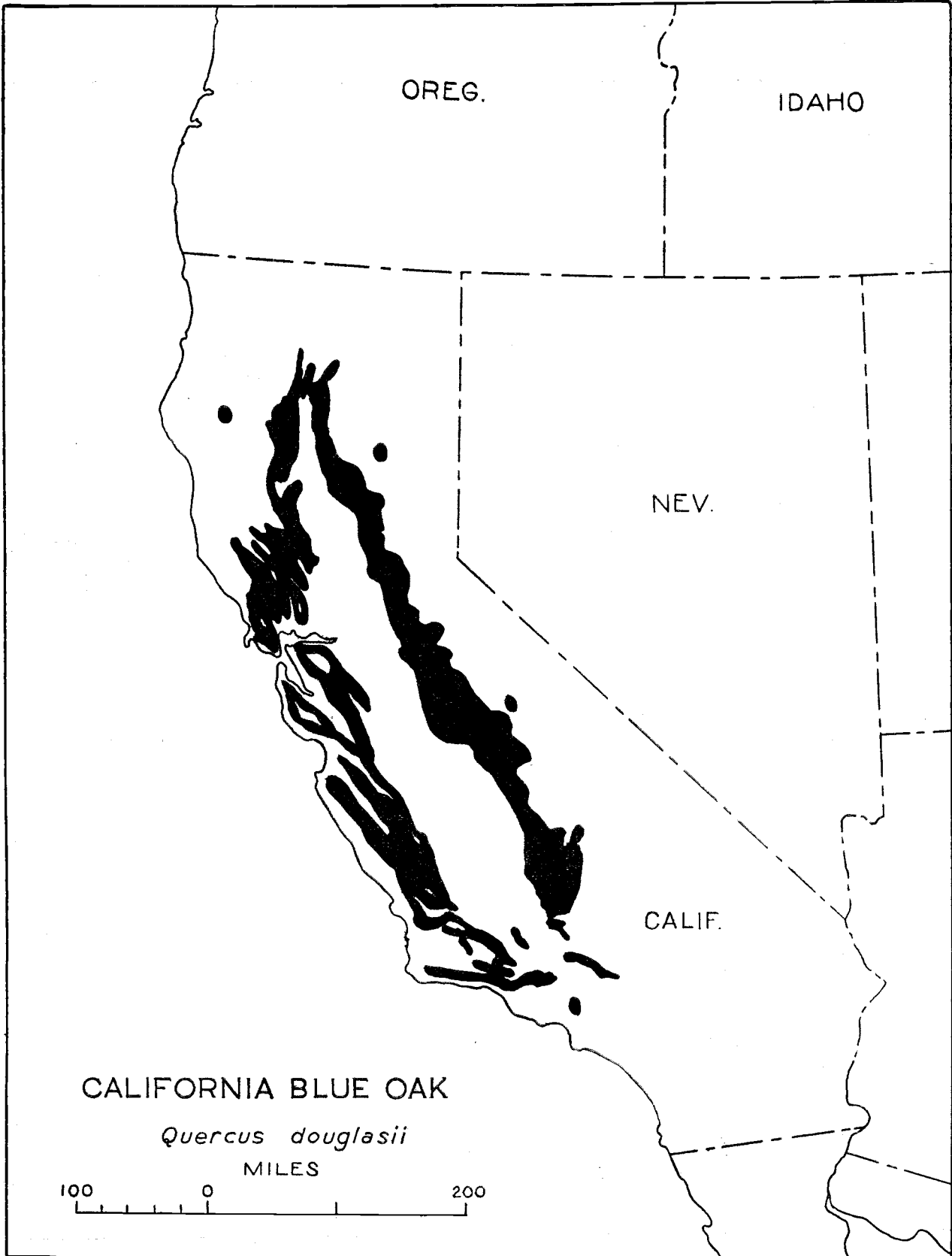


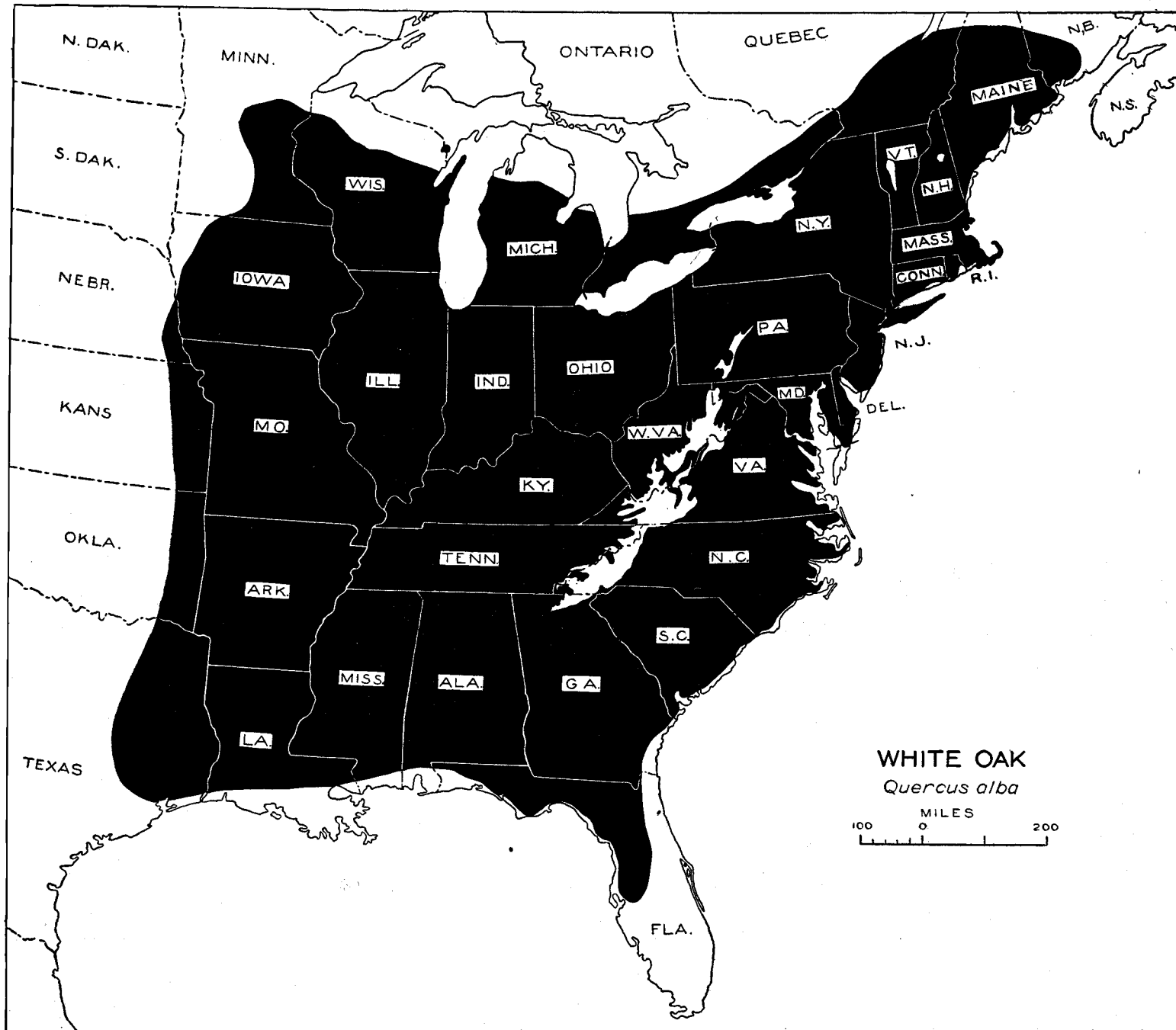


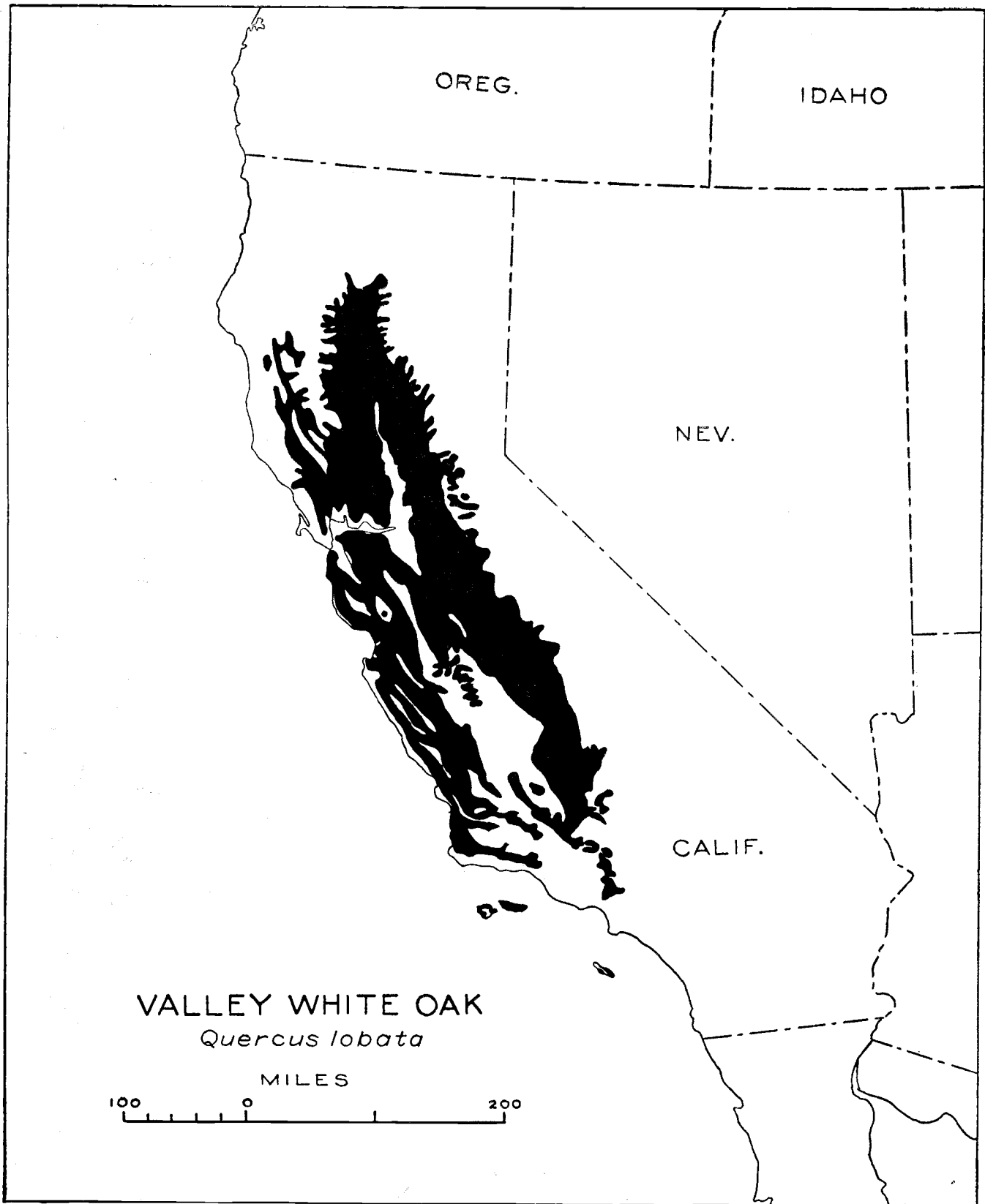
QUERCUS VIRGINIANA MILLER

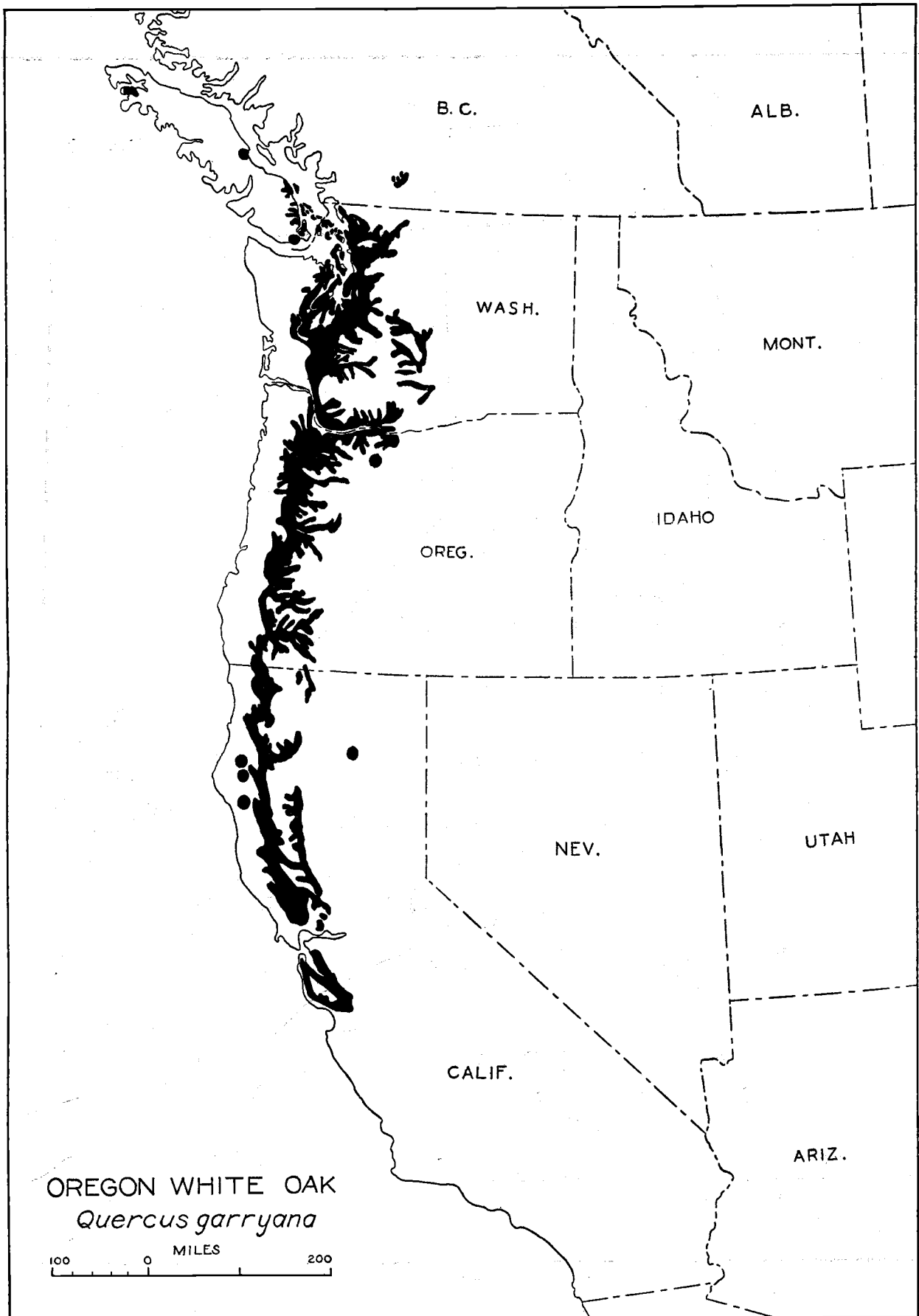
MAP 108

LIVE OAK



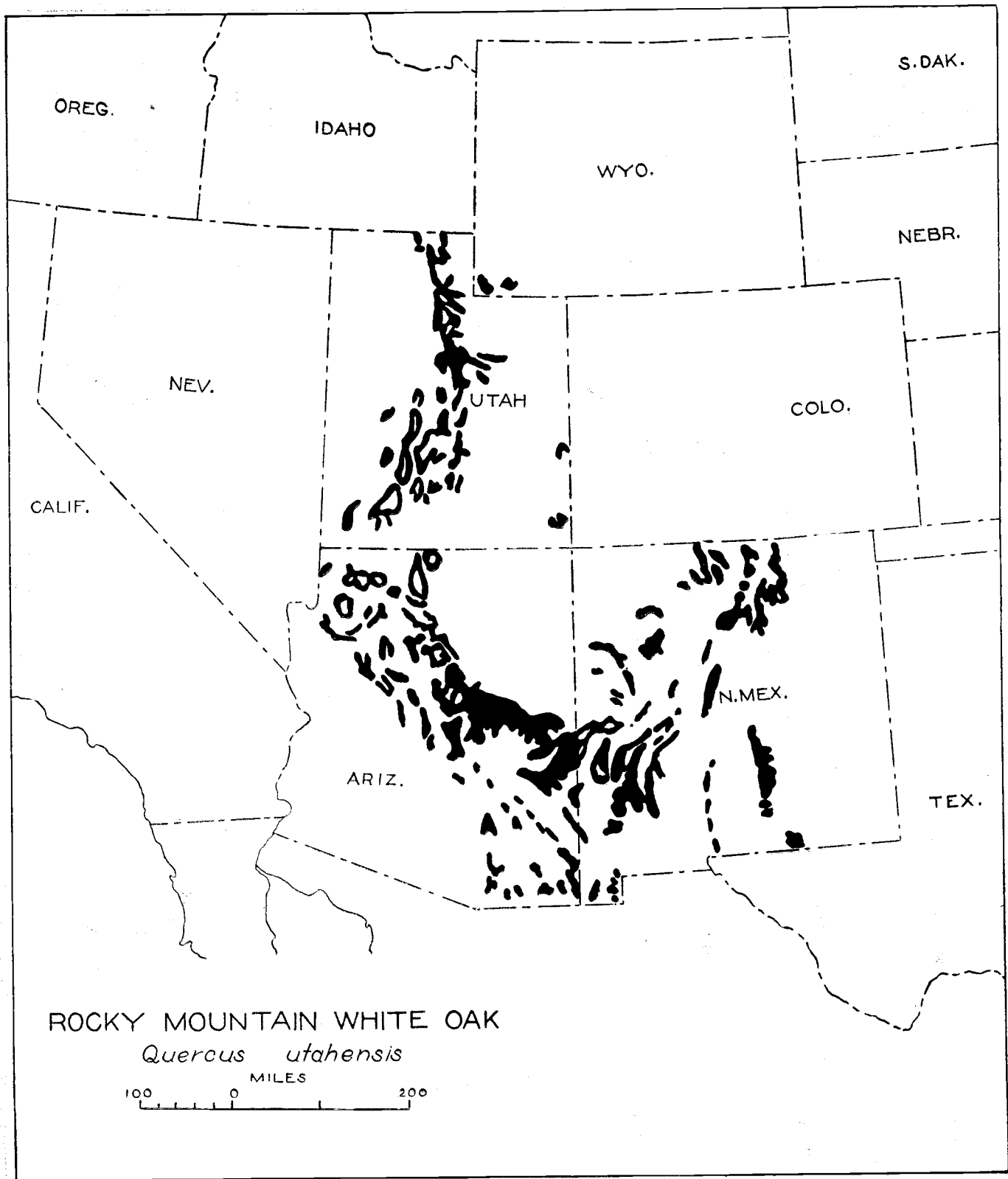






OREGON WHITE OAK
Quercus garryana

100 0 200
MILES

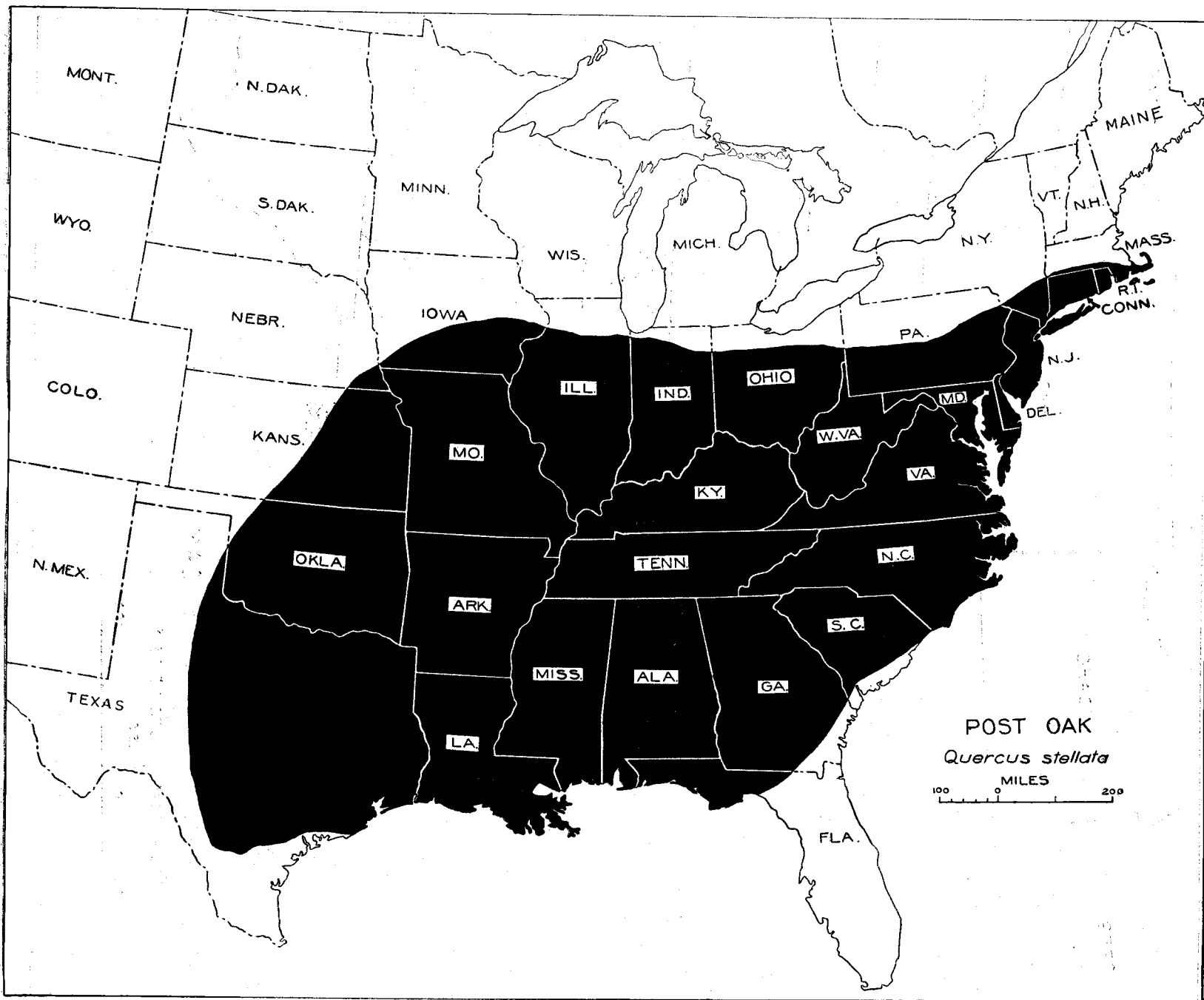


QUERCUS UTAHENSIS (A. DE CANDOLLE) RYDBERG

2399-38-16

MAP 113

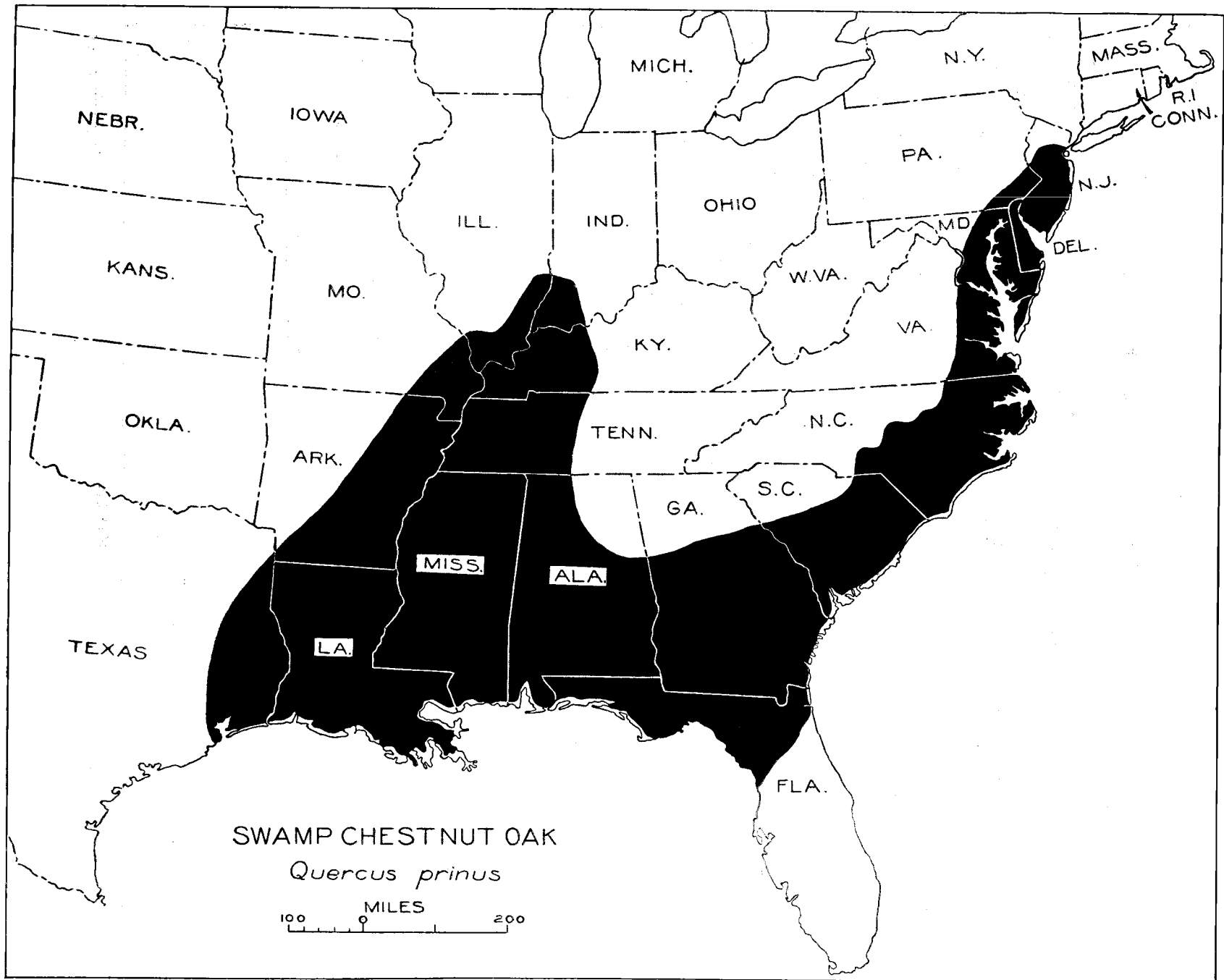
ROCKY MOUNTAIN WHITE OAK

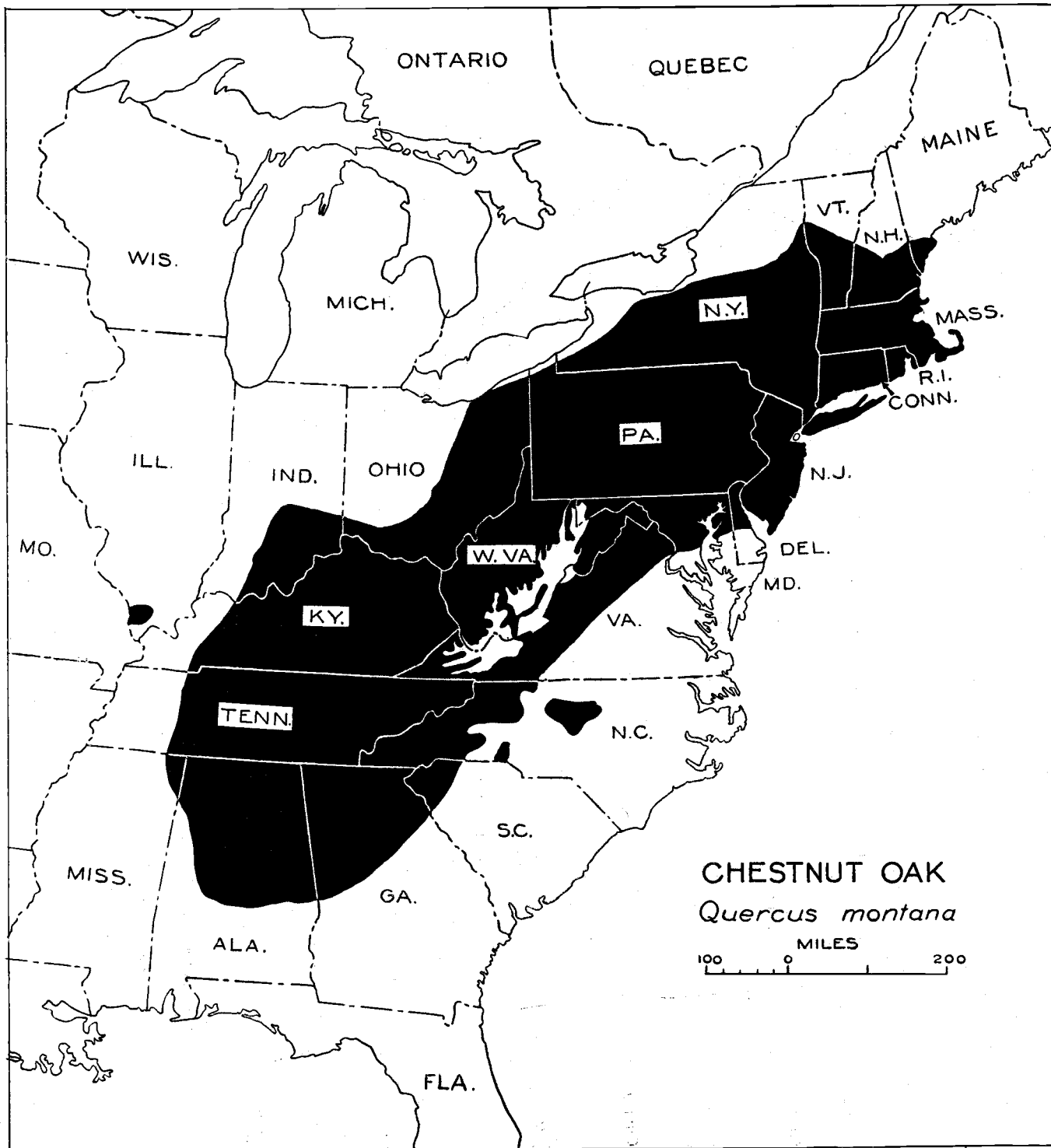


