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CONTENTS

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County Distribution of Ferns and Fern Allies in Rhode Island

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There has been a reawakening of interest recently in the compilation of floras of vascular plants. Maine (Ogden, 1948) and New Hampshire (Scammon, 1947) have published bulletins on their fern flora. The most recent state list for Massachusetts is that by Churchill, et al. (1928, 1933). The Pteridophyta are included in *The Flora of Vermont* (Dole, 1937) and in *Catalogue of the Flowering Plants and Ferns of Connecticut Growing without Cultivation* (Graves, et al., 1910; Harger, 1930). The most recent publication concerning the ferns of Rhode Island (Wright and Crandall, 1941) is an unannotated list. It excluded the fern allies and gave no information on county distribution. In this paper the list of ferns and fern allies has been brought up-to-date and county records have been compiled from existing herbarium records and from my field collections.

Specimens of the ferns and fern allies noted in this paper are deposited in one of the following herbaria: University of Rhode Island, University of Connecticut, Gray Herbarium, Brown University, Reed Herbarium in Baltimore, and many of the specimens collected by me are in the herbarium at Randolph-Macon Woman's College, Lynchburg, Virginia. Most of the fern specimens in the herbaria checked were collected in the latter part of the 19th century or during the first two decades of the 20th century. Since there are no recent records for some of the ferns and since there have been many changes caused by highway con-

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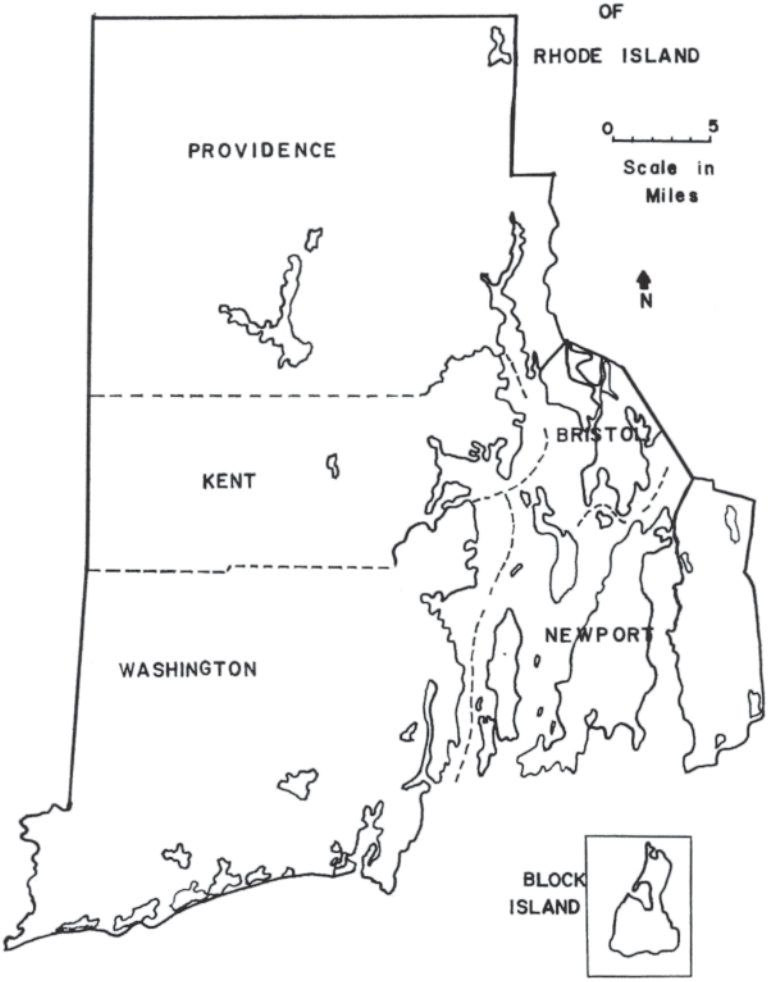
FIG. I MAP OF THE STATE OF RHODE ISLAND



struction, development of new factories and industries, and urbanization, it is probable that some of these ferns may no longer grow naturally within the State. Verified records of present-day occurrence of these ferns, as well as for those for which only a few examples are known, would be helpful. A new fern record for Rhode Island was published recently (Champlin, 1961).