QUERCUS STELLATA WANGENHEIM

MAP 114

POST OAK

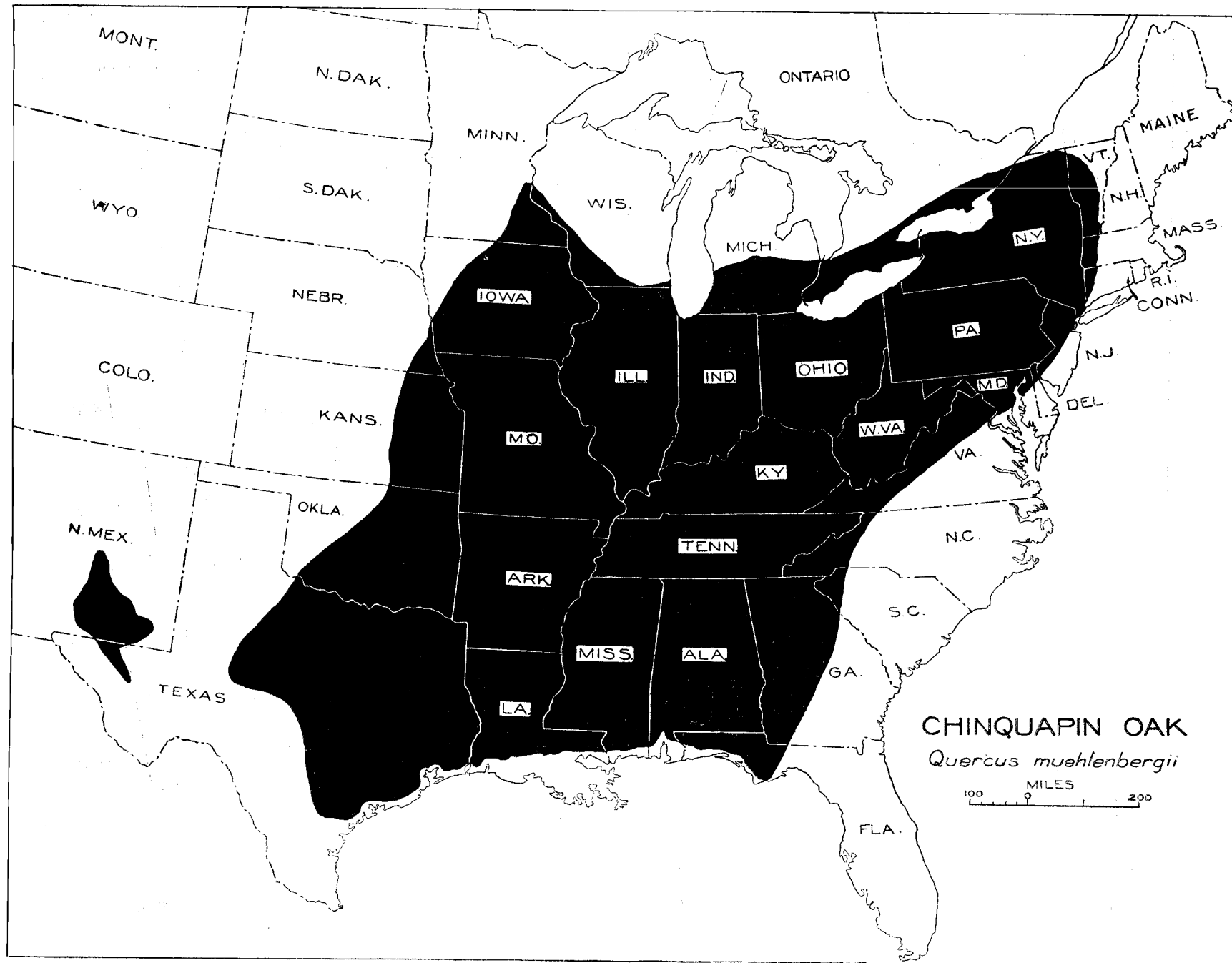




QUERCUS MONTANA WILLDENOW

MAP 118

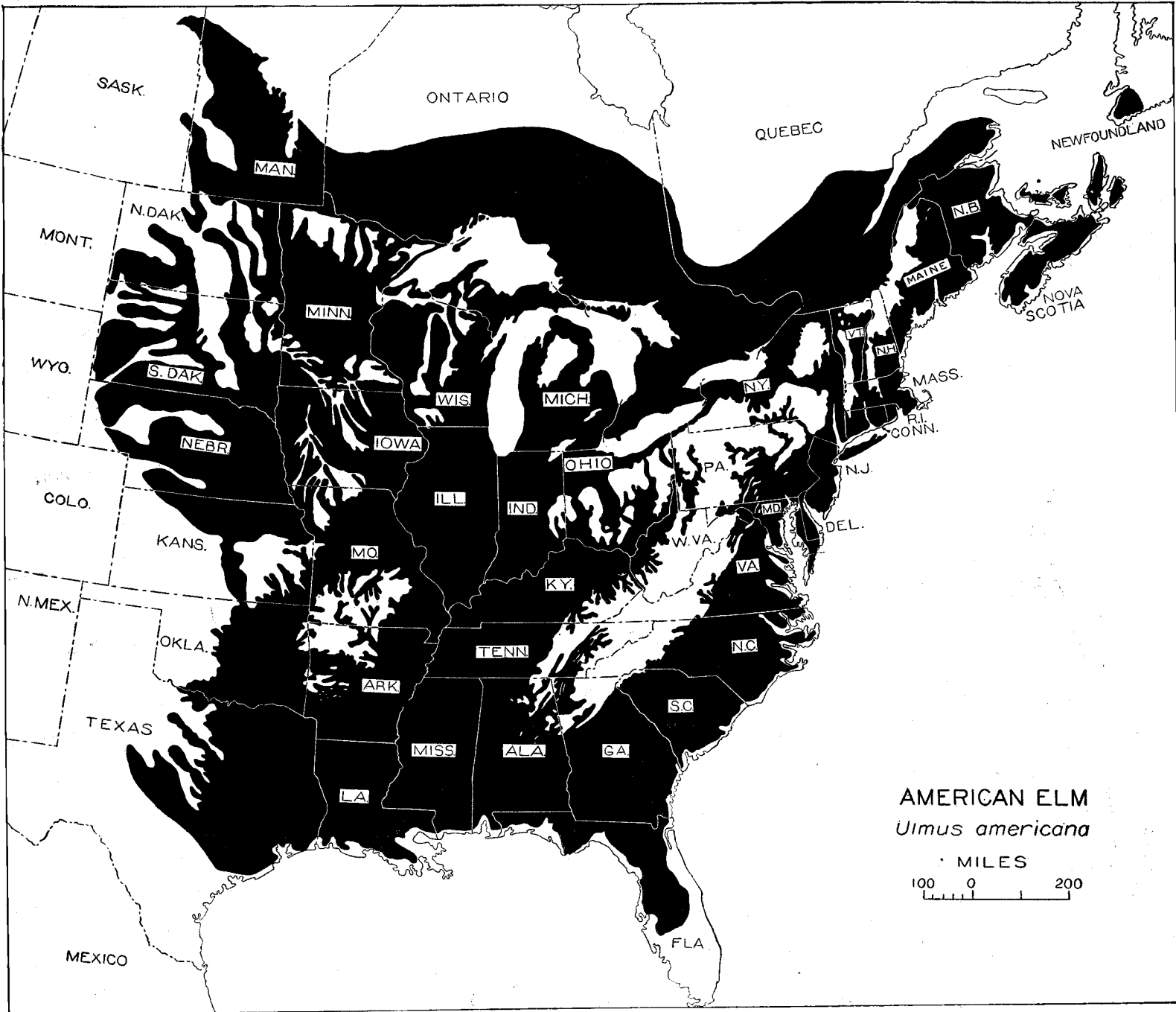
CHESTNUT OAK



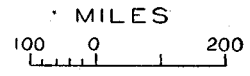
QUERCUS MUEHLENBERGII ENGELMANN

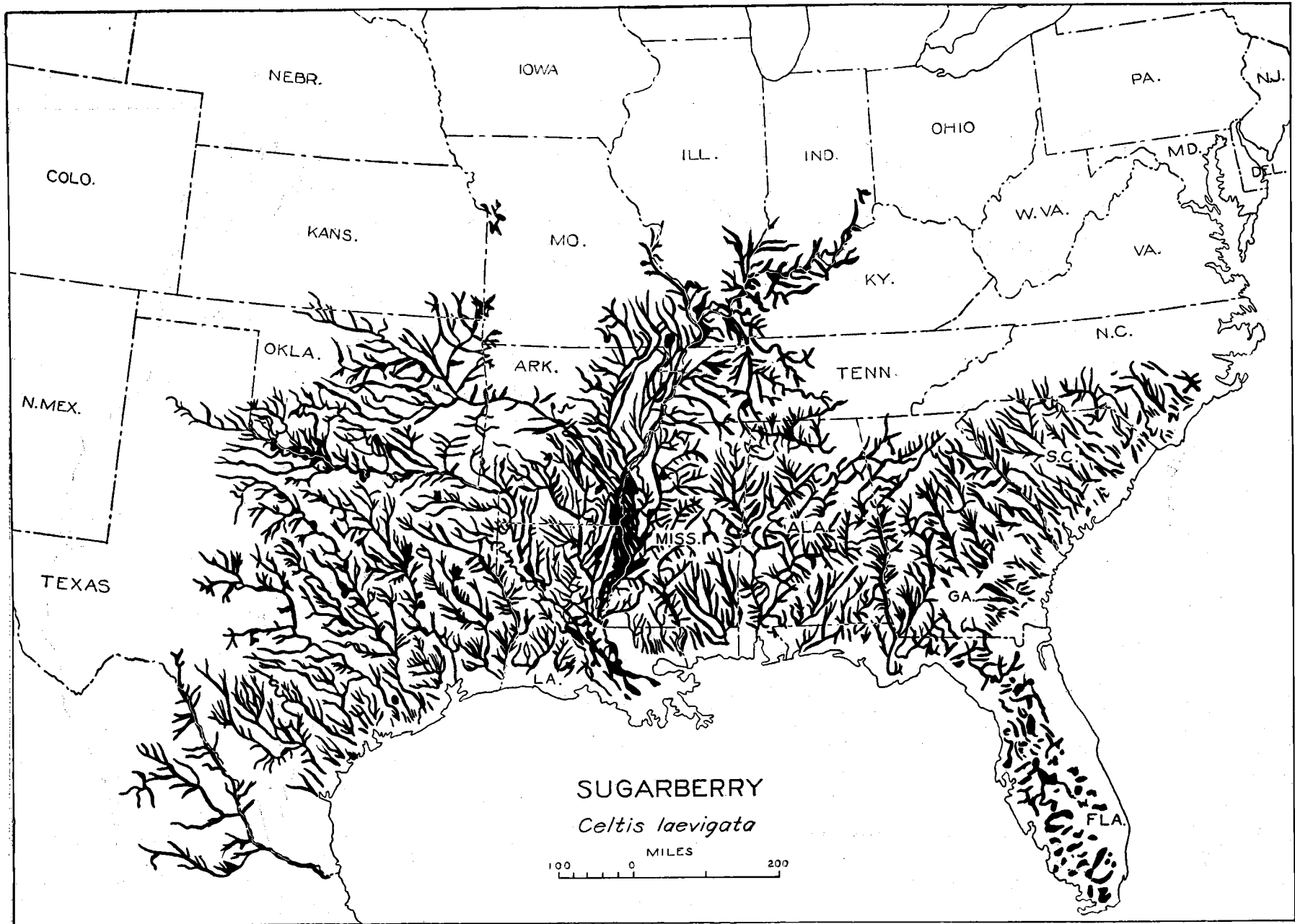
MAP 119

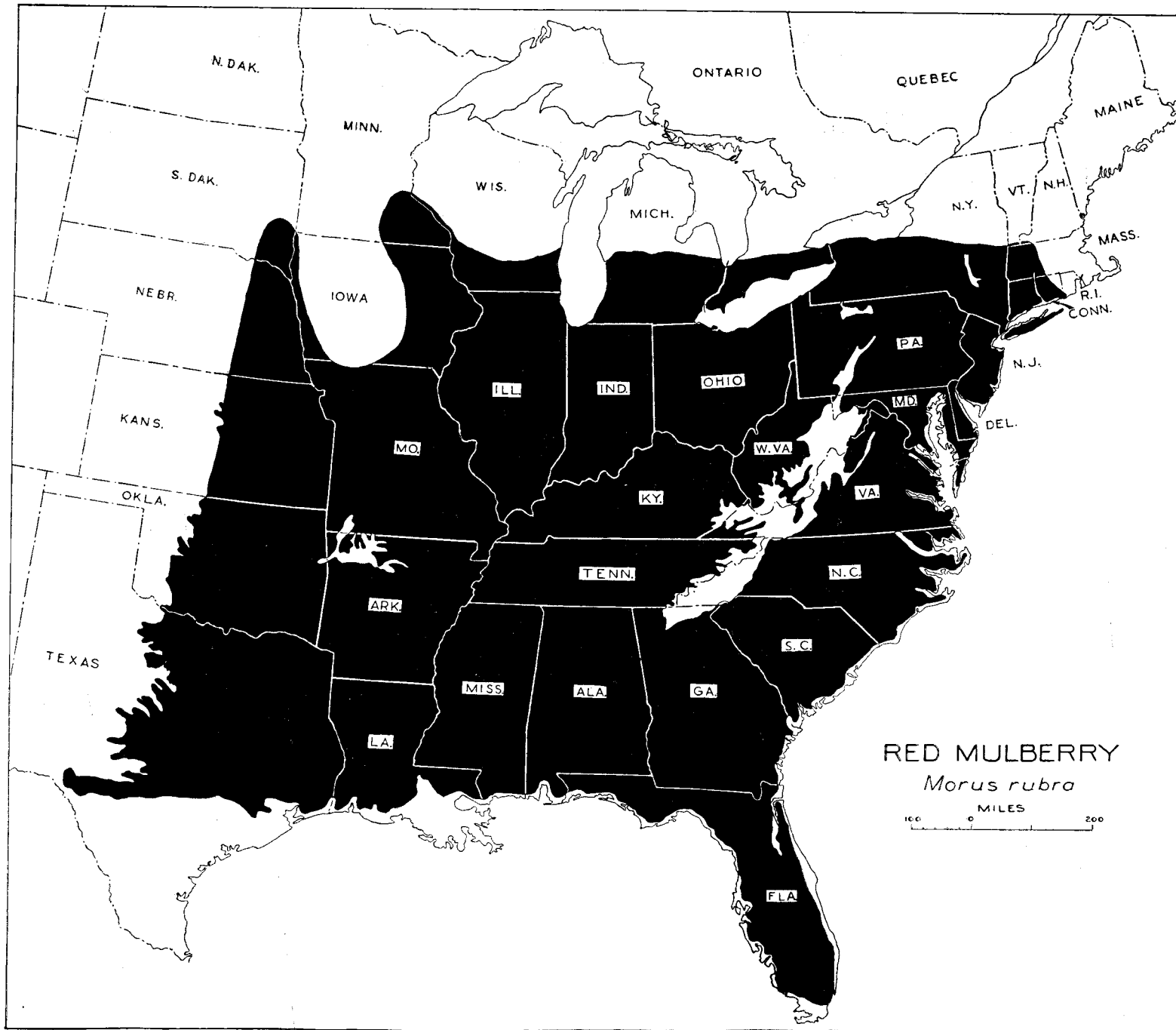
CHINQUAPIN OAK



AMERICAN ELM
Ulmus americana

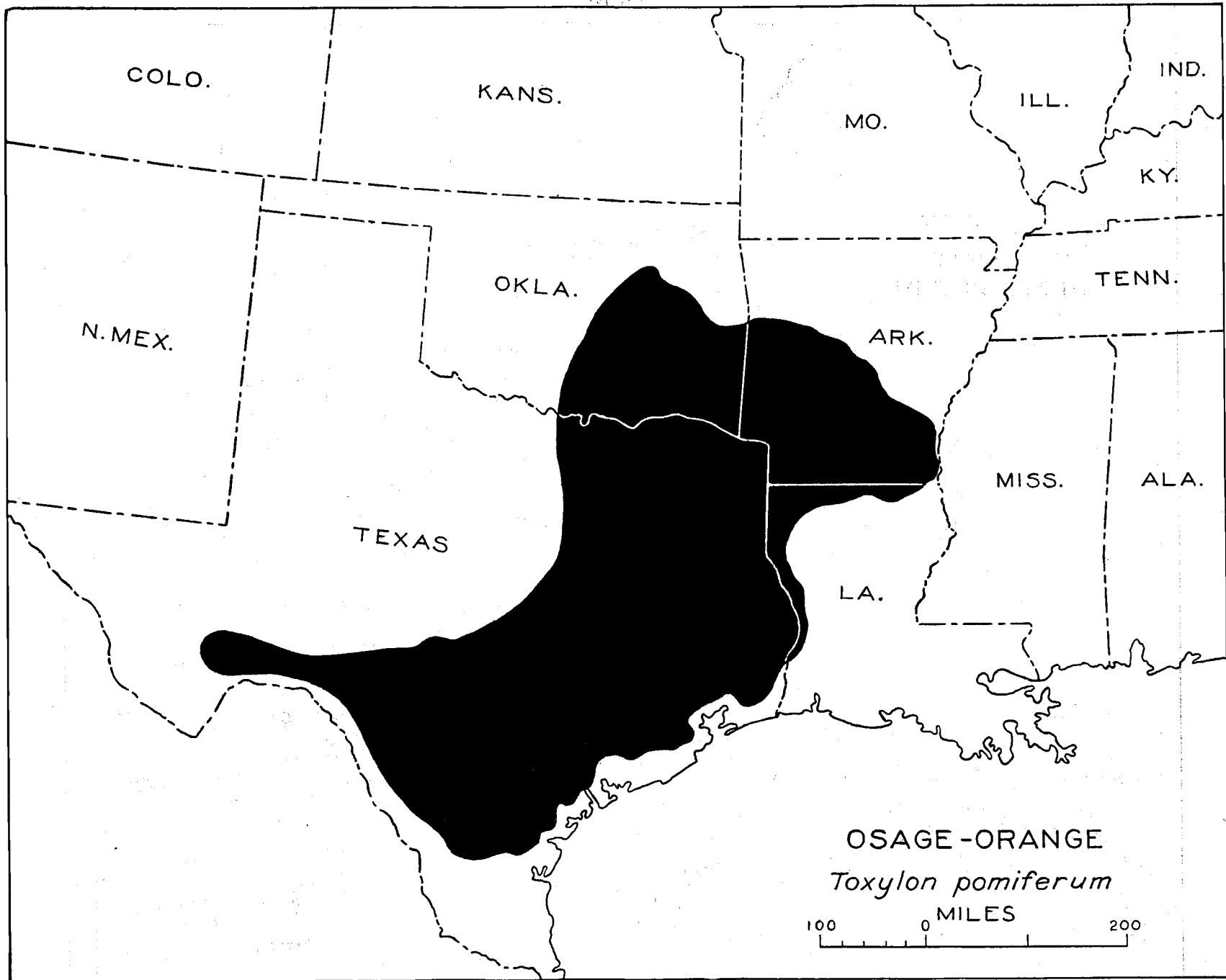


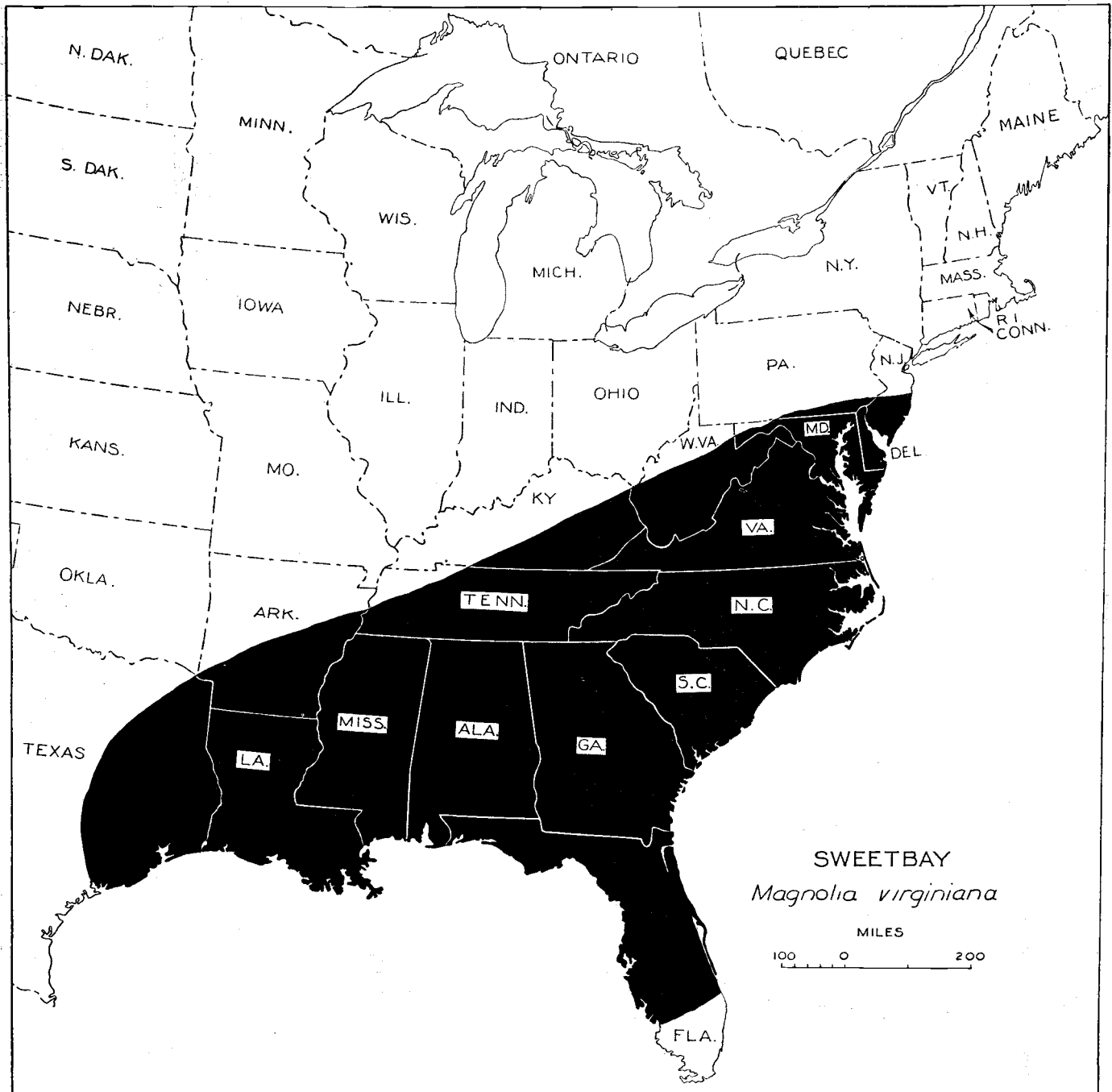


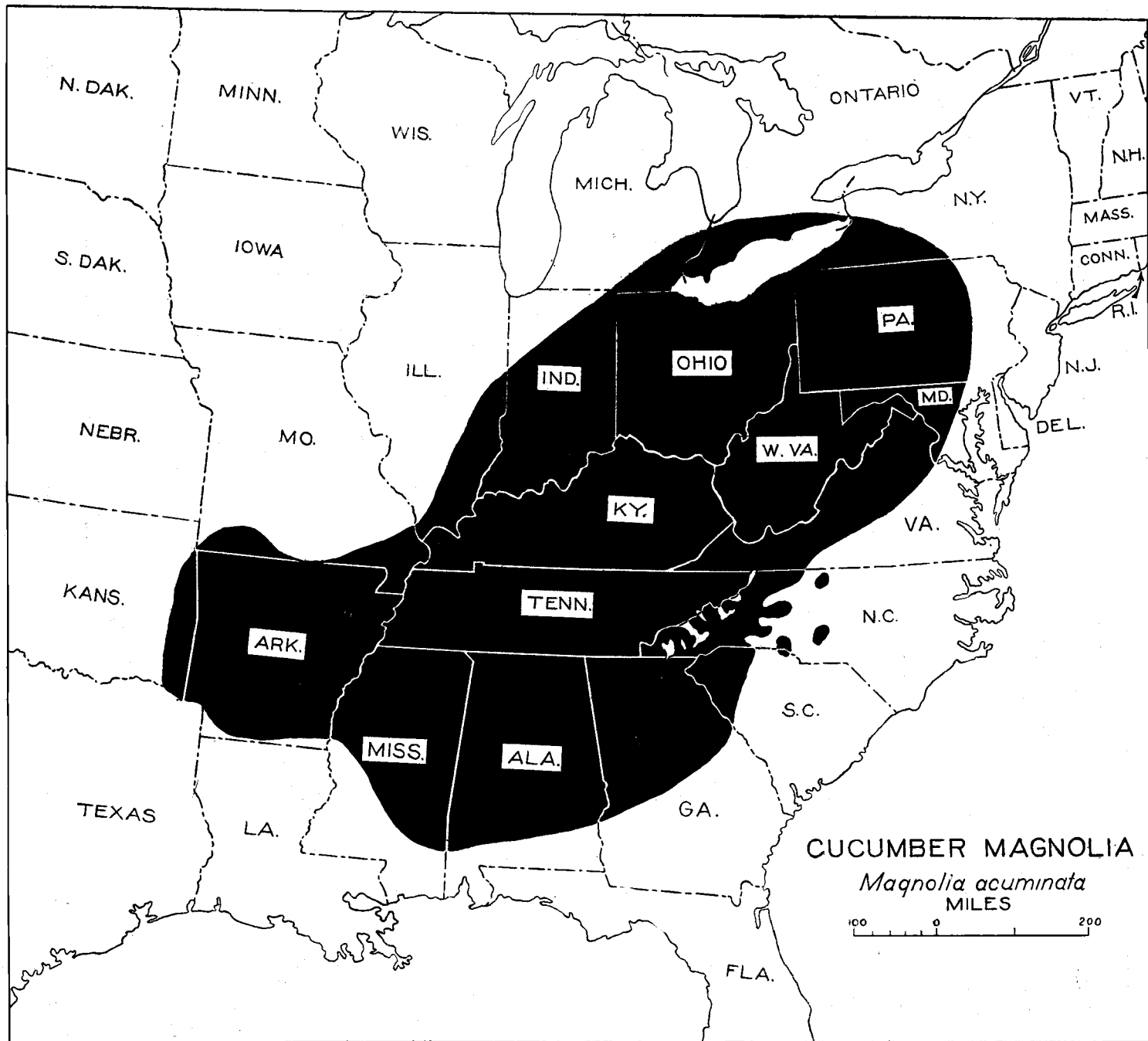


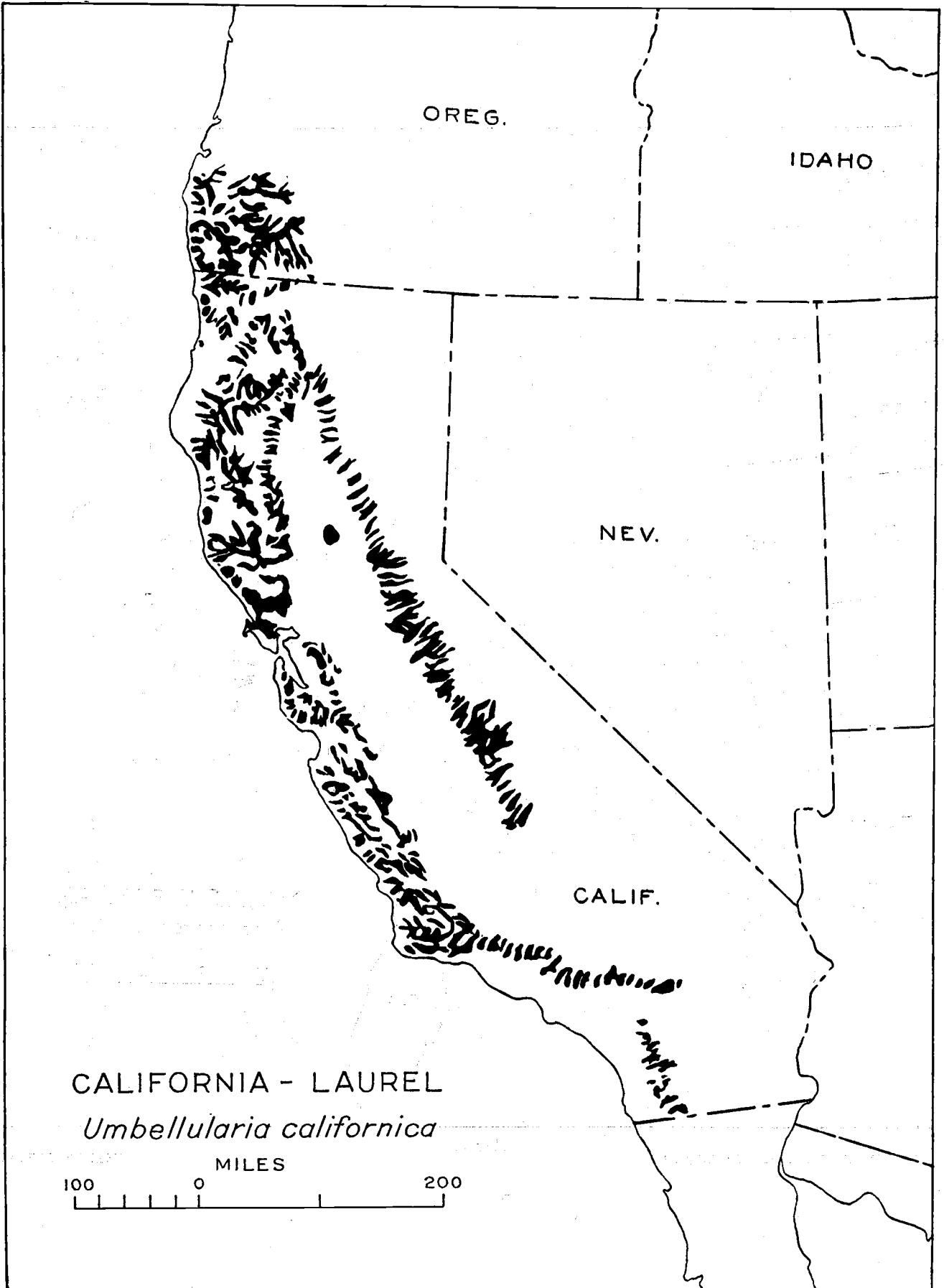
RED MULBERRY
Morus rubra

MILES
0 100 200





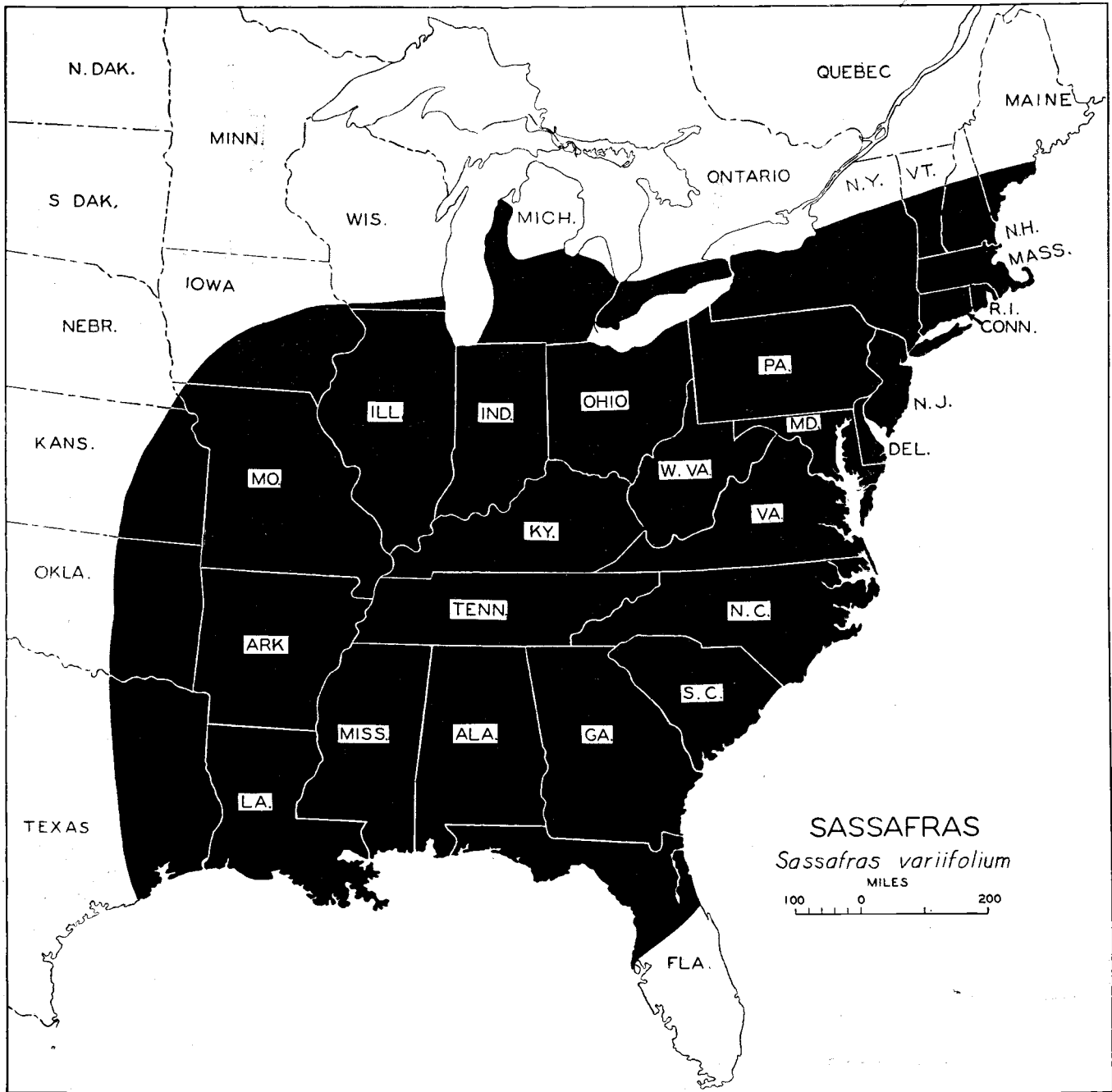




MAP 128

UMBELLULARIA CALIFORNICA (HOOKER AND ARNOTT) NUTTALL

CALIFORNIA-LAUREL

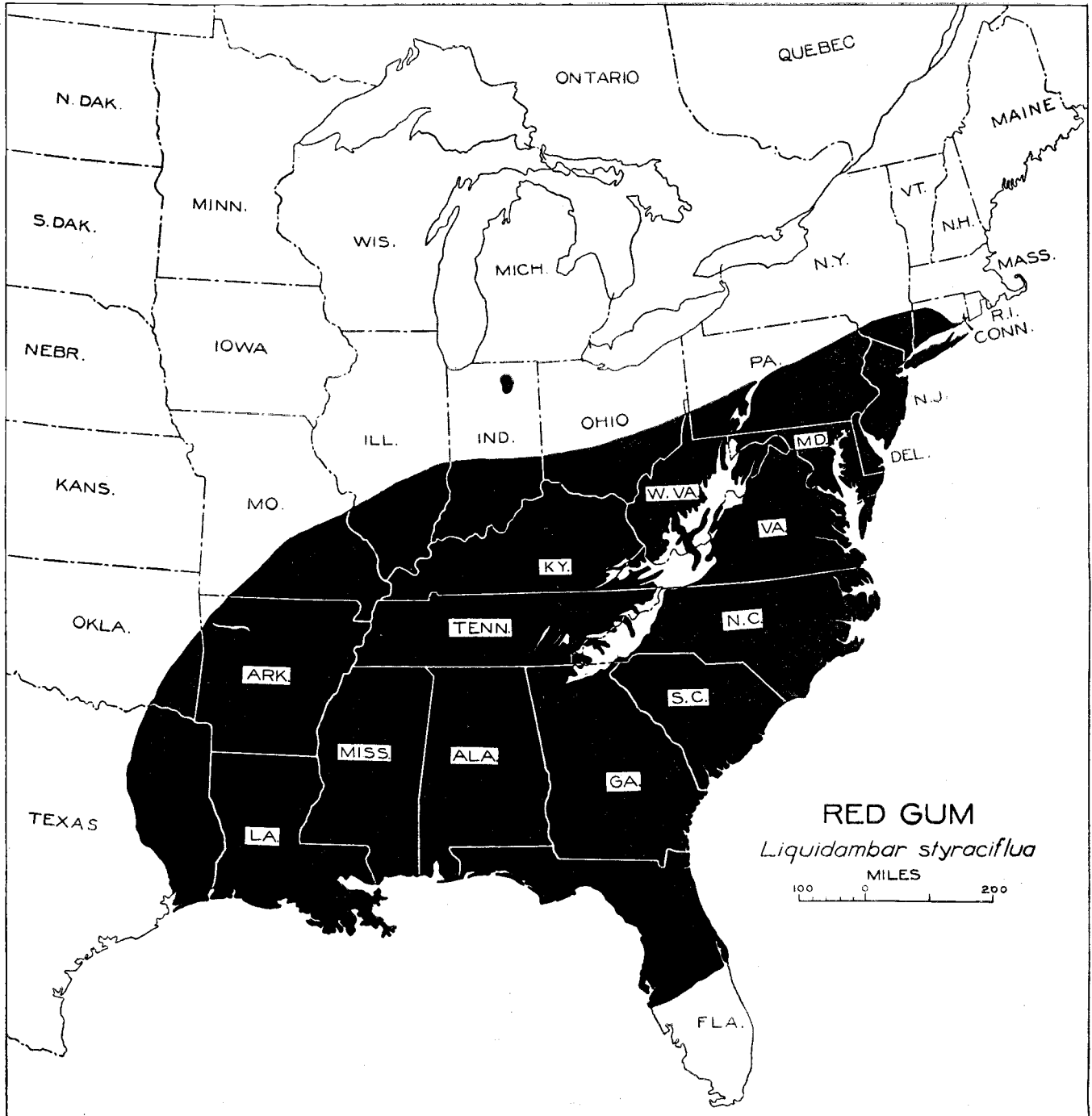


SASSAFRAS
Sassafras variifolium
MILES
100 0 200

SASSAFRAS VARIIFOLIUM (SALISBURY) KUNTZE

MAP 129

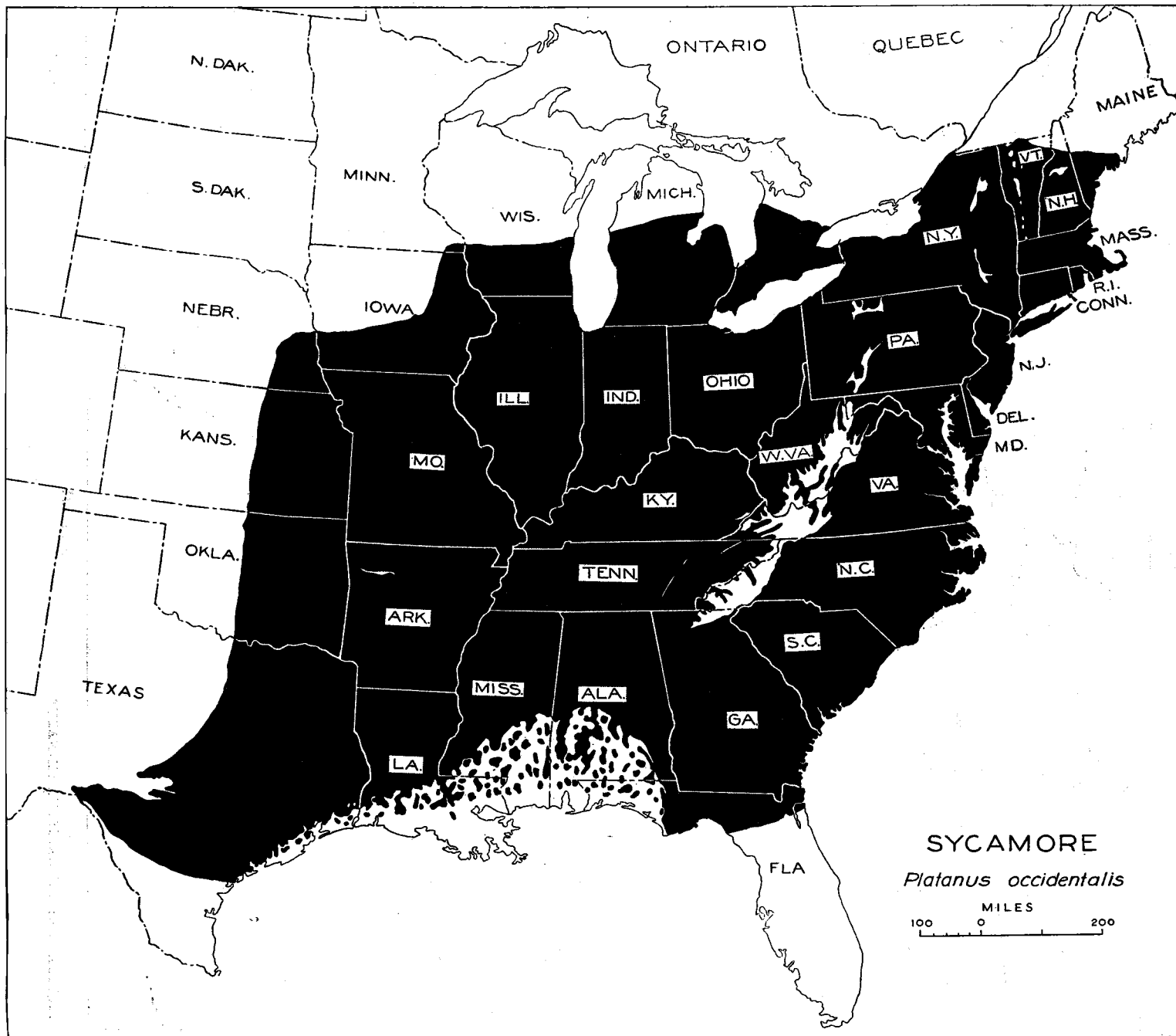
SASSAFRAS

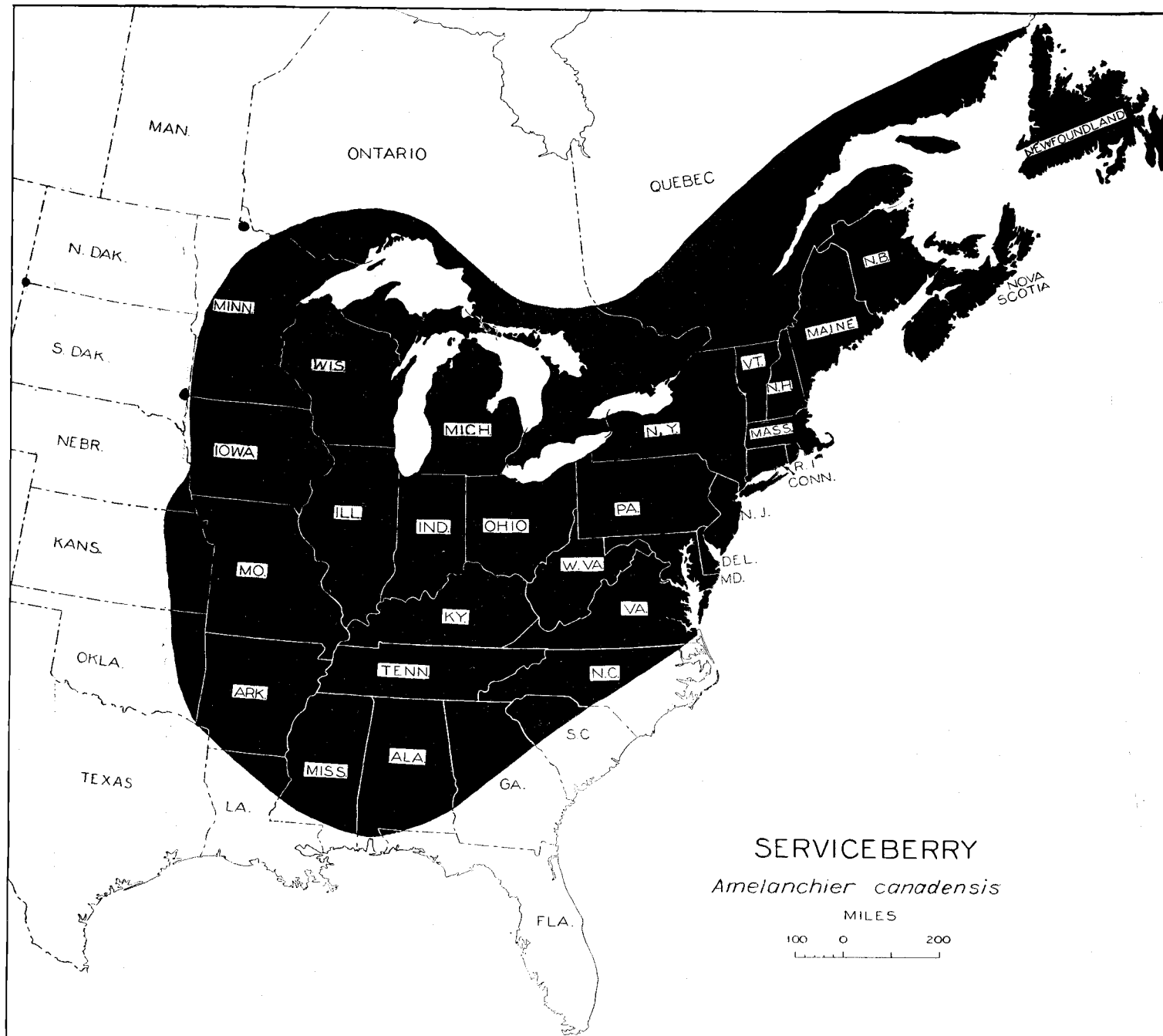


LIQUIDAMBAR STYRACIFLUA LINNAEUS