One of the earliest lists of Rhode Island ferns occurs in *Plants of Rhode Island* (Bennett, 1888), which includes 36 species and varieties of ferns and 18 species of fern allies. *Notes On the Flora of Block Island (Bailey,* 1893) contains only seven species of ferns, all relatively common in the state. Bailey (1895) included the names of 40 ferns. Noble (1920) revised Bennett's list, deleted one species of *Isoetes,* added two new species, *Pellaea atropurpurea,* and *Dryopteris simulata,* and recognized as a *Aspidium boottii* species. This brought the total known species of ferns to 33 and fern allies to 20. Wright and Crandall (1941) listed 39 species of ferns.

Gray's Manual (Fernald, 1950) has been used as the authority for all scientific names in this paper. In addition certain changes in nomenclature discussed in Wherry's *The Fern Guide* (1961) and in Gleason (1952) are considered.

A table listing number of species in the New England states was published in the American Fern Journal by Blake (1950). Apparently the ferns are more adequately represented than the fern allies in Rhode Island. This may be owing to inadequate collecting rather than the actual absence of these species.

Fenneman (1938) gave a detailed description of Rhode Island's physiography in his account of the New England Province.

PLANT COVER OF RHODE ISLAND.—Two general forest types (Braun, 1950) occur within the state. The extreme northern portion is in the "White Pine Region" of New England and the remainder is in the "Sprout Hardwoods Region." Characteristic trees of the former are white pine, hemlock, beech, sugar maple, and yellow birch, while in the latter region occur second growth hardwood, including several species of oaks. Coastal white

cedar is dominant in some of the bogs and swamps of the southern portion of the state and associated with it are red maple, sour gum, white elm, poison sumac, mountain-holly and blueberries. Pitch pine occurs on the sand plains adjacent to the ocean and Narragansett Bay.

FERN DISTRIBUTION.—Rhode Island is divided into five counties (Fig. 1). Distribution of ferns and fern allies is tabulated by counties in Table 1. Each record is based on a specimen or specimens deposited in one or more of the herbaria listed.

The existing records for each county partially reflect the size, geology, soils and other natural features. However, some counties have been botanized much more extensively, either because of their proximity to the colleges and universities, or because of peculiar habitat features which have attracted the interest of collectors and botanists during the past 100 years.

DISCUSSION

Equisetaceae—Horsetail Family

Equisetum arvense L.—Field Horsetail
E. fluviatile L.—Water Horsetail
E. hyemale L. *var. affine* (Engelm.) A. A. Eat.—Scouring Rush
E. sylvaticum L. var. *pauciramosum* Milde—Woodland Horsetail
E. sylvaticum f. *multiramosum* Fern.

Of the above four species. *E. arvense* occurs most frequently. It occurs on Block Island and in all the counties. *Equisetum sylvaticum* f. *multiramosum* of Gray's Manual is considered a variety by Wherry (1961), who assigns a definite geographic range to this population. The only two representatives of this form observed were collected in Providence County in 1877 and 1911.

Lycopodiaceae—Clubmoss Family

Lycopodium clavatum L.—Common or Running Clubmoss
L. clavatum var. *megastachyon* Fern. and Bissell
L. complanatum L. var. *flabelliforme* Fern.—Crowfoot
L. inundatum L.—Bog Clubmoss
L. lucidulum Michx.— Shining Clubmoss
L. obscurum L.—Ground-pine
L. obscurum var. *dendroideum* (Mich.) D. C. Eat.—Ground-pine

L. tristachyum Pursh—Ground-pine or Ground-cedar

The first species is known from three counties, Providence, Kent and Washington. Formerly the only herbarium specimen from the latter county was one collected in 1927 from South Kingston. It was found by the author in 1958, growing abundantly in oak and pine woods in Westerly, Washington County. Variety *megastachyon* is represented by one specimen from Providence County.

The Crowfoot Clubmoss or Creeping Jenny is classed as a species, *L. flabelliforme* (Fern.) Blanchard, by Wherry (1961). It is common in some wooded areas but is unknown from Bristol and Newport counties.

All specimens of the Bog Clubmoss in the Gray Herbarium are considered to be var. *bigelovii* and it may be that most or all specimens from this state should be classified as this variety. Because of the confusion within this highly variable taxon Wherry (1961) recognized only the species. There has been no attempt in the present paper to distinguish the variety. Specimens are known from Providence, Washington and Newport counties and from Block Island.

The Shining Clubmoss grows rather abundantly in moist *Rhododendron* thickets and in beds of sphagnum in Washington County. It occurs in all except Bristol County. Numerous collections are known from each of these counties with the exception of Kent, which until the summer of 1963 was represented by one specimen from West Greenwich collected in 1878. Recently several stations were observed on the W. Alton Jones Campus in Kent County.