MAP 131

RED GUM





AMELANCHIER CANADENSIS (LINNAEUS) MEDICUS

MAP 133

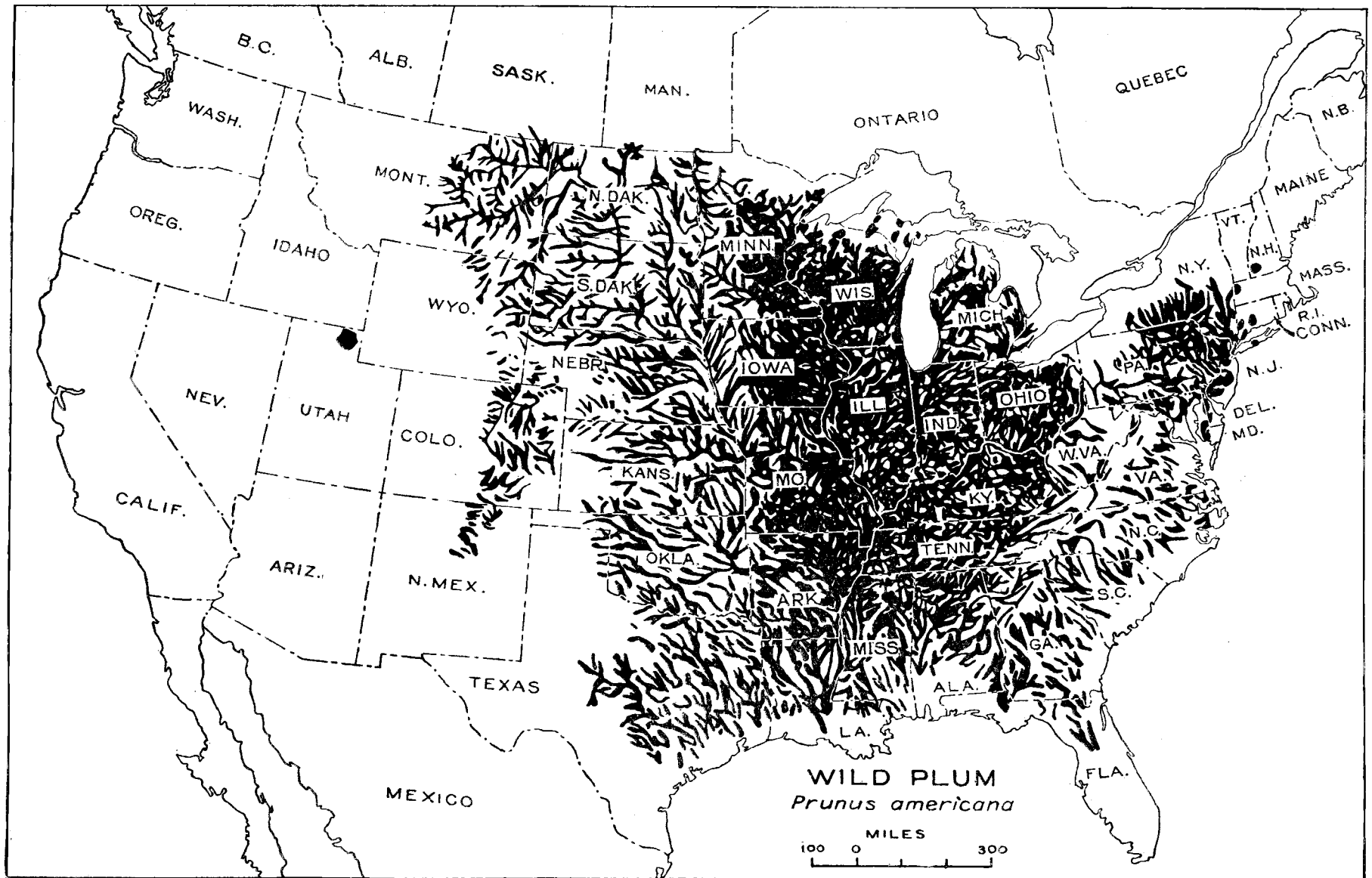
SERVICEBERRY



CERCOCARPUS LEDIFOLIUS NUTTALL

MAP 134

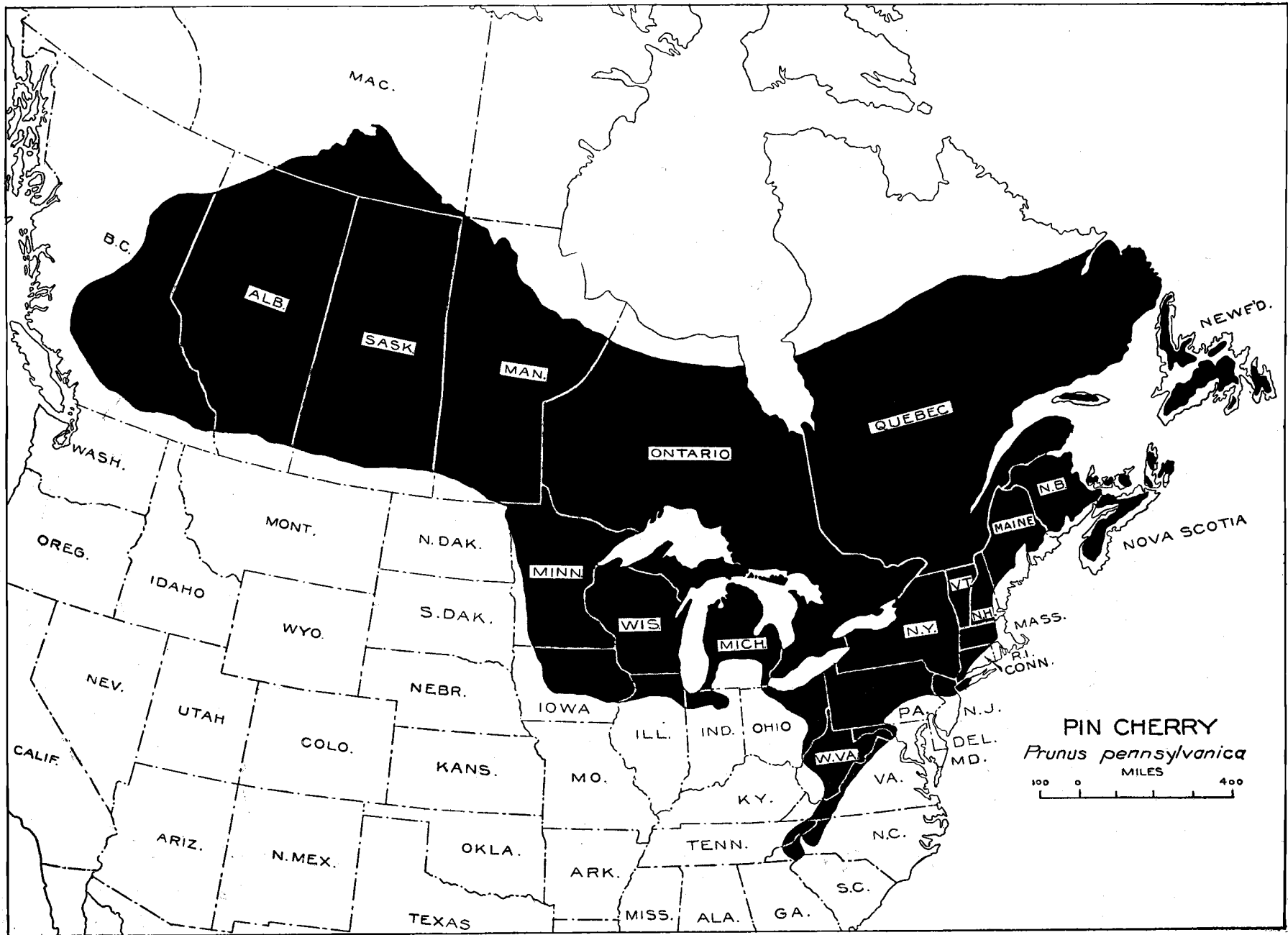
CURLLEAF MOUNTAIN-MAHOGANY

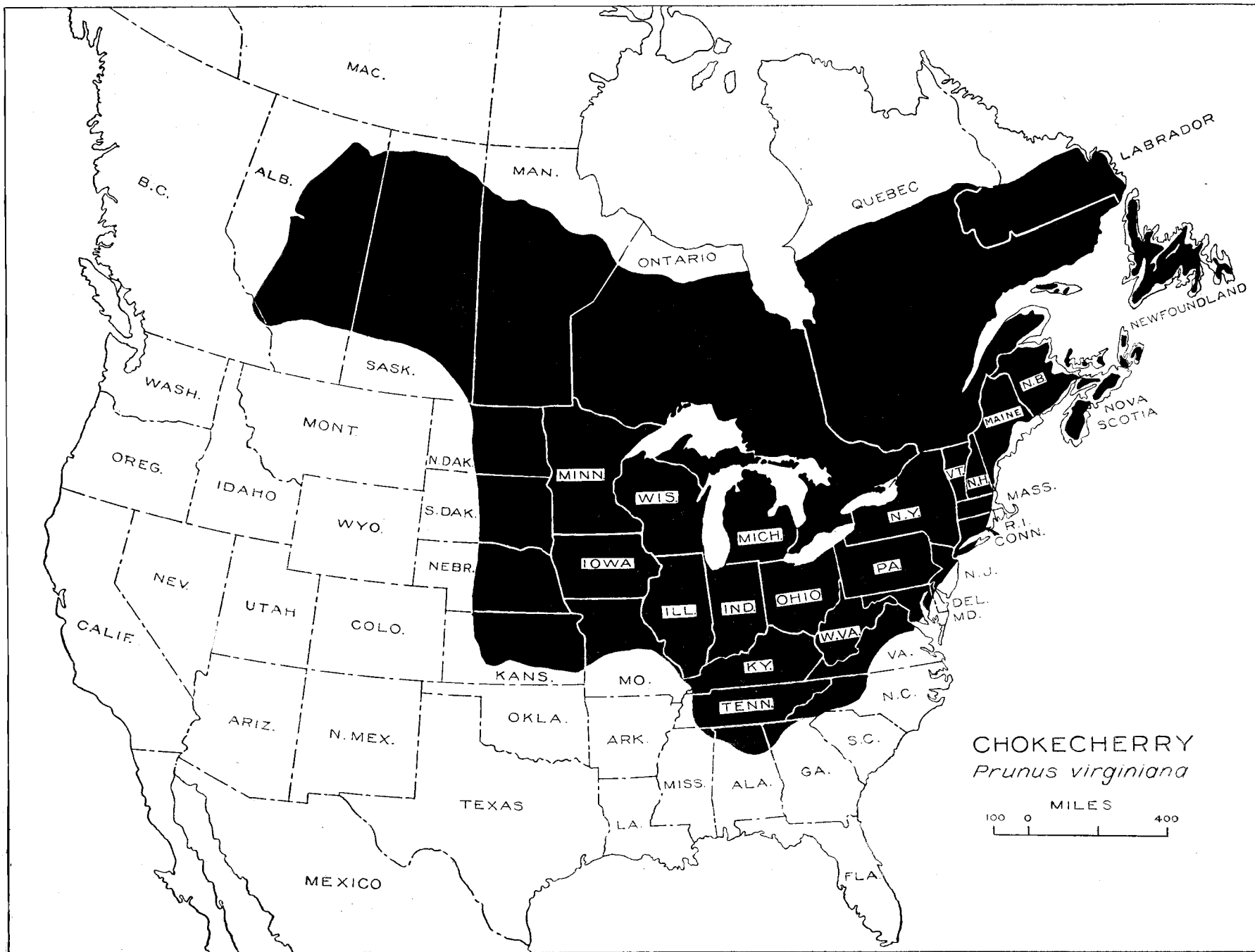


PRUNUS AMERICANA MARSHALL

MAP 135

WILD PLUM

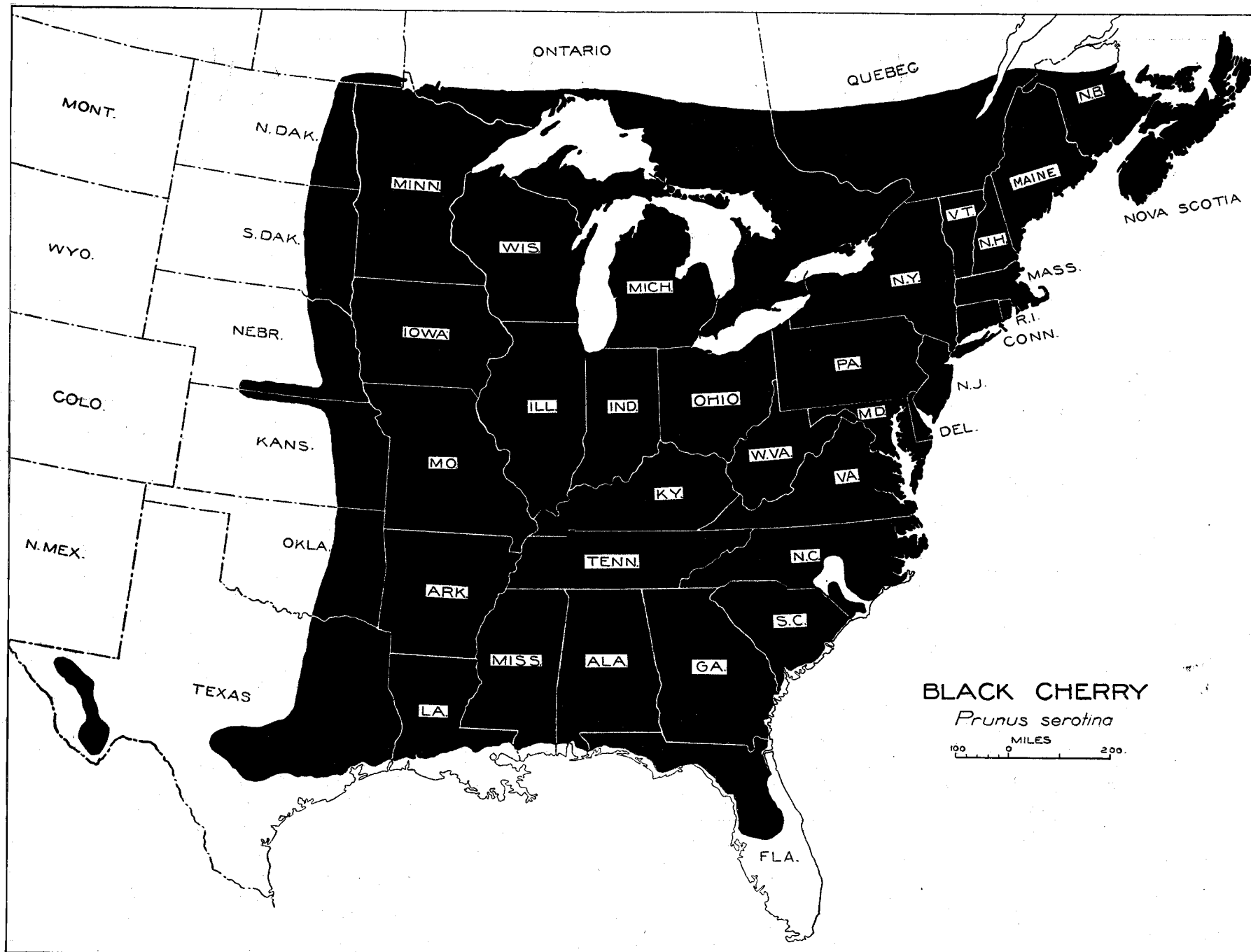


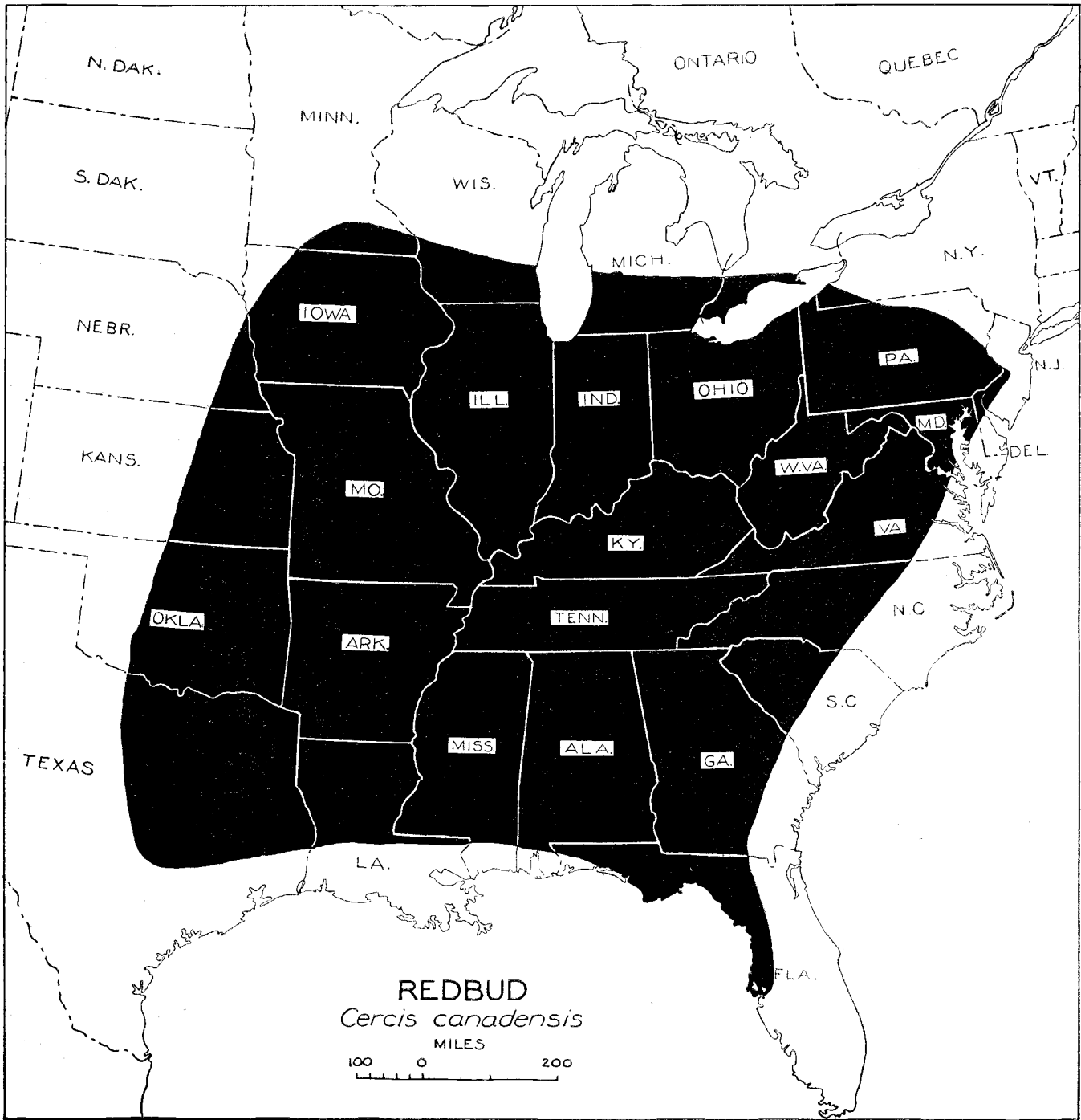


PRUNUS VIRGINIANA LINNAEUS

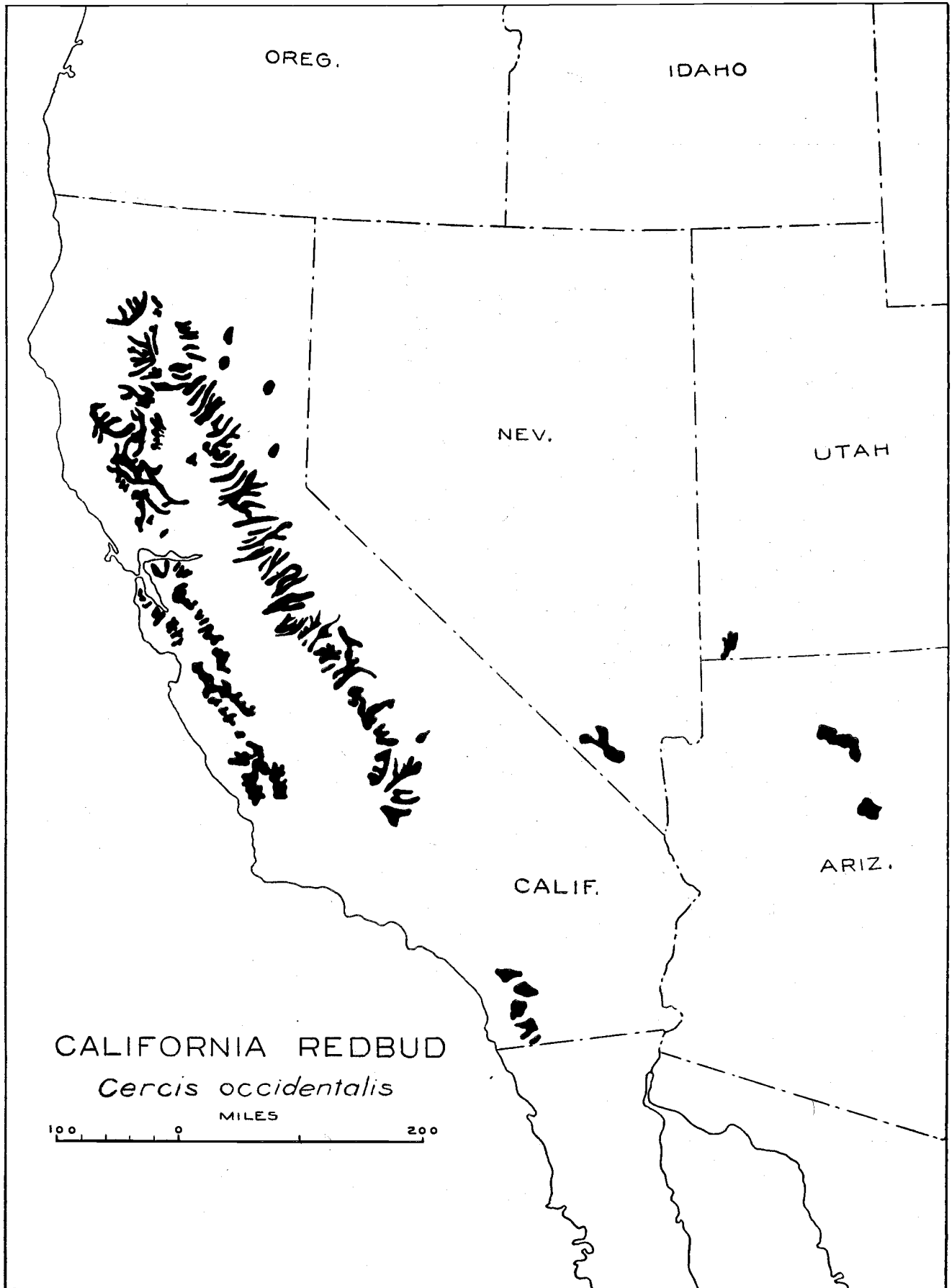
MAP 137

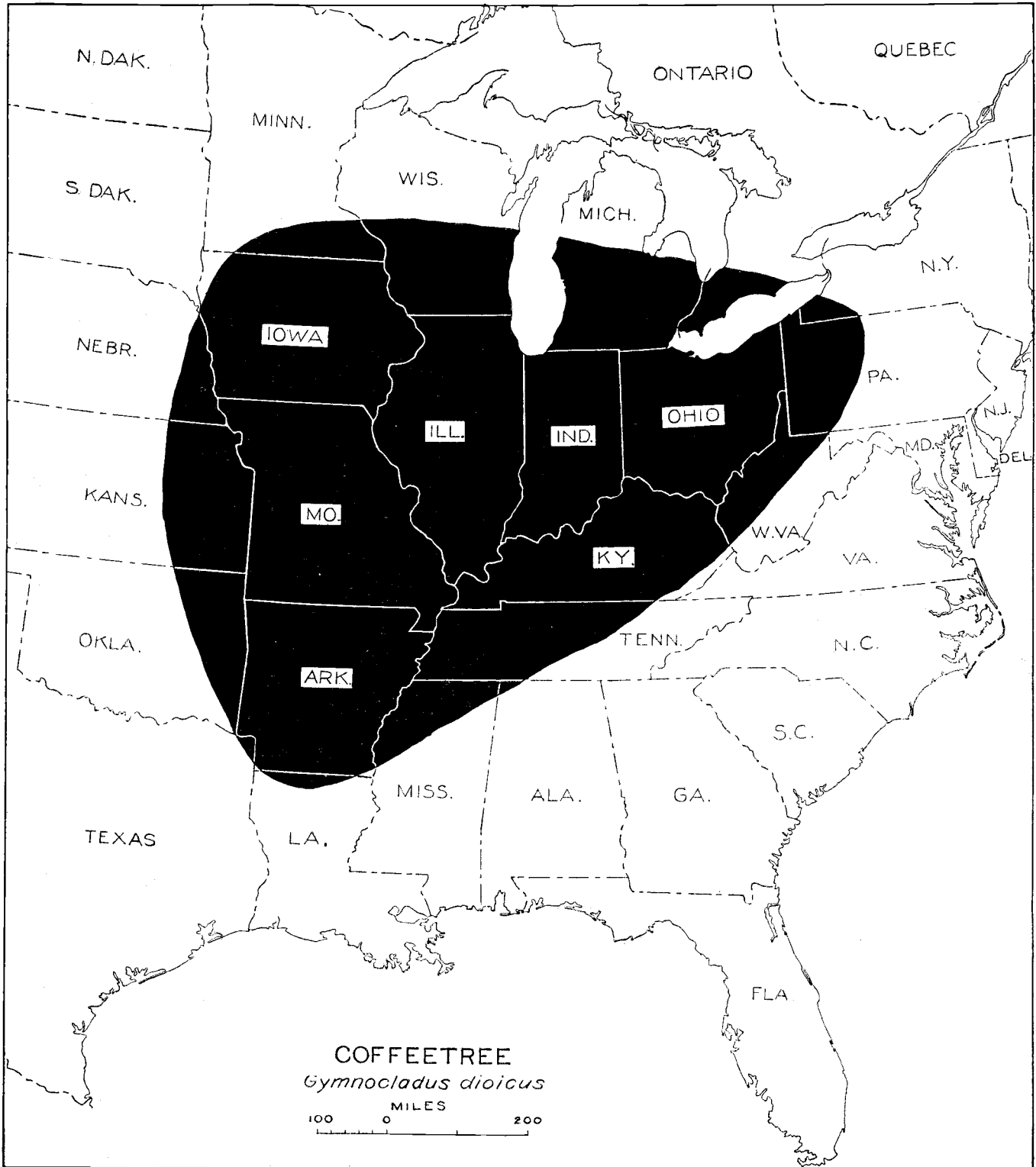
CHOKECHERRY





REDBUD
Cercis canadensis
MILES
100 0 200

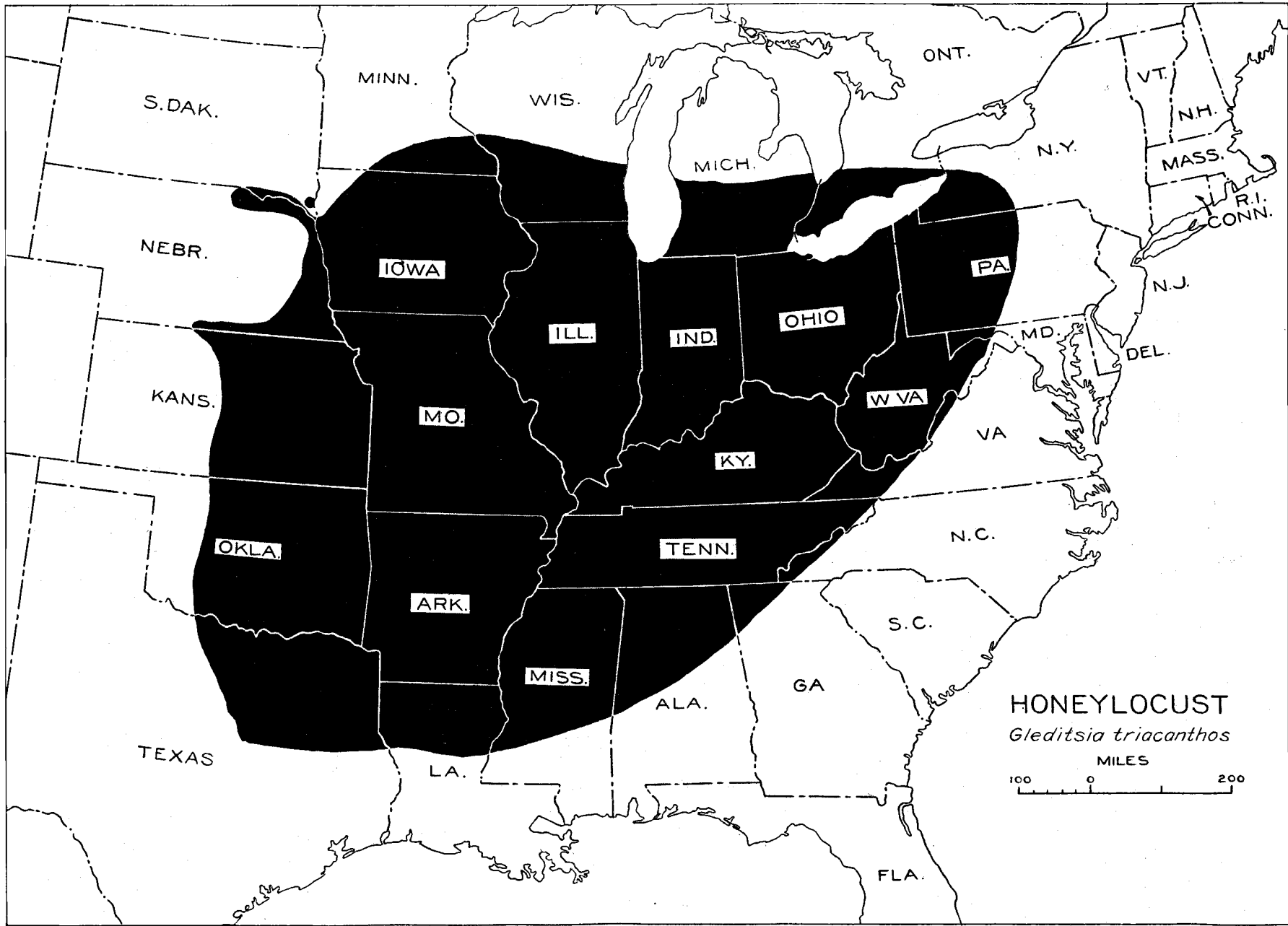




GYMNOCLADUS DIOICUS (LINNAEUS) K. KOCH

MAP 141

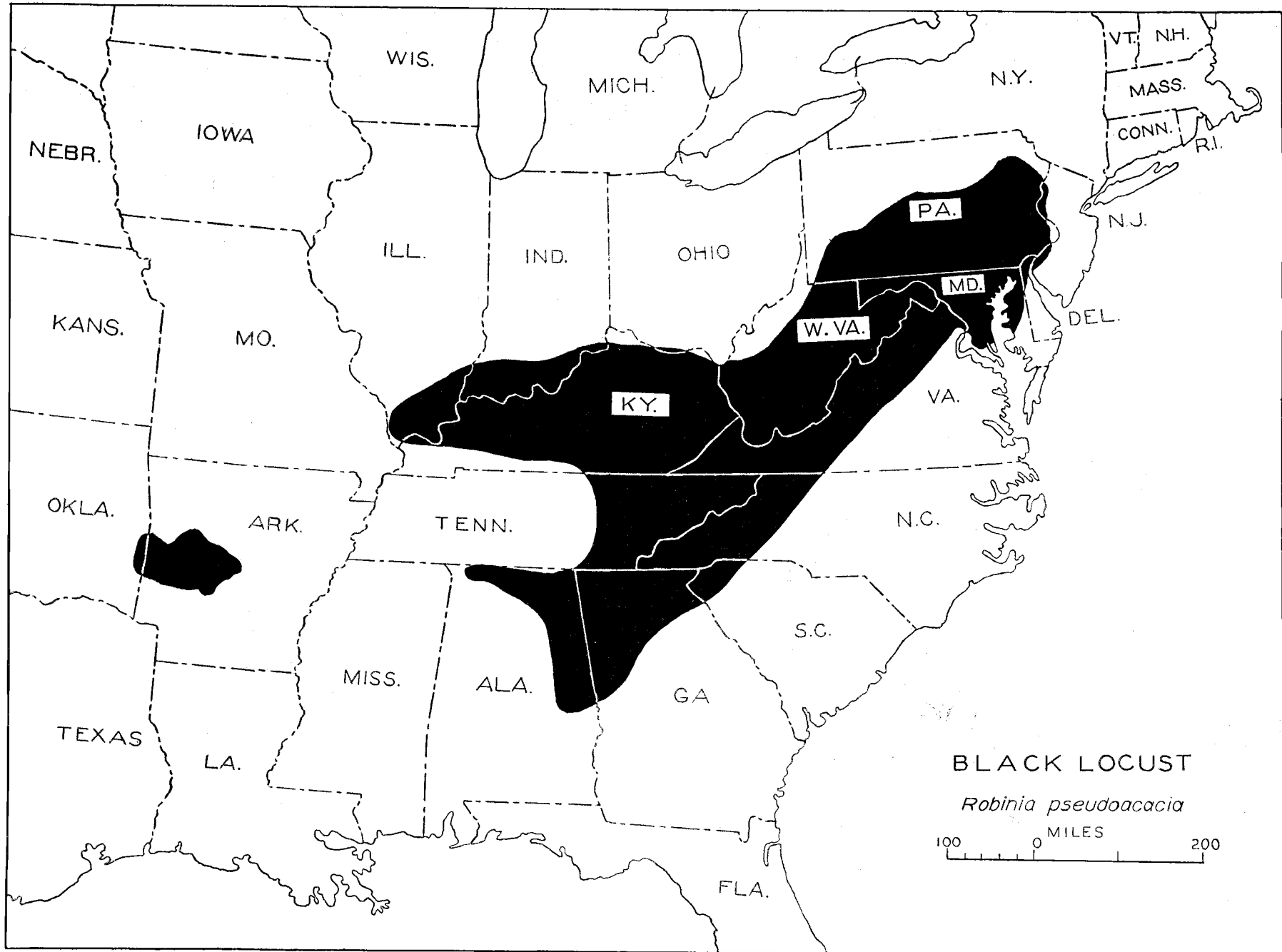
COFFEETREE

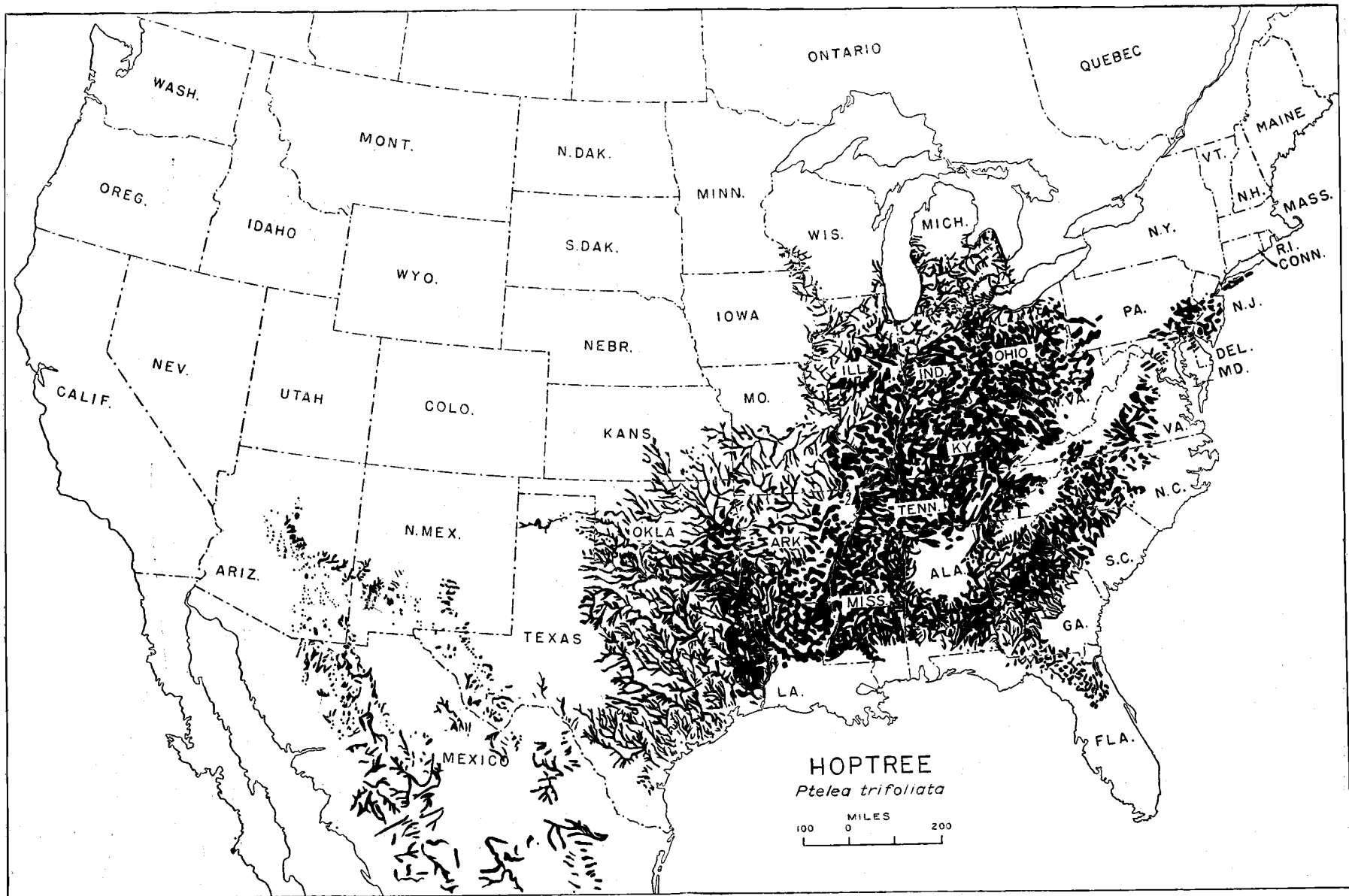


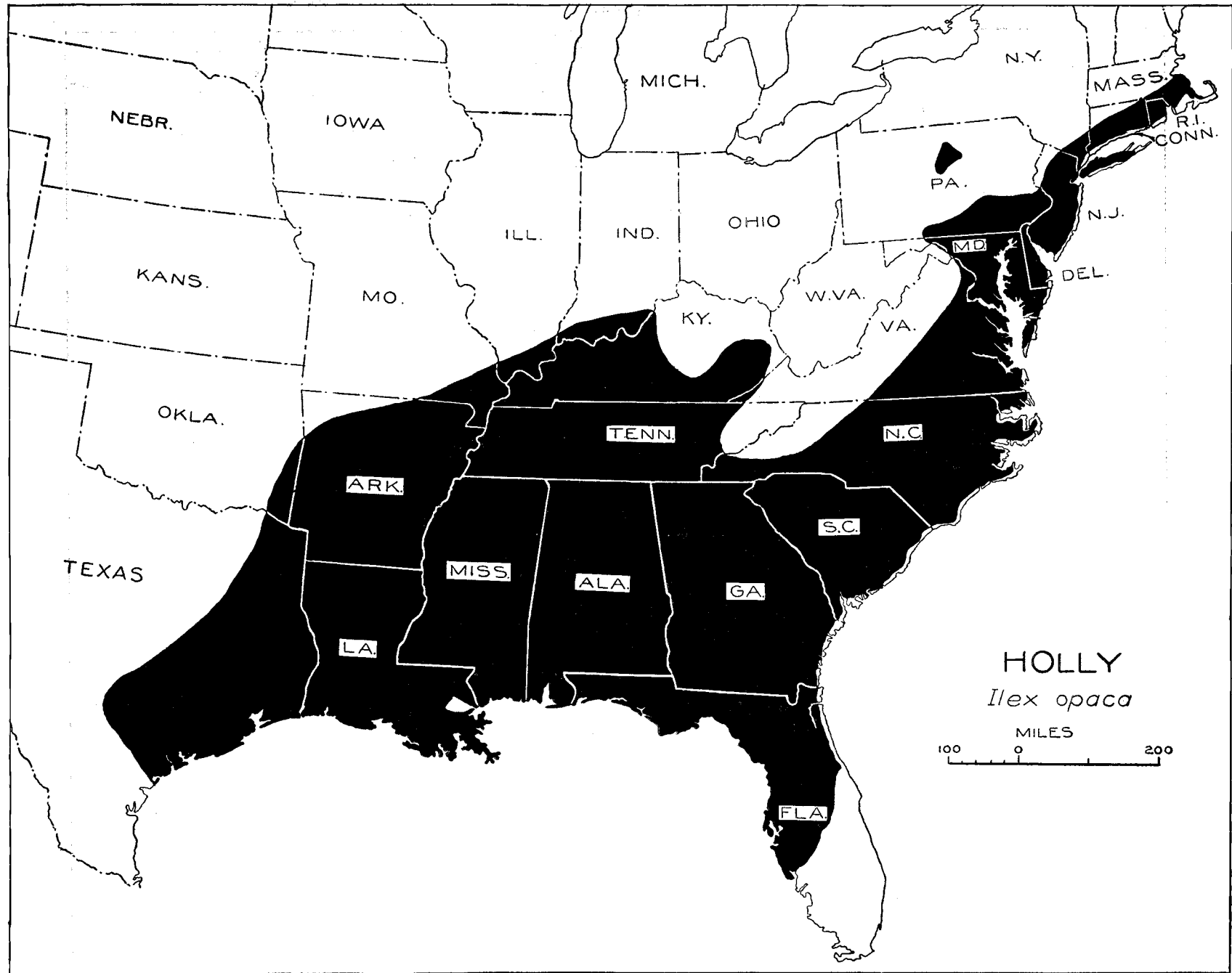
GLEDISIA TRIACANTHOS LINNAEUS

MAP 142

HONEYLOCUST



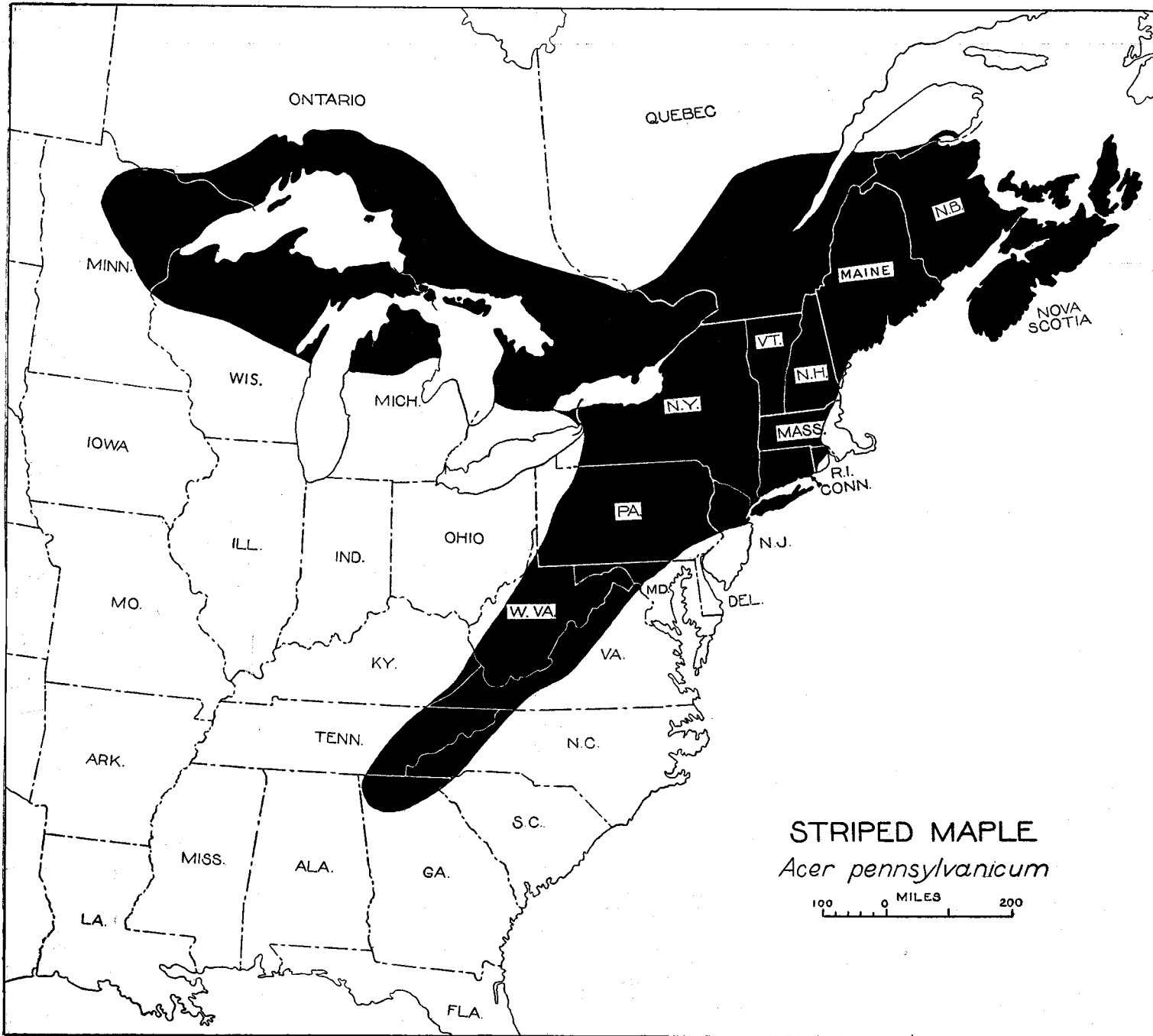


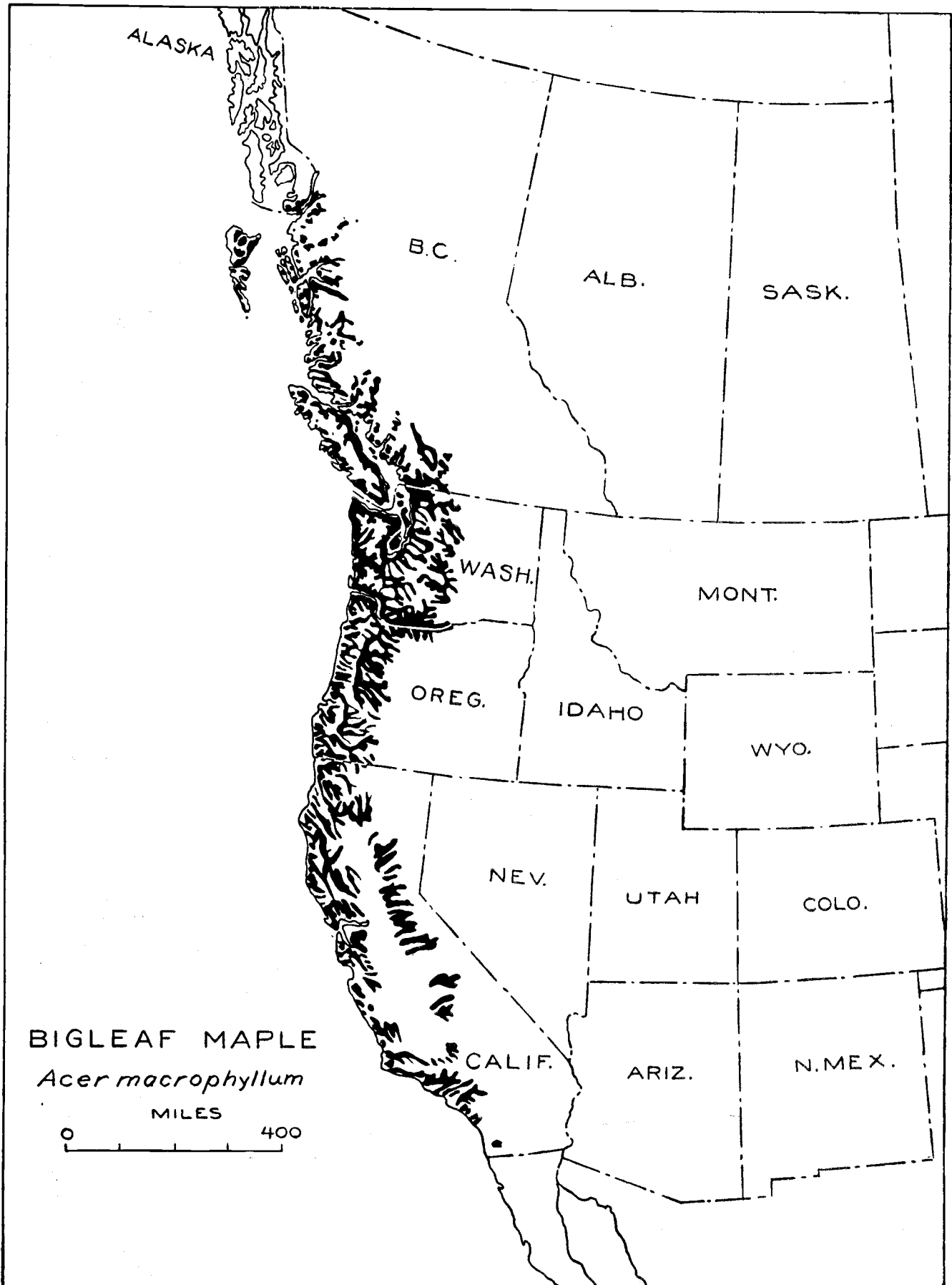


ILEX OPACA AITON

MAP 145

HOLLY



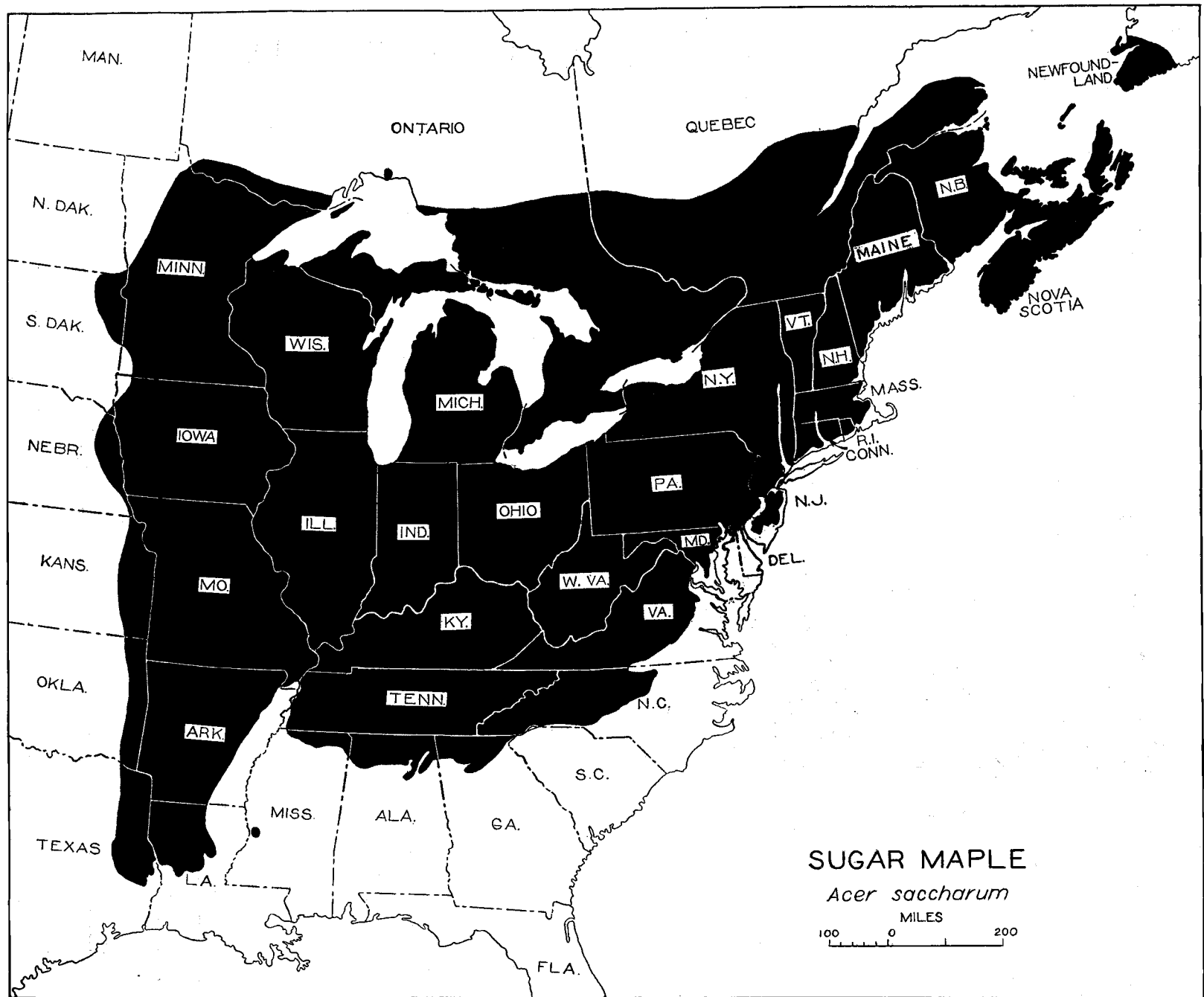