Both var. *obscurum* and var. *dendroideum* of the Tree Clubmoss, Ground-pine or Princess-pine, as this clubmoss is called in Washington County, are encountered relatively often in moist wooded areas and partial clearings. Variety *obscurum* has been collected in all counties except Bristol and specimens of var. *dendroideum* are recorded from Providence and Washington counties.

Lycopodium tristachyum is known chiefly from Washington County. Only one specimen was seen from Kent and one from Providence County.

Selaginellaceae—Spikemoss Family

Selaginella apoda (L.) Fern.—Meadow Spikemoss

S. rupestris (L.) Spring—Rock Spikemoss

The first of these two species is relatively common in damp areas and has been found in all counties except Bristol and Newport. The second species grows in more exposed situations on rocky ledges and gravelly slopes. The only specimens recorded from Washington County were found by the author in 1958, growing on exposed granite ledges. Only seven other specimens were noted, six of these from Providence County and one from Newport.

Isoetaceae—Quillwort Family

Isoetes engelmannii A. Br.

I. muricata Dur.

I. riparia Engelm.

I. riparia var. *canadensis* Engelm.

I. tuckermanii A. Br.

In this family four species are known from herbarium specimens but the genus is poorly represented in collections. There are only a few specimens of each species. The only specimen of I. tuckermanii seen is in the Gray Herbarium. A majority of the few specimens available are in very poor condition and inadequate for accurate identification. These four species were recorded from the Diamond Hill area in Providence County by Ernest Palmer (1947). Perhaps because of their aquatic habitat, their resemblance to tufted grasses, and because they are difficult to identify, these plants have been overlooked or avoided by many fern collectors.

Ophioglossaceae—Adder's Tongue Family

Botrychium dissectum Spreng var. *dissectum*

B. dissectum f. *elongatum* (Gilbert and Haberer) Weath.

B. dissectum f. *obliquum* (Muhl.) Fern.

B. dissectum f. *oneidense* (Gilbert) Clute.

B. lanceolatum (Gmel.) Angstr. var. *angustisegmentum* Pease and Moore.

B. matricariifolium A. Br.
B. multifidum (Gmel.) Rupr. var. intermedium (D. C. Eat.) Farw.
B. simplex E. Hitchc.
B. virginianum (L.) Sw.
Ophioglossum vulgatum L.—Adder's Tongue

Fernald (1950) lists many forms of B. dissectum that Wherry (1961) calls varieties. One of these forms, *B. dissectum* f. *oneidense* is considered a species by Wherry (1960, 1961). Studies by Wagner (1959) indicate that *B. ternatum*, not included in the above list, occurs in the United States. Since this fern resembles small-lobed forms of *B. multifidum* var. *intermedium* which occurs in Rhode Island, it may be found ultimately that *B. ternatum* also occurs here. Six species and three forms of Botrychium have been collected in the state with Providence and Washington counties best represented. I have seen no specimens from Kent County. *B. dissectum* f. *obliquum* is the only grapefern known from Bristol County.

The only observed specimen of *Ophioglossum vulgatum* was collected from Providence County and is in the Gray Herbarium.

Osmundaceae—Flowering Fern Family
Osmunda cinnamomea L.—Cinnamon Fern
O. cinnamomea var. *glandulosa* Waters
O. claytoniana L.—Interrupted Fern.
O. regalis L. var. *spectabilis* (Willd.) Gray.—Royal Fern

The Cinnamon, Interrupted and Royal ferns occur in all five counties. O cinnamomea var. glandulosa was collected in 1906 from Barrington, Bristol County, and according to Fernald (1950) occurs "on or near Coastal Plain, R. I." If herbarium specimens indicate accurately its frequency, it is relatively rare in the state. These ferns are among the largest that grow within the state. The Cinnamon Fern occasionally attains a height of six feet in swamps and at margins of bogs in Washington County.

Schizaeaceae—Curly-Grass Family
Lygodium palmatum (Bernh.) Sw.—Climbing Fern

This interesting fern with its twining rachis is known from only two counties. During the past year a sight record was reported in Washington County but it has not been verified. The

most recent specimens from Providence County are dated 1906, while specimens from Kent County were collected in 1920.