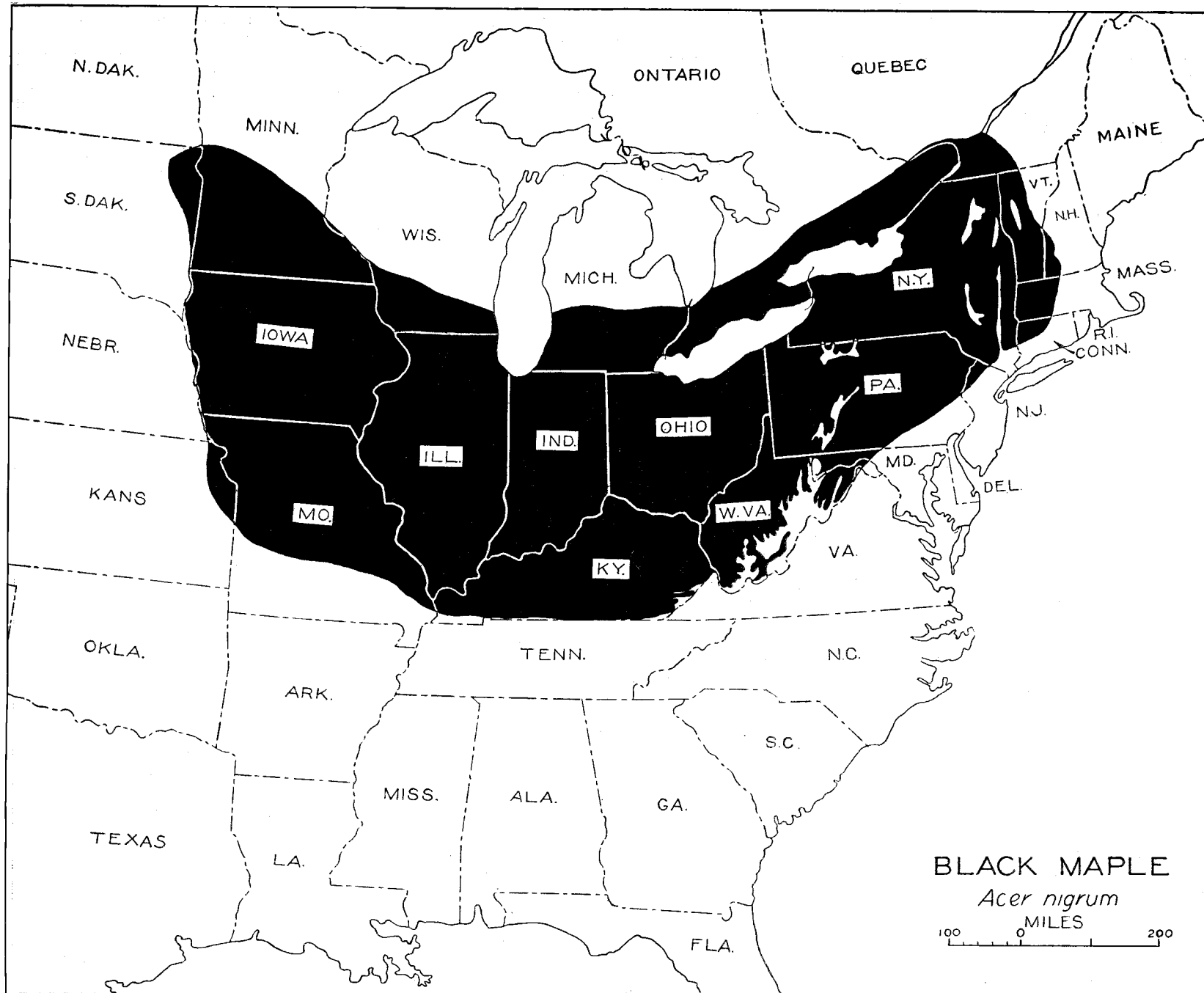
BIGLEAF MAPLE

Acer macrophyllum

MILES

0 400

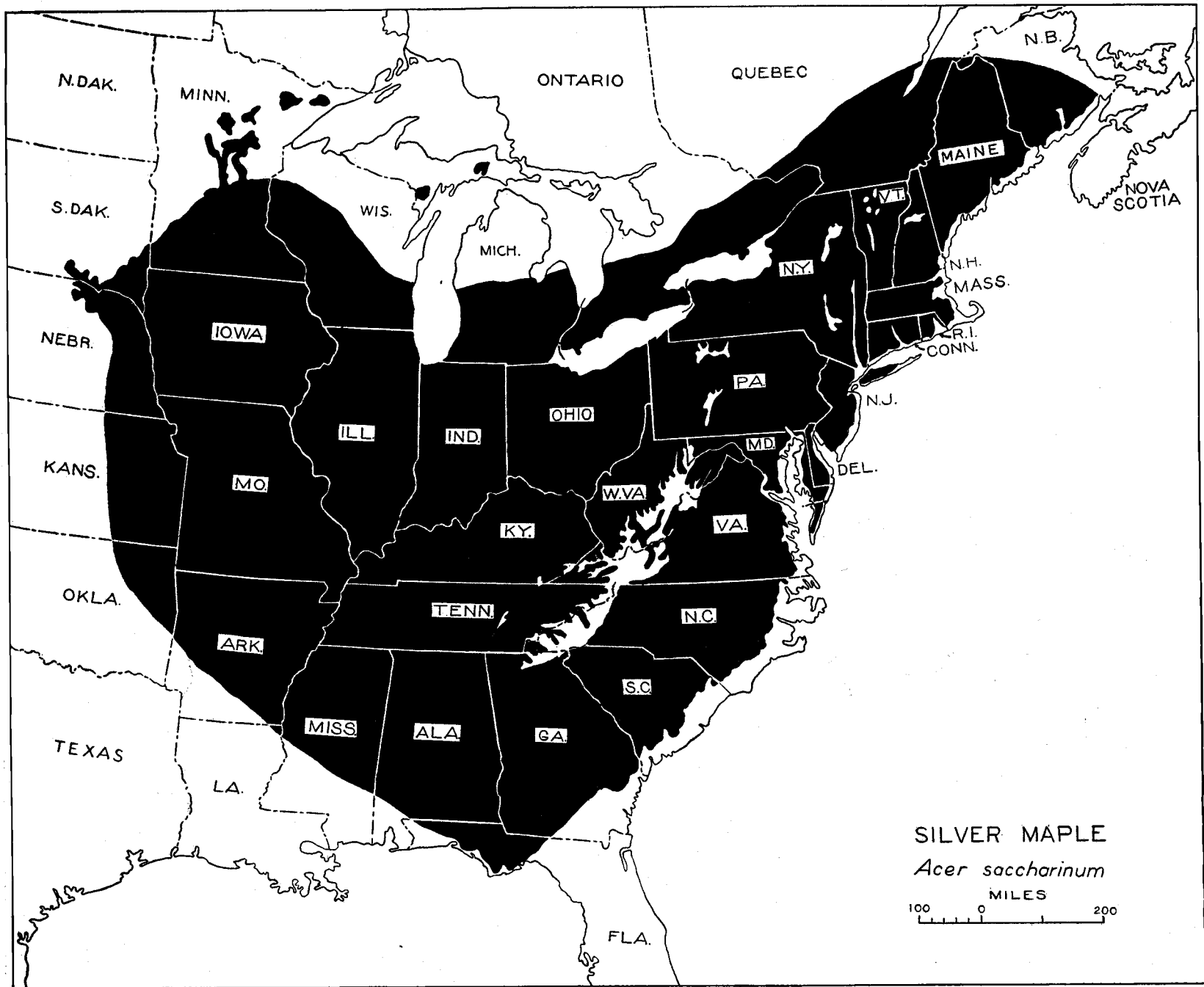




ACER NIGRUM MICHAUX FILIUS

MAP 149

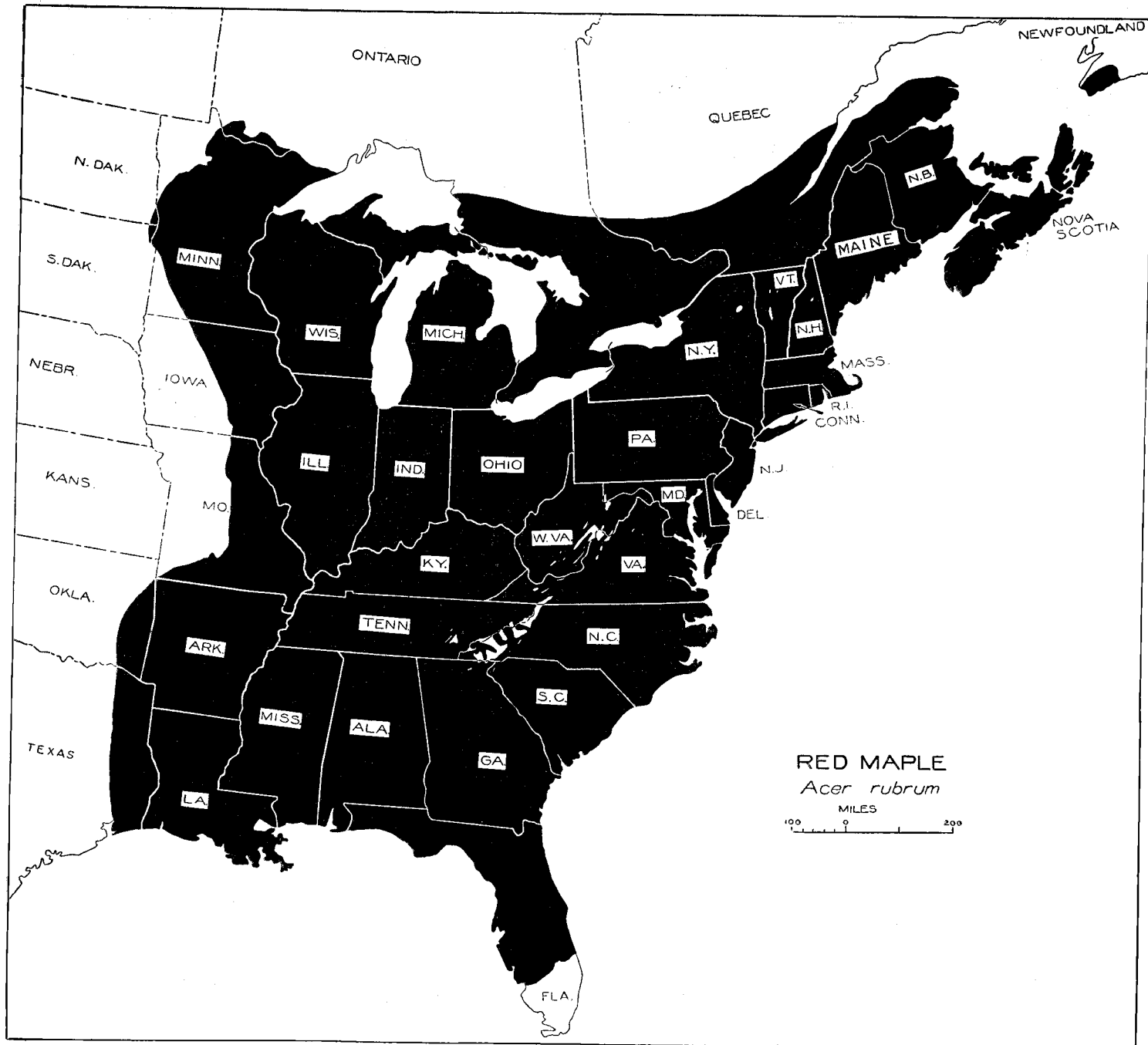
BLACK MAPLE



ACER SACCHARINUM LINNAEUS

MAP 150

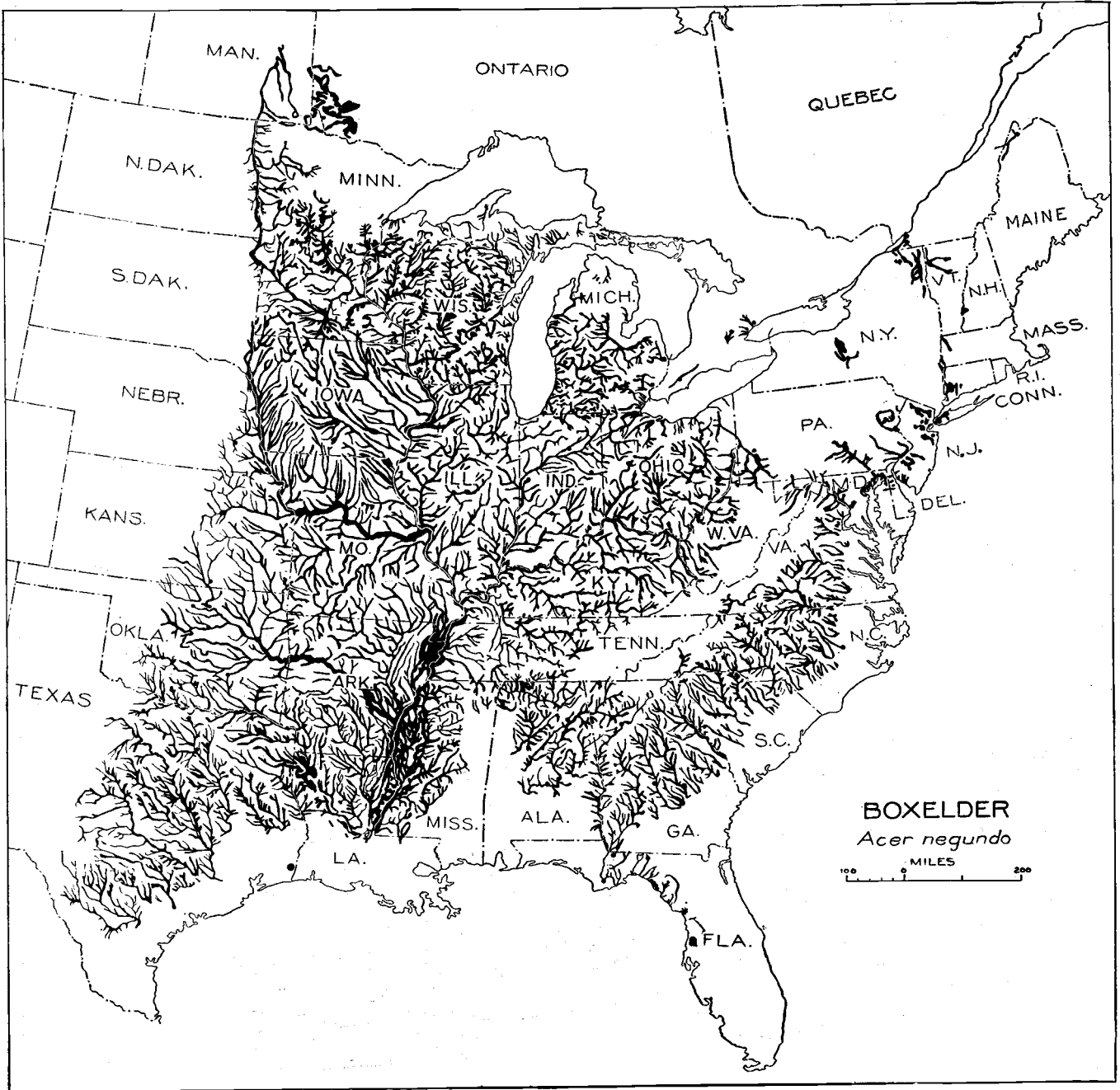
SILVER MAPLE



ACER RUBRUM LINNAEUS

MAP 151

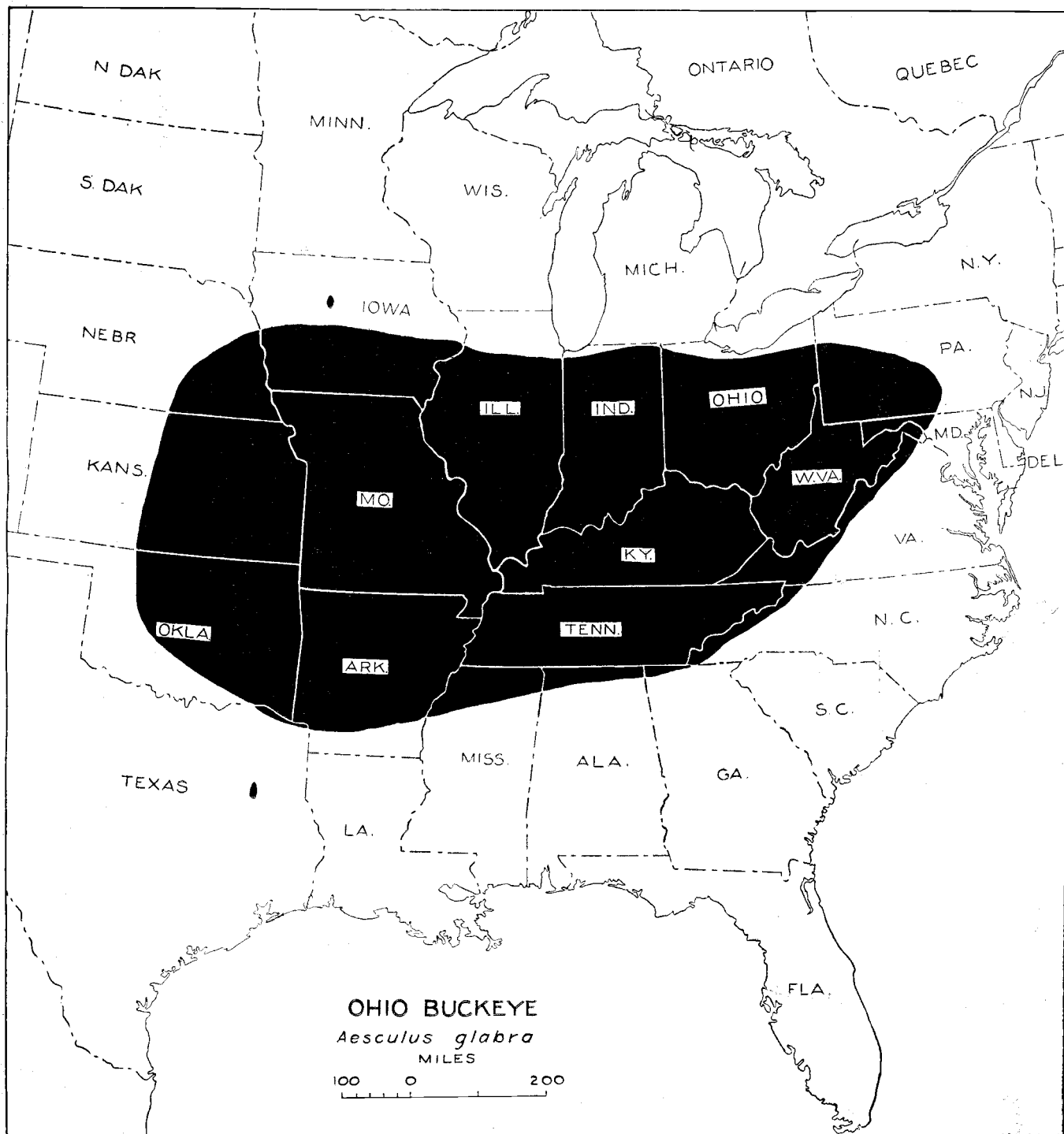
RED MAPLE



ACER NEGUNDO LINNAEUS

MAP 152

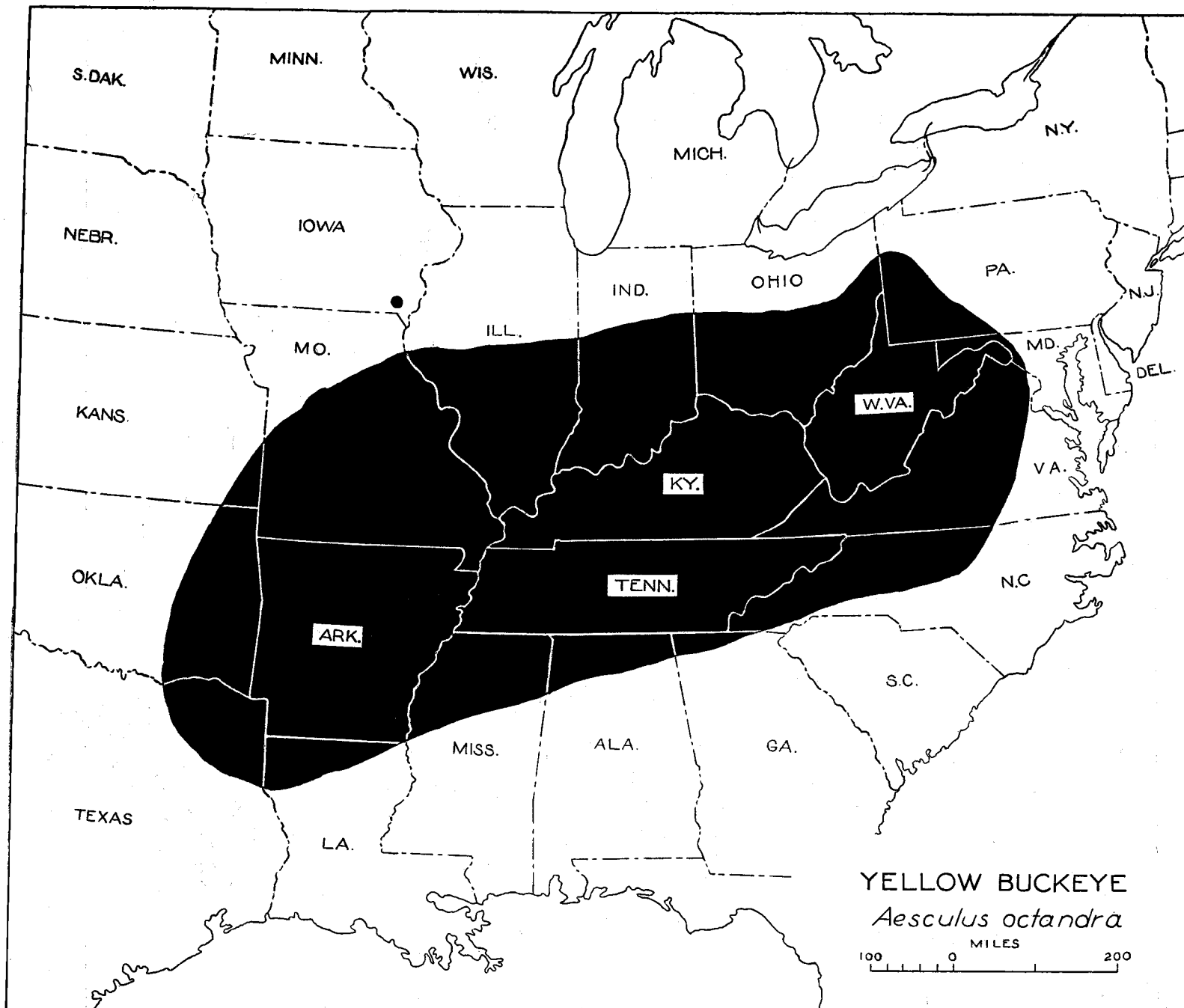
BOXELDER