Polypodiaceae—Fern Family

Adiantum pedatum L.—Northern Maidenhair Fern

This beautiful fern is known in Rhode Island only from Washington and Providence counties. Most specimens were collected in the last decade of the 19th century and probably several of the early stations are no longer in existence. E. J. Palmer (1947) found this species in a few places in rich and moist woods in Providence County.

Asplenium montanum Willd.—Mountain Spleenwort

A. platyneuron (L.) Oakes—Ebony Spleenwort

A. trichomanes L.—Maidenhair Spleenwort

The Mountain Spleenwort was reported from Rhode Island first by Champlin (1961). The specimens were discovered in West Glocester, Providence County. It is surprising that a species (unless introduced) should be discovered so recently in an area in which there has been intensive collecting for many years.

Although the Ebony Spleenwort is not recorded from Kent County, it is found so commonly in the other parts of the state that a search in this county may reveal its presence. It is well represented in the herbaria checked.

The Maidenhair Spleenwort is an inhabitant of rock crevices in Providence, Kent and Washington counties. The only specimen from Kent is dated 1897 and the two from Washington County, 1908.

Athyrium felix-femina (L.) Roth var. *asplenioides* (Michx.) Farw.—Lady Fern

A. felix-femina var. *michauxii* (Spreng.) Farw.—Lady Fern

A. thelypteroides (Michx.) Derv.—Silvery Athyrium

The first named of the above ferns is maintained as *Athyrium asplenioides* (Michx.) A. Eaton, and the second as *A. angustum,* (Willd.) Presl., by Wherry (1961). The latter name is found in many of the early fern lists, including that of E. J. Palmer (1947). Fernald (1950) describes this species as "discouragingly variable" and numerous forms of variety *michauxii* are labeled in

the herbaria. Among these are f. *elatius, rubellum, elegans* and *laciniatum*. The variety *michauxii* is widely distributed in the state, having been collected from all counties and from Block Island. Only a few specimens of variety *asplenioides* were observed, none from Kent or Bristol. The Silvery Athyrium is known from Providence, Kent and Washington counties.

Camptosorus rhizophyllus (L.) Link—Walking Fern

The Walking Fern is rare within the state, known only from the towns of Lincoln and Smithfield in Providence County. In the five herbaria checked, the most recent specimen was collected in 1910.

Cystopteris bulbifera (L.) Bernh.—Bulblet Fern
C. fragilis (L.) Bernh.—Fragile Fern
C. fragilis var. *mackayi* Lawson

Two specimens of the Bulblet-fern were observed from Providence County. One was collected on September 18, 1899, from "Dr. Field's Grounds," indicating that it may have been cultivated in his garden. The other specimen was collected on July 9, 1873, in East Greenwich, Kent County. Whether or not this fern may still grow native in the state is uncertain. Numerous records of the Fragile Fern are known from Providence and Newport counties but only one from Washington County.

Dennstaedtia punctilobula (Michx.) Moore—Hay-scented Fern

This fern, growing on Block Island and in all five counties, is one of our most common ferns in pastures and open woodlands, frequently spreading rather rapidly along stone walls and edges of woods.

Dryopteris cristata (L.) Gray—Crested Wood-Fern
D. disjuncta (Ledeb.) C. V. Mort.—Oak Fern
D. hexagonoptera (Michx.) Christens.—Broad Beech-Fern
D. marginalis (L.) Gray—Marginal Shield-Fern
D. noveboracensis (L.) Gray—New York Fern
D. phegopteris (L.) Christens.—Long Beech-Fern
D. simulata Davenp.—Massachusetts Fern
D. spinulosa (O. F. Muell.) Watt—Spinulose Wood-Fern
D. spinulosa var. *intermedia* (Muhl.) Underw.
D. thelypteris (L.) Gray var. *pubescens* (Lawson) Nakai—Marsh or Meadow-Fern

Hybrids

Dryopteris clintoniana × *cristata* Wherry
D. cristata × *intermedia* Dowell
D. cristata × *marginalis* Davenp.
D. intermedia × *spinulosa* Wherry

The Crested Wood-Fern has been found in all five counties.

The only three specimens of the Oak-fern observed were from Washington County. Wherry (1961) and Gleason (1952) accept the name *Gymnocarpium dryopteris* (L.) Newman, but Fernald (1950) retains the genus *Dryopteris.* Nomenclature of the Broad-Beech-fern is also questioned and this species is assigned to the genus *Dryopteris* by Fernald (1.950), to *Phegopteris* by Wherry (1961) and to *Thelypteris* by Gleason (1952). Herbarium specimens of the Broad Beech-fern are known only from Providence County.

Specimens of the Marginal Shield-fern have been collected in all counties, with f. *elegans* (J. Robins.) F. W. Gray known from Providence County. One specimen is filed from Bristol, three from Newport and twenty-four from Providence County.

Examples of the New York Fern, a relatively common inhabitant of acid woods and boggy or swampy places, have been collected from all five counties. Both Gleason (1952) and Wherry (1961) assign this fern to *Thelypteris.*

The Long Beech-fern, known from Providence, Kent, and Washington counties, is included in *Dryopteris* by Fernald (1950) but has been placed in *Phegopteris* by Wherry (1961). Gleason (1952) includes both of the Beech Ferns in *Thelypteris.*

The Massachusetts or Bog Fern is known from all five counties and Block Island and is well represented in the various herbaria. Both Gleason (1952) and Wherry (1961) assign this fern to *Thelypteris.*

Several varieties and/or hybrids of the Spinulose Wood-fern occur throughout much of the state. *Dryopteris spinulosa* var. *spinulosa* grows in all five counties. The most frequently encountered variety, *intermedia,* is given species status by Wherry (1961). All except Newport County and Block Island are rep-

resented by specimens in the herbaria.

The Marsh or Meadow-fern is represented by numerous specimens from each of the counties and from the vicinity of Harbor Pond on Block Island.

Much confusion exists concerning .*Dryopteris* hybrids and this paper will not attempt to verify the records and names for them. For uniformity the four hybrids that presumably occur within the state are listed under the names of the two parents although not all of these are included in Fernald (1950).

The hybrid *D. clintoniana* × *cristata* was found in Washington County and identified as *D. clintoniana* var. *australis* Wherry, Fernald did not recognize the species *clintoniana* but considered this a variety of *D. cristata.* Today this fern is thought to be a hybrid between *clintoniana* (hexaploid) and *cristata* (tetraploid) and has been given the epithet *D.* × *australis* (Wherry, 1961). However, the absence of one of the parents of *D. clintoniana,* namely *D. goldiana,* from Rhode Island raises doubt in the mind of the author that this hybrid actually occurs here. Perhaps on the basis of glandular indusia and other similarities, these specimens may prove to belong to the next hybrid.

Boott's Shield Fern *(D. cristata* × *intermedia,),* one of the commonest and best known of the *Dryopteris* hybrids, is intermediate between *D. spinulosa* var. *intermedia* and *D. cristata* and probably occurs over much of the state where the two parents are found. It was recognized by Fernald as *D.* × *boottii* (Tuckerm.) Underw. Records are known from all counties except Newport.

The only specimen of *D. cristata* × *marginalis* or *D.* × *slossonae* Wherry was collected in Bristol County in 1894.

Two specimens collected by J. F. Collins from Barrington in Bristol County and labeled *D. spinulosa* var. *fructuosa* (Gilbert) Trudell, appear to be the hybrid, *D. intermedia* × *spinulosa,* or D. × *triploidea* Wherry, since upon examination most of the spores appear to be aborted. Wherry (1960) notes that most of the specimens in herbaria labelled *"fructuosa"* are merely lux-

uriant *intermedia* but this is presumably not the case in this instance.

Onoclea sensibilis L.—Sensitive Fern

Dr. Wherry prefers the common name "Bead Fern" which refers to the bead-like fertile pinnules rather than the more familiar name (at least to the author) of Sensitive Fern which is in reference to the blackening of the fronds at first frost. This fern occurs in all five counties and on Block Island.

Pellaea atropurpurea (L.) Link—Purple Cliff-brake

The Purple Cliff-brake, one of the rare ferns in the state, is known only from limestone cliffs in Limerock, Providence County, where it was collected in 1906 and 1913.

Polypodium virginianum L.—Rock-polypody

The Rock-polypody or Rock-cap fern is known from all counties, where it occurs chiefly in humus on rock outcrops.

Polystichum acrostichoides (Michx.) Schott—Christmas Fern

The Christmas Fern is common in some of our wooded areas and specimens have been collected from all counties and there are representatives in all five herbaria. Newport County is represented by one specimen from the town of Portsmouth and Bristol by one specimen from the town of Barrington.

Pteretis pensylvanica (Willd.) Fern.—Ostrich Fern

Although included in the genus *Pteretis* by Fernald (1950) the accepted name today is *Matteuccia pensylvanica* Raymond (Wherry, 1961; Gleason, 1952). The Ostrich fern is rather rare in Rhode Island, having been collected only from Providence County in 1914 and 1925.