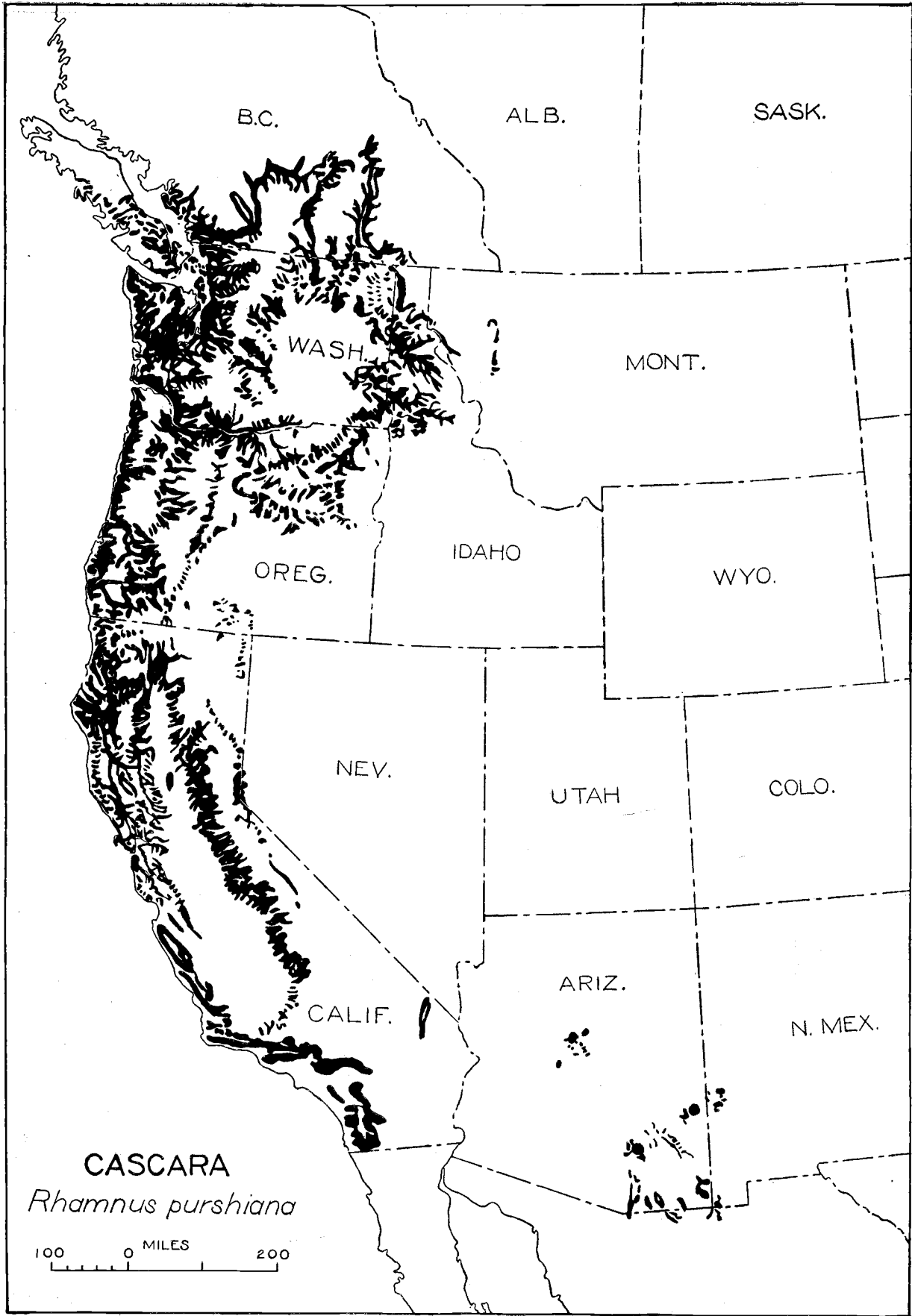


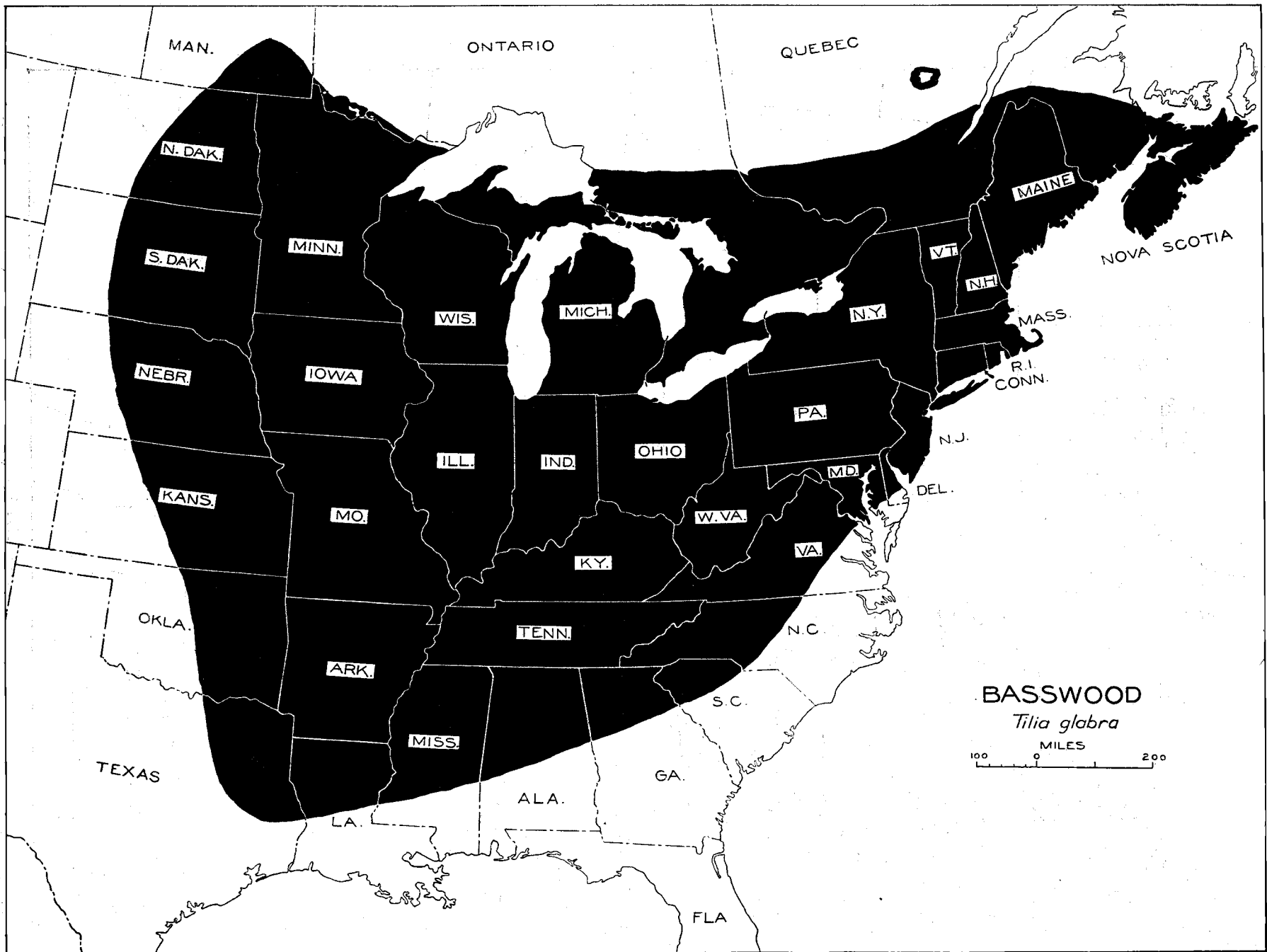
AESCULUS GLABRA WILLDENOW

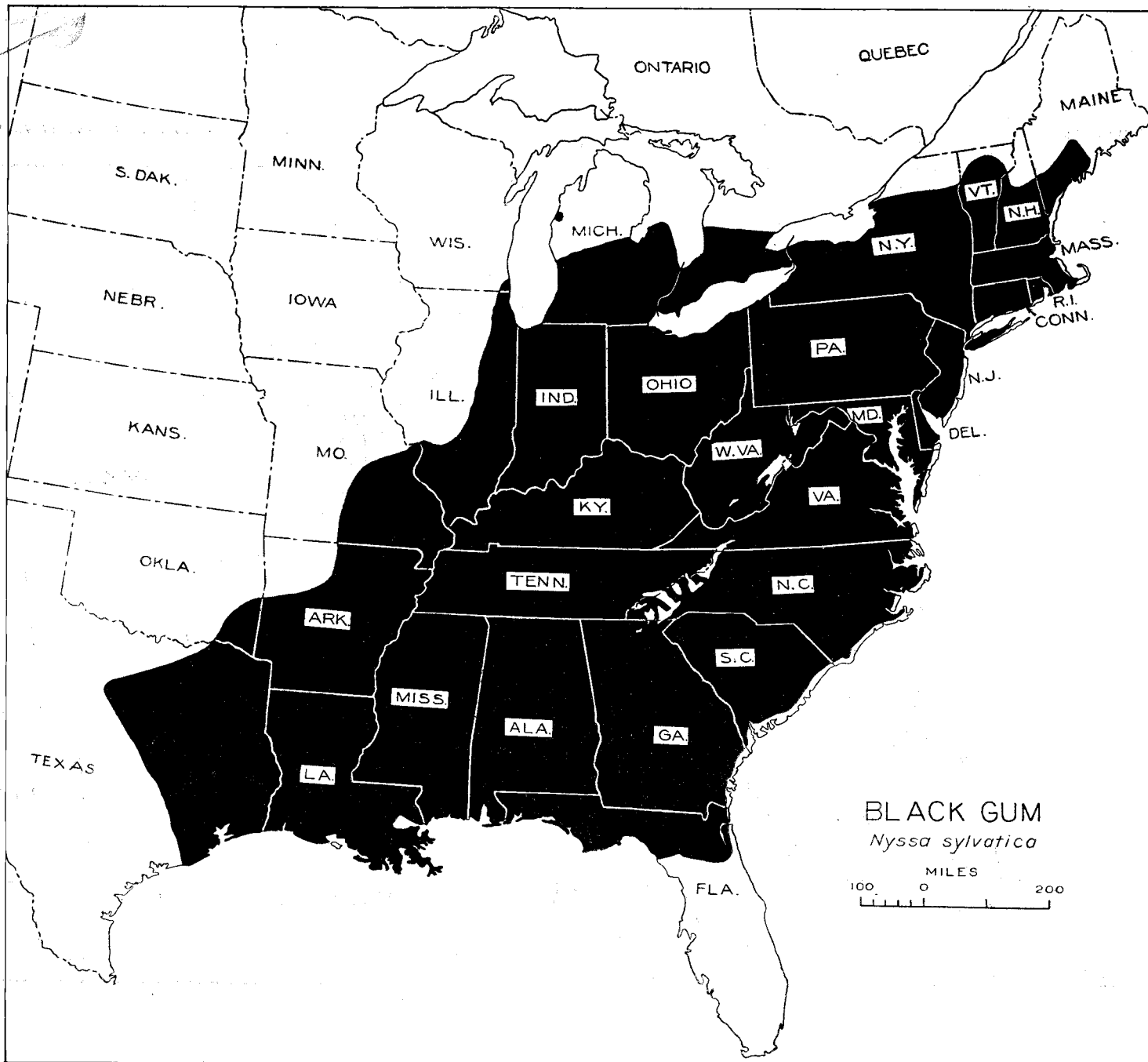
MAP 153

OHIO BUCKEYE





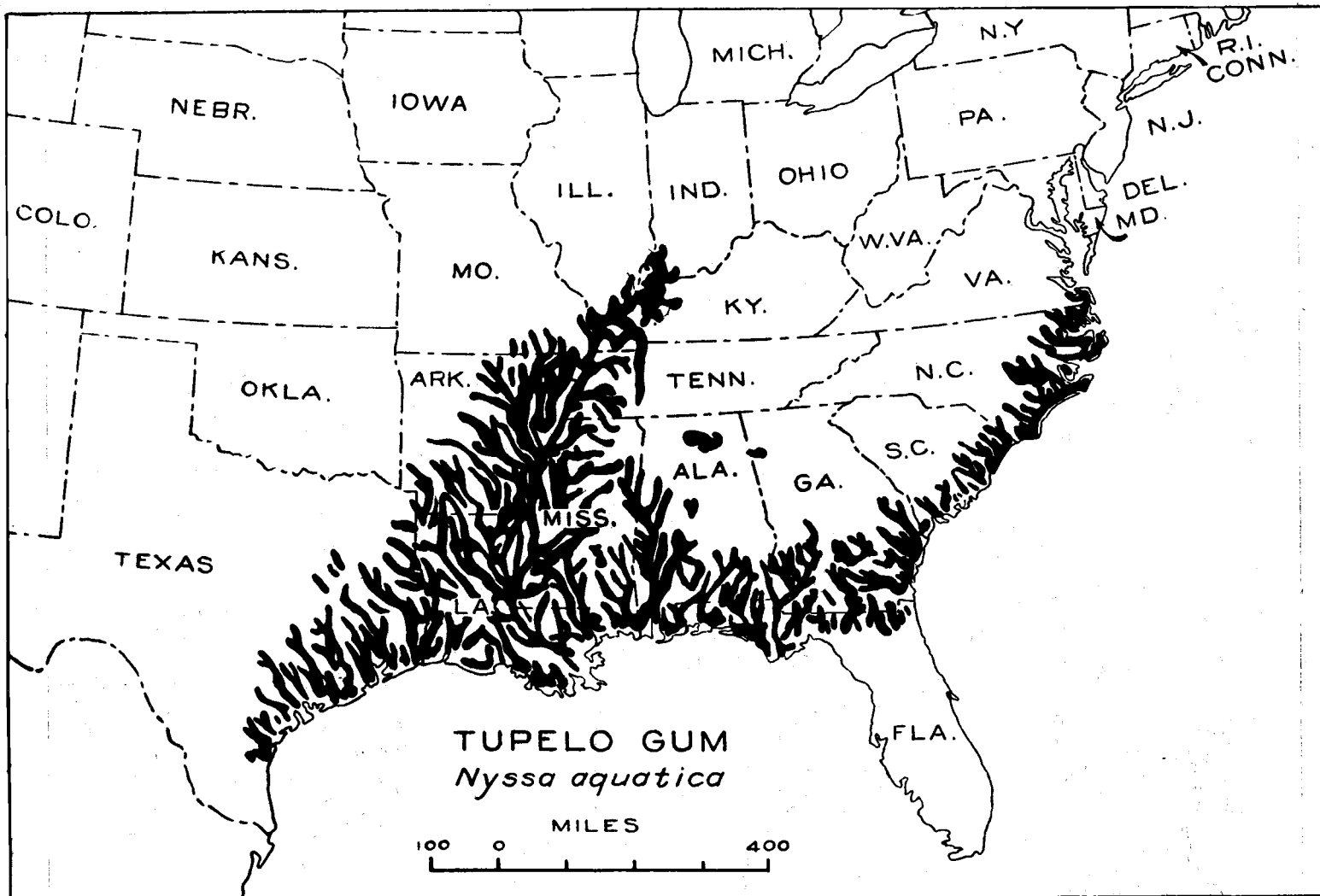




NYSSA SYLVATICA MARSHALL

MAP 157

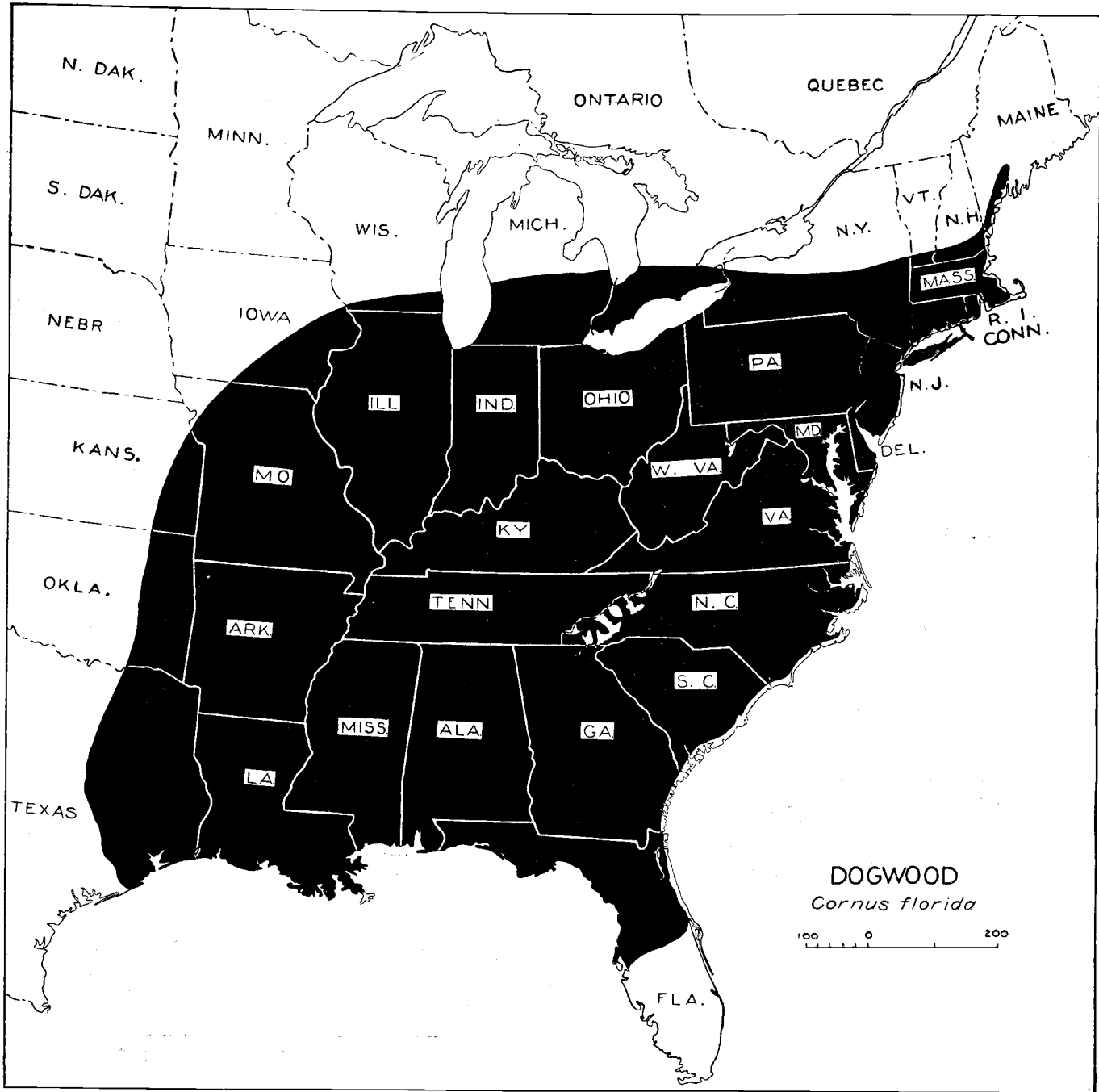
BLACK GUM



NYSSA AQUATICA LINNAEUS

MAP 158

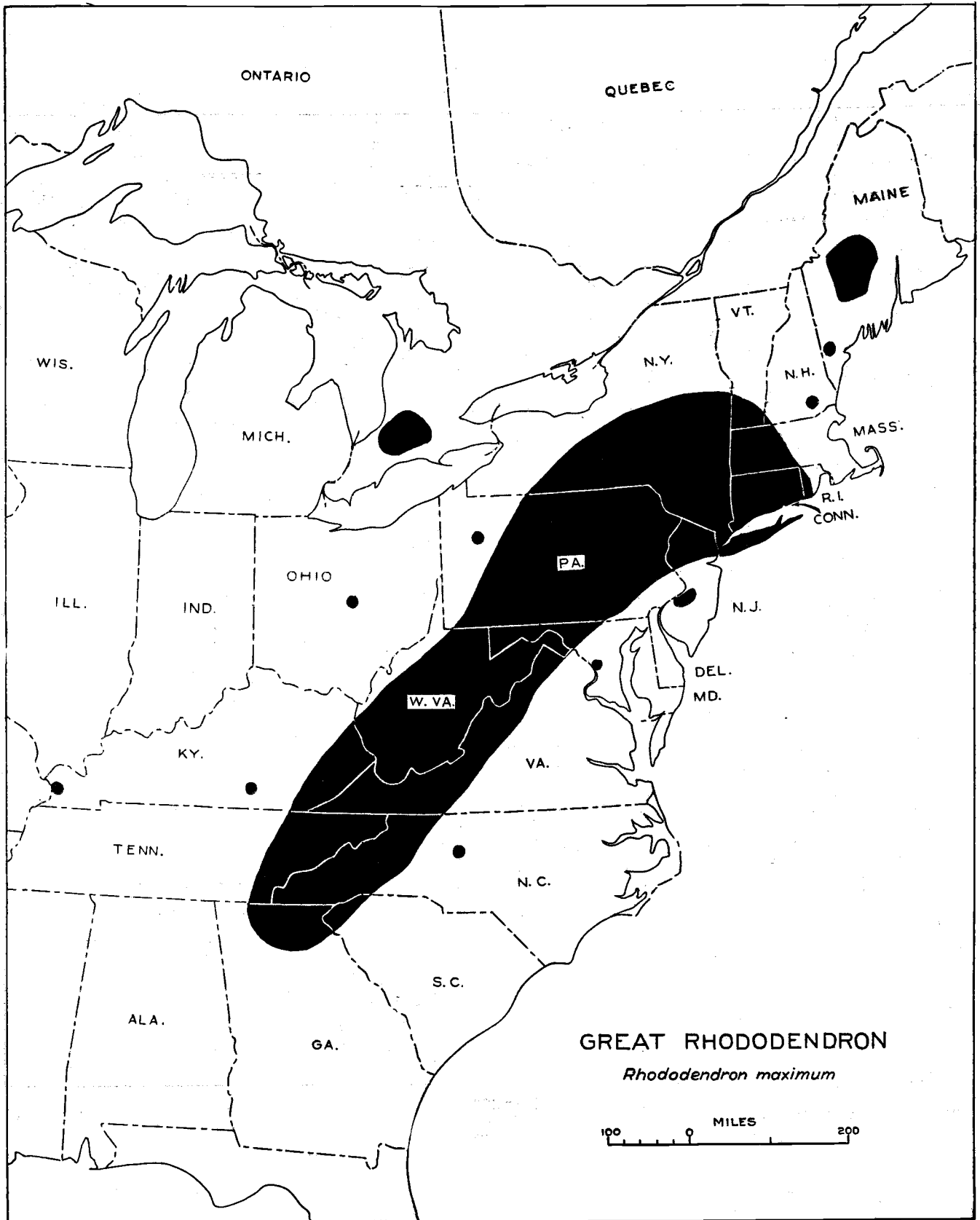
TUPELO GUM

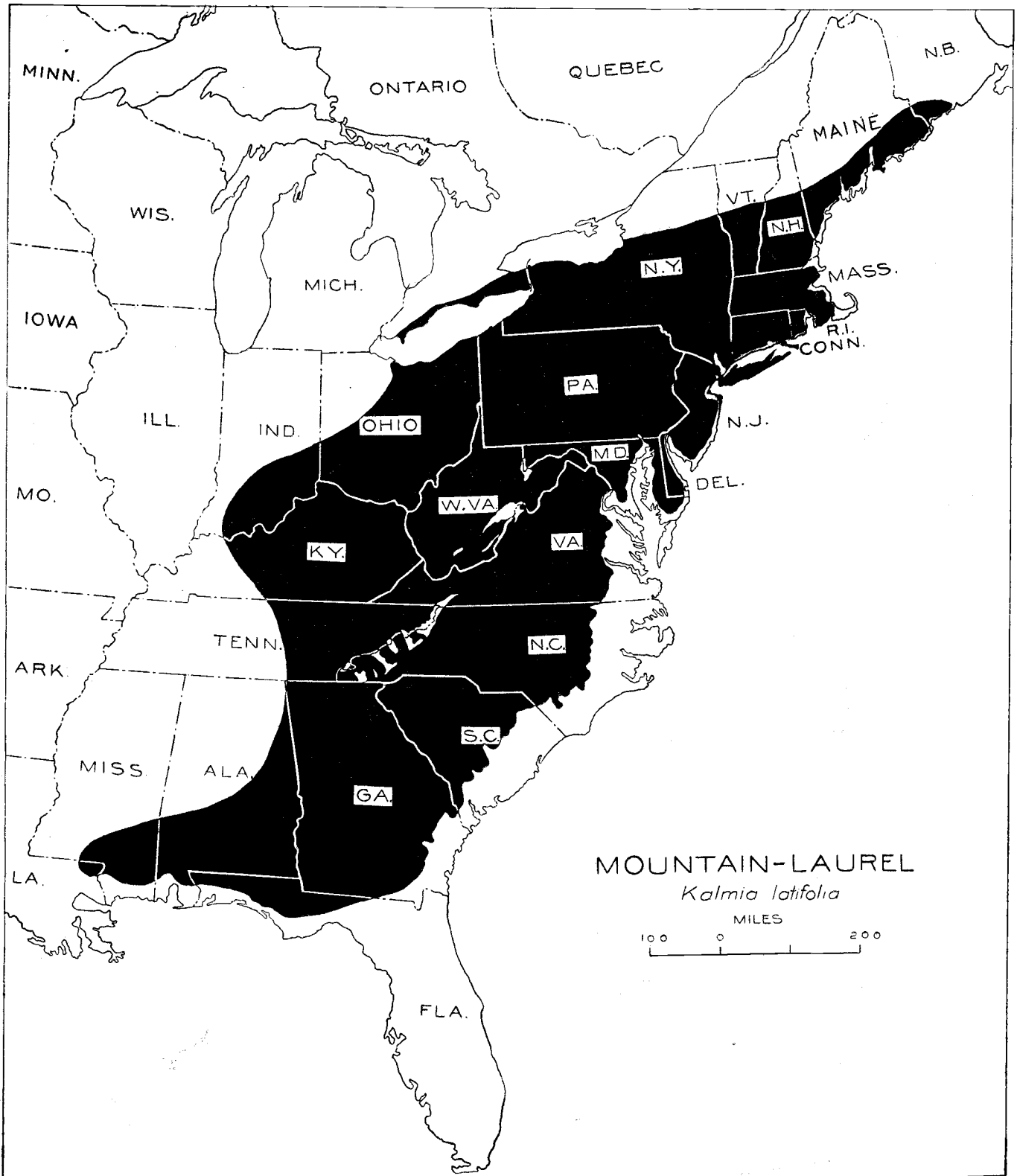


CORNUS FLORIDA LINNAEUS

MAP 159

DOGWOOD

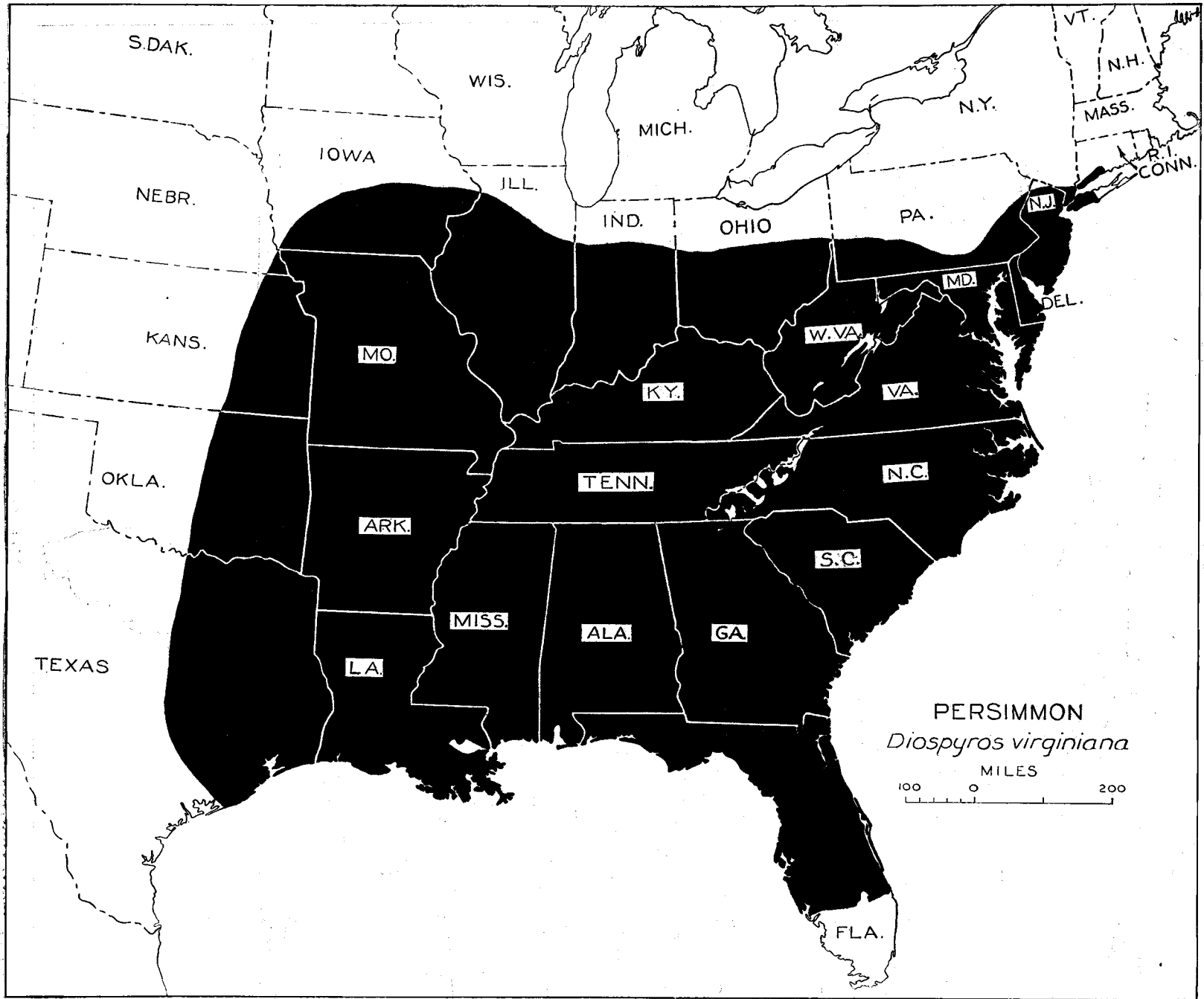


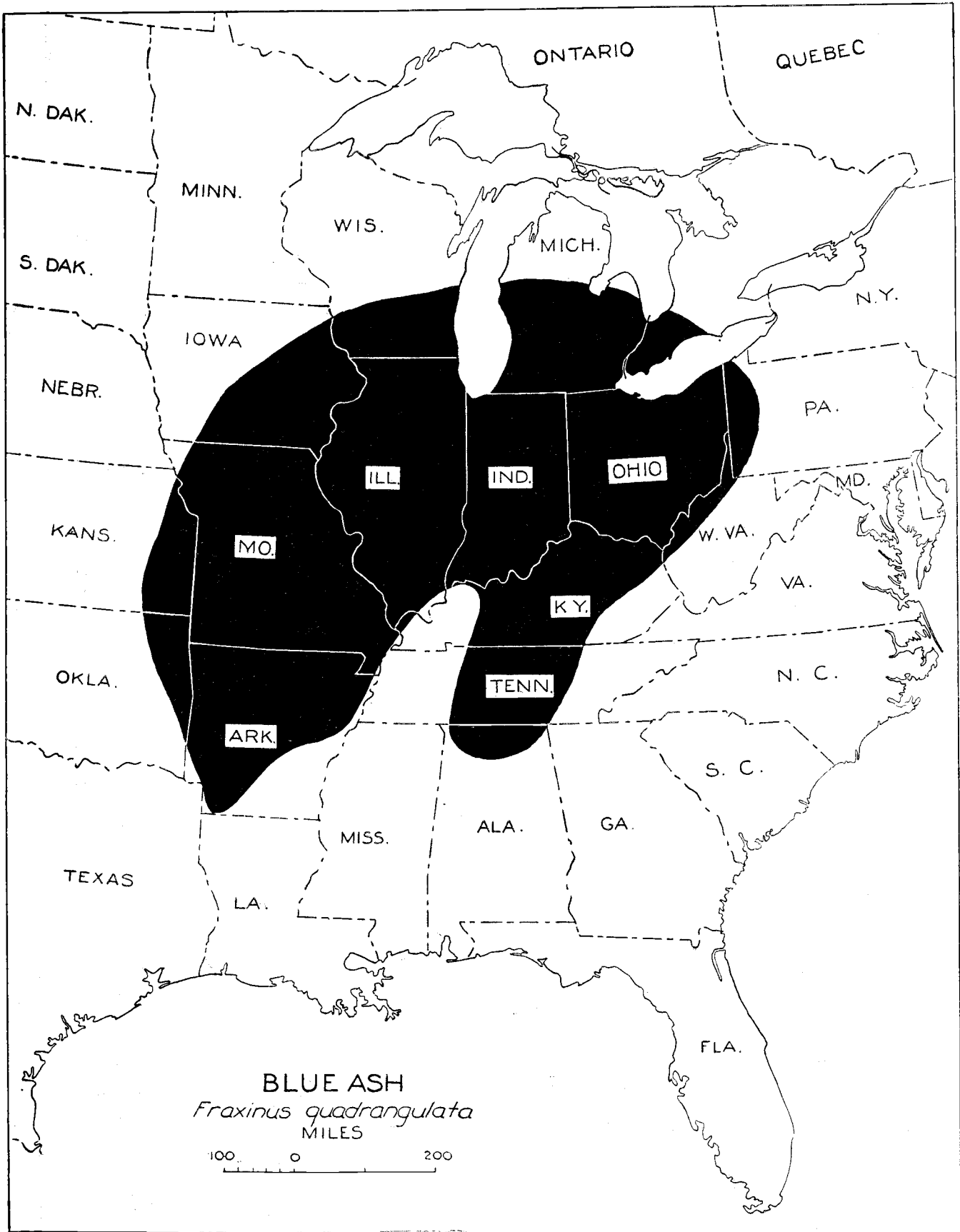


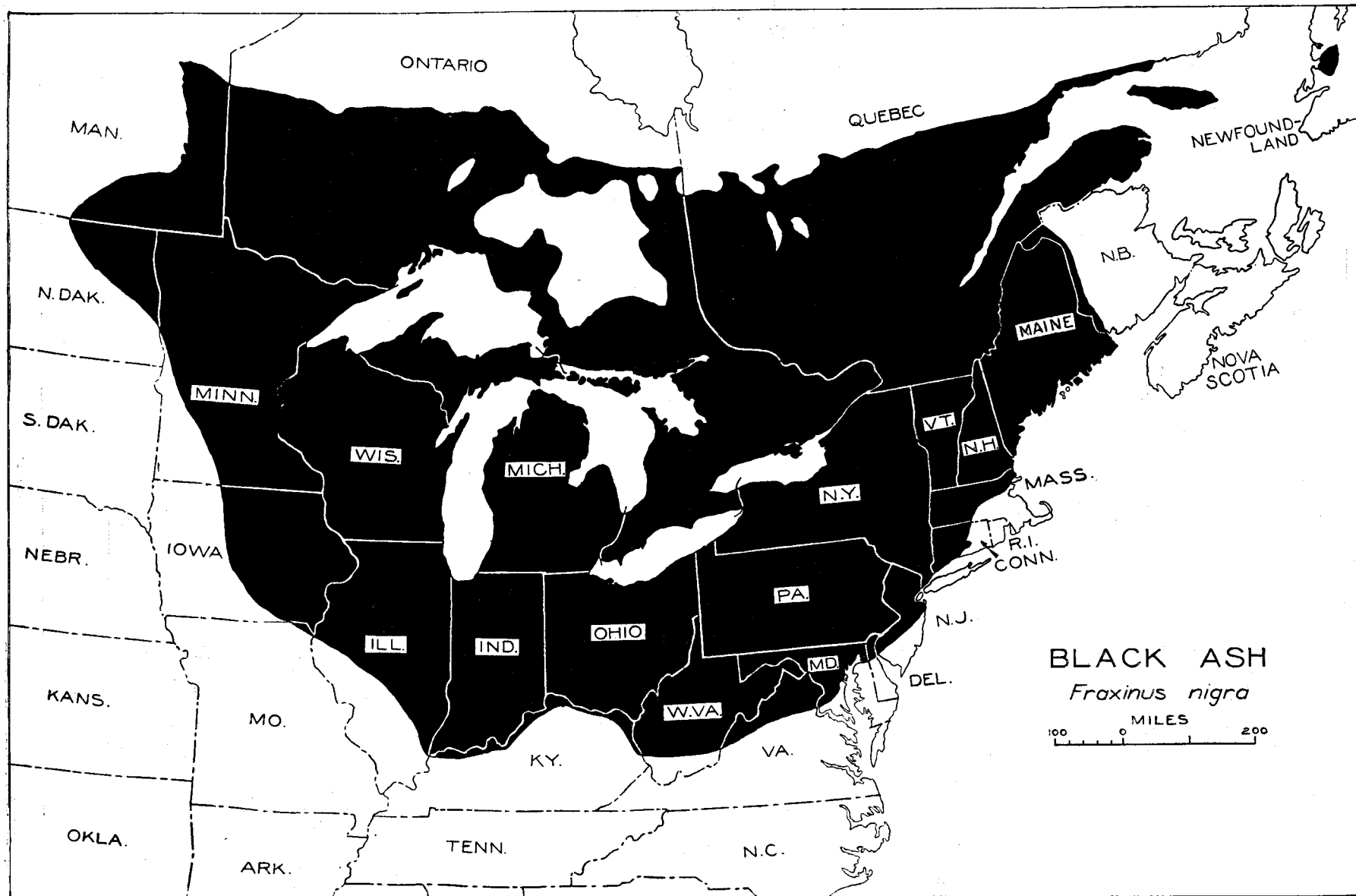
KALMIA LATIFOLIA LINNAEUS

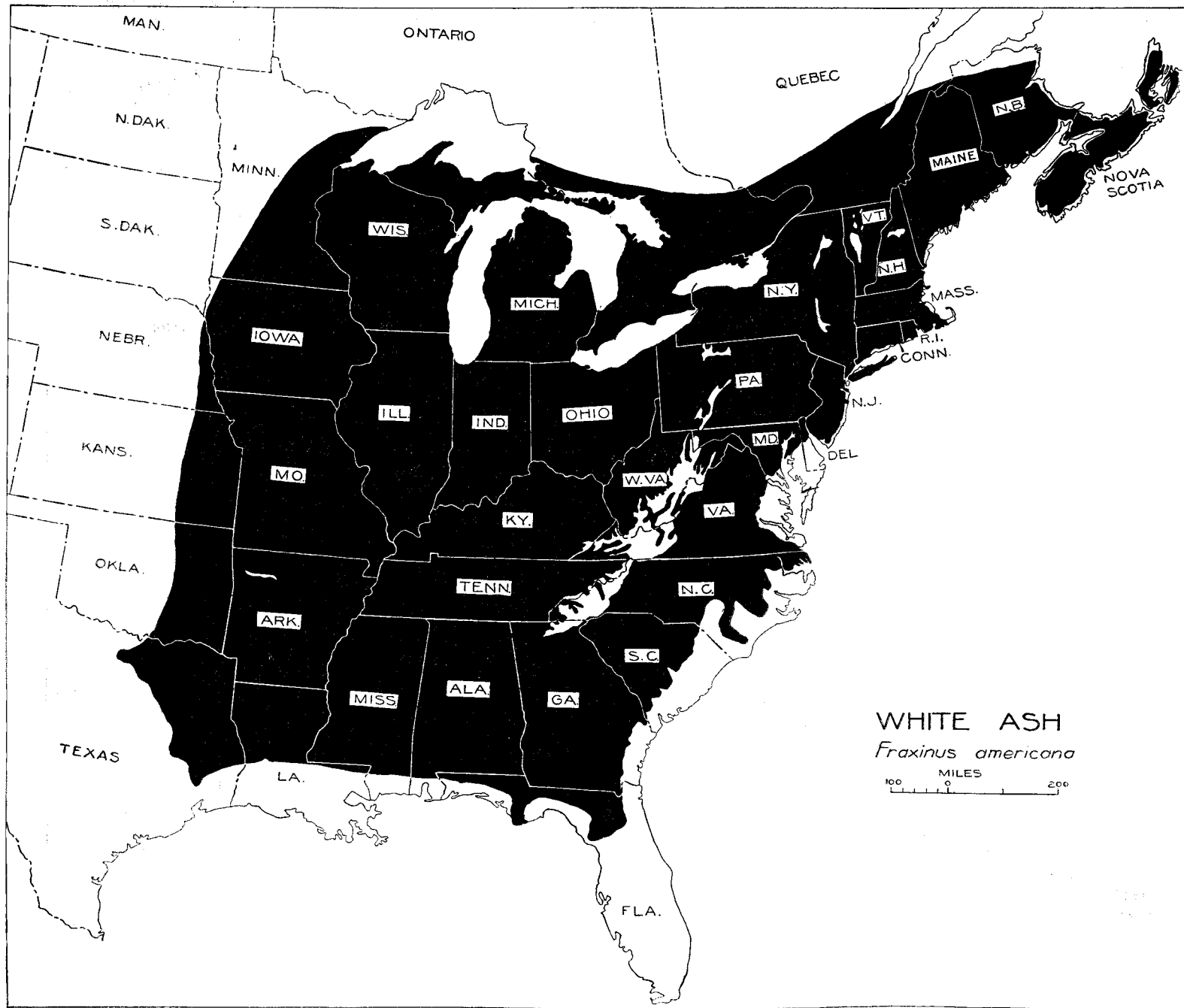
MAP 161

MOUNTAIN-LAUREL





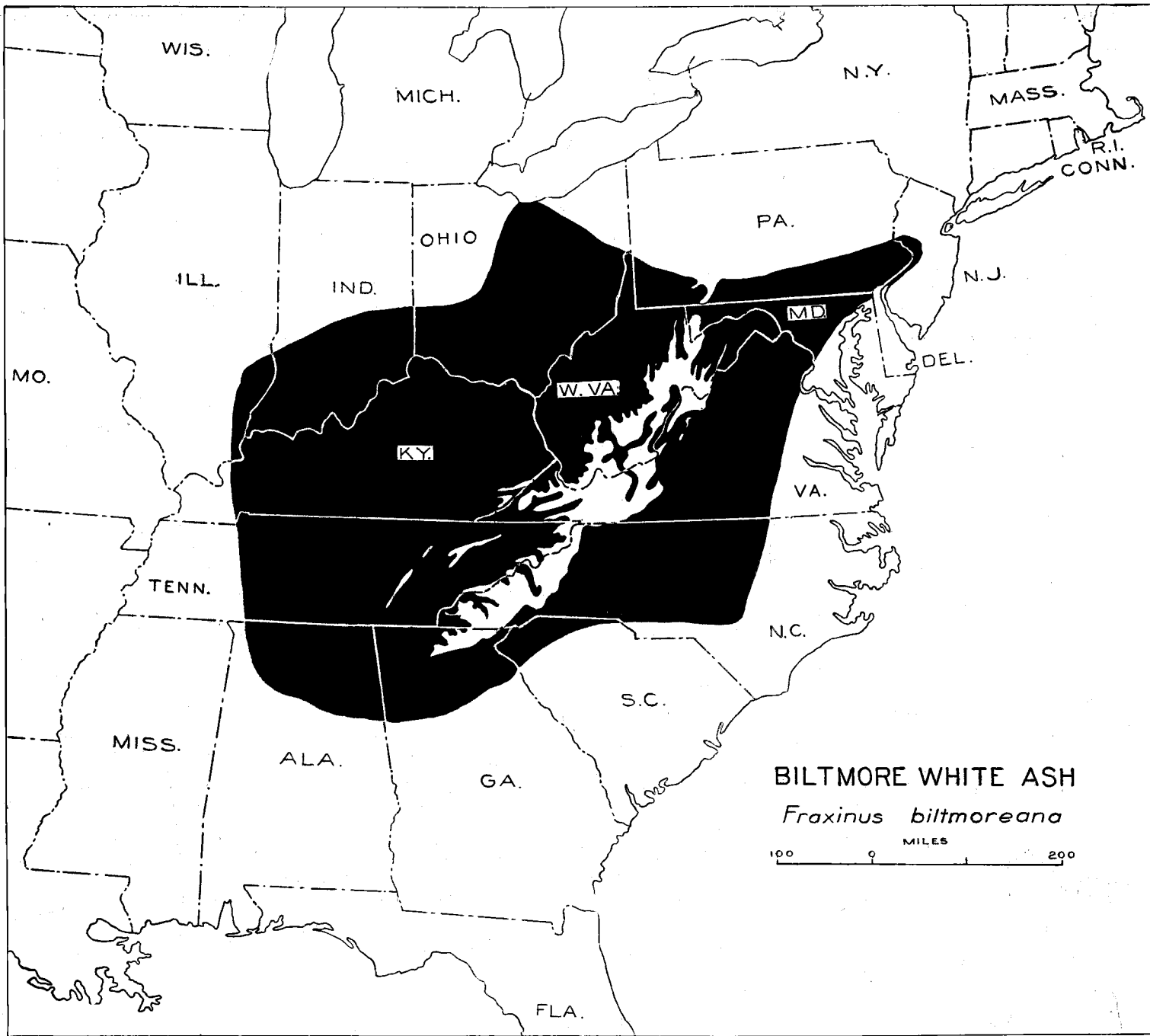


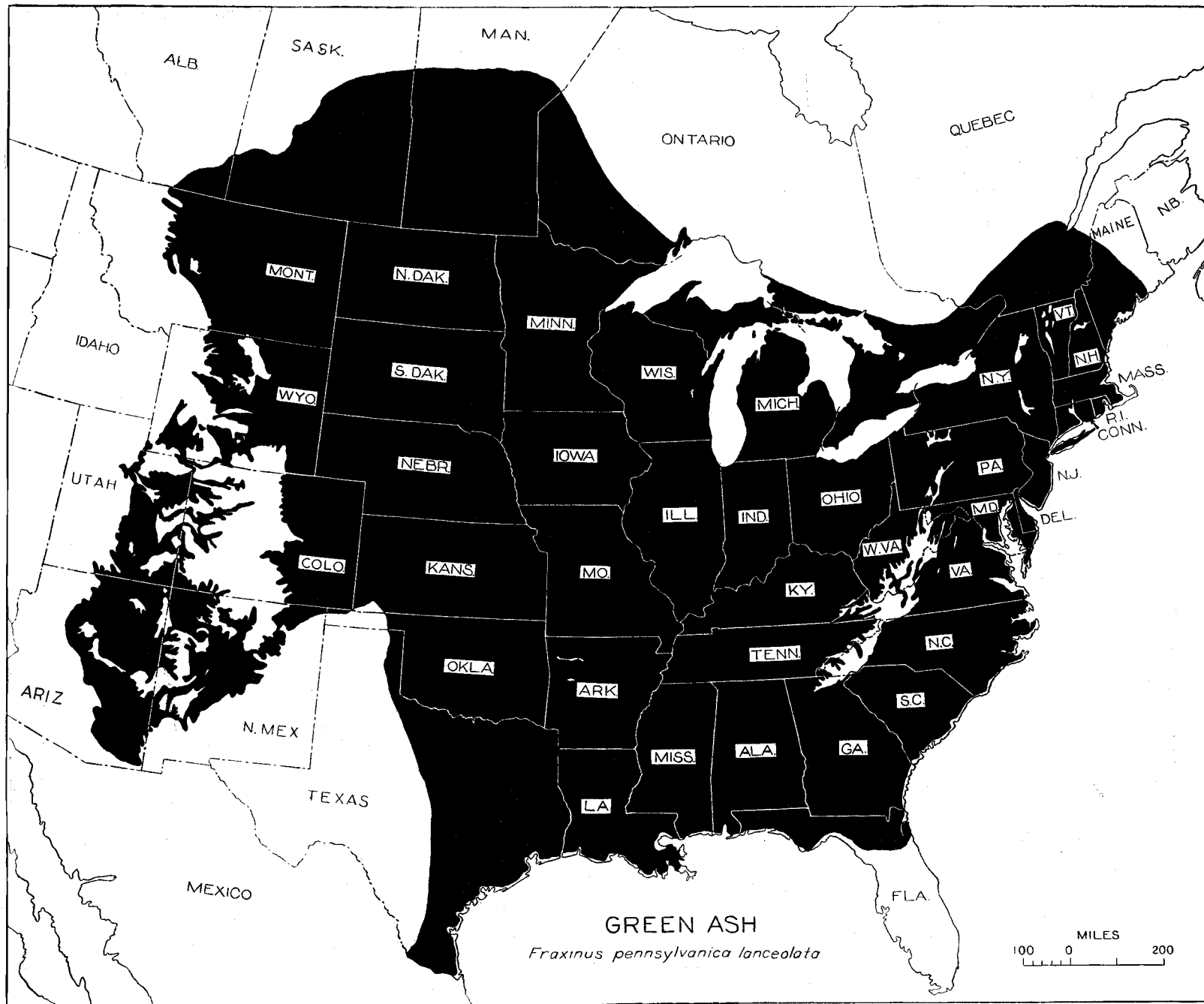


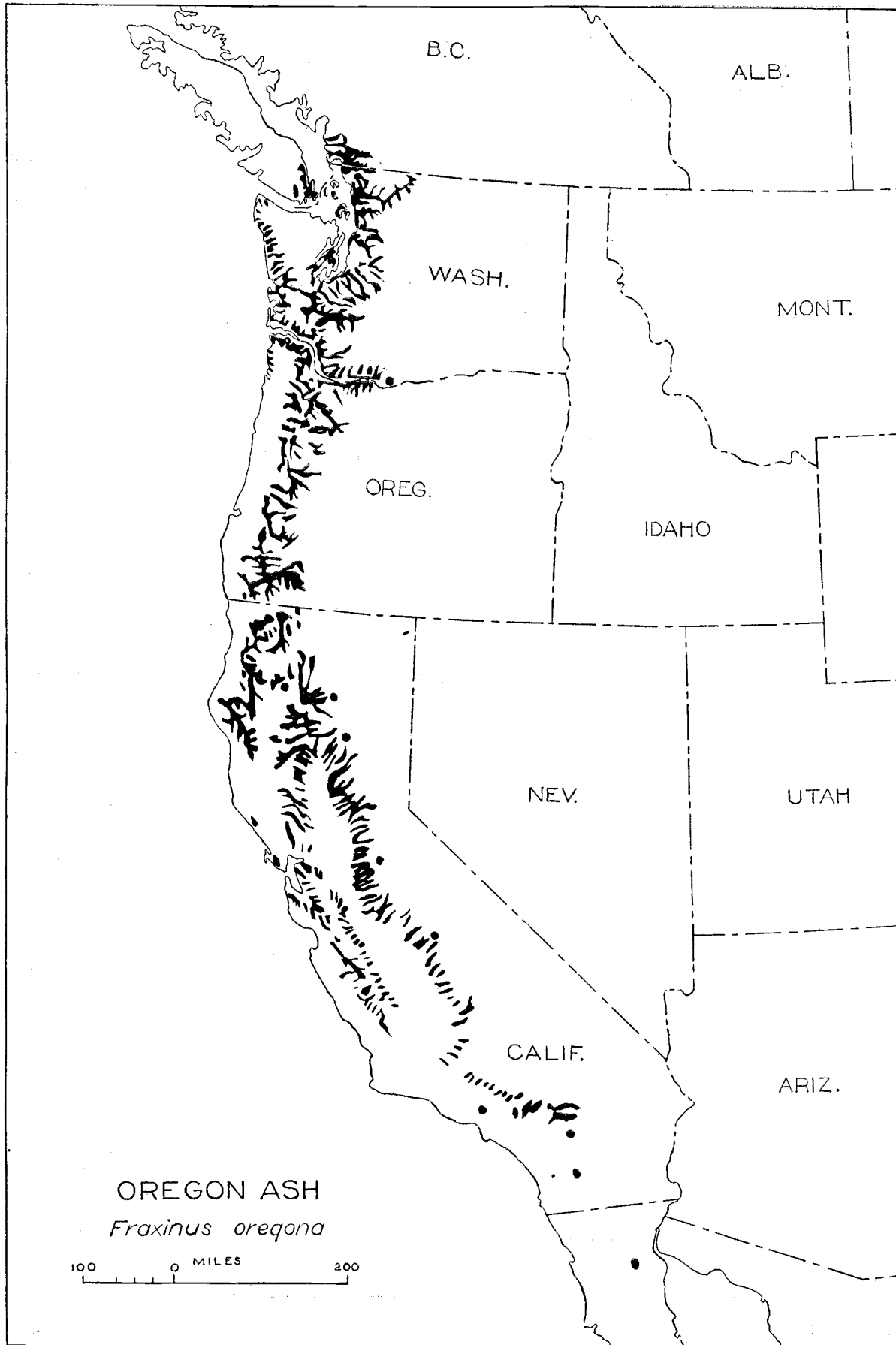
FRAXINUS AMERICANA LINNAEUS

MAP 165

WHITE ASH



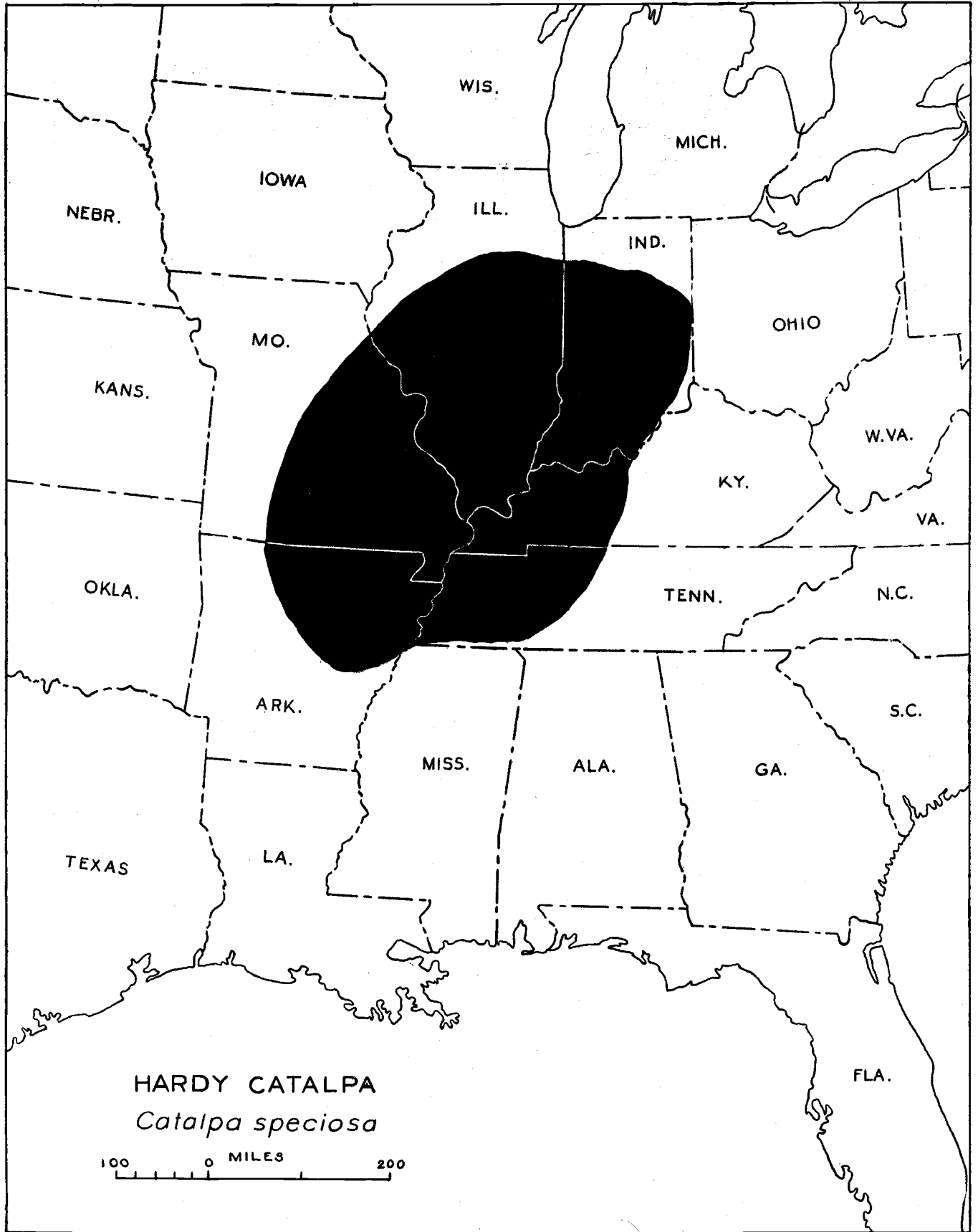




FRAXINUS OREGONA NUTTALL

MAP 169

OREGON ASH



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