Pteridium aquilinum (L.) Kuhn var. *latiusculum* (Desv.) Underw.—Brake or Bracken

The Bracken Fern may cover extensive areas in dry woods and pastures especially following fire or other disturbance. Although this is perhaps one of the more common ferns in the state, it was not represented from Newport County in the herbaria studied.

Woodsia ilvensis (L.) R. Br.—Rusty or Fragrant Woodsia

W. obtusa (Sprang.) Torr.—Blunt-lobed or Large Woodsia

The only two specimens of the Rusty Woodsia seen were col-

lected in 1908 from Copper Mine Hill in Providence County and are filed in the Gray Herbarium and Brown University Herbarium. Many collections of the Blunt-lobed Woodsia are known from Providence County but only two sites have been recorded for Washington County and one for Kent County. In 1937 this *Woodsia* was found growing profusely in the rock walls of a well in Washington County. This well has since been covered over and the station no longer exists.

Woodwardia areolata (L.) Moore—Netted Chain-fern

W. virginica (L.) Sm.—Virginia Chain-fern

Both species of Woodwardia have been collected from all five counties and from Block Island. They are especially prevalent in the Great Swamp and the cranberry bogs in Washington County. The Netted Chain-fern is placed in the Genus *Lorinseria* by Wherry (1961) but is included in the Genus *Woodwardia* by both Fernald (1950) and Gleason (1952).

TABLE 1. County Distribution of Ferns and Fern Allies in Rhode Island

	COUNTIES					
	P	K	W	B	N	BI
EQUISETACEAE						
Equisetum arvense var. *arvense*	x	x	x	x	x	x
E. fluviatile	x				x	
E. hyemale var. *affine*	x	x			x	
E. sylvaticum var. *pauciramosum*	x		x	x		
E. sylvaticum f. *multiramosum*	x					
LYCOPODIACEAE						
Lycopodium clavatum var. *clavatum*	x	x	x			
L. clavatum var. *megastachyon*	x					
L. complanatum var. *flabelliforme*	x	x	x			
L. inundatum (? var.)	x		x		x	x
L. lucidulum	x	x	x		x	
L. obscurum	x	x	x		x	
L. obscurum var. *dendroideum*	x		x			
L. tristachyum	x	x	x			
SELAGINELLACEAE						
Selaginella apoda	x	x	x			
S. rupestris	x		x		x	

	COUNTIES					
	P	K	W	B	N	BI
ISOETACEAE						
Isoetes engelmannii	x				x	
I. muricata	x	x				
I. riparia var. *riparia*			x			
1. ripauia var. *canadensis*	x					
I. tuckermanii	x					
OPHIOGLOSSACEAE						
Botrychium dissectum var. *dissectum*	x		x		x	
B. dissectum f. *elongatum*			x			
B. dissectum f. *obliquum*	x		x	x	x	x[a]
B. dissectum f. *oneidense*	x		x		x	x[a]
B. lanceolatum var. *angustisegmentum*	x					
B. matricariifolium	x		x			
B. multifidum var. *intermedium*	x		x			
B. simplex	x		x			
B. virginianum	x					
Ophioglossum vulgatum	x					
OSMUNDACEAE						
Osmunda cinnamomea	x	x	x	x	x	x
O. cinnamonea var. *glandulosa*				x		
O. claytoniana	x	x	x	x	x	
O. regalis var. *spectabilis*	x	x	x	x	x	x[a]
SCHIZAEACEAE						
Lygodium palmatum	x	x				
POLYPODIACEAE						
Adiantum pedatum	x		x			
Asplenium montanum	x					
A. platyneuron	x		x	x	x	
A. trichomanes	x	x	x			
Athyrium filix-femina var. *asplenioides*	x		x		x	x
A. filix-femina var. *michauxii*	x	x	x	x	x	x
A. thelypteroides	x	x	x			
Camptosorus rhizophyllus	x					
Cystopteris bulbifera	x	x				
C. fragilis var. *fragilis*	x		x			
C. fragilis var. *mackayi*	x				x	
Dennstaedtia punctilobula	x	x	x	x	x	x
Dryopteris cristata	x	x	x	x	x	
D. disjuncta			x			
D. hexagonoptera	x					
D. marginalis	x	x	x	x	x	
D. noveboracensis	x	x	x	x	x	
D. phegopteris	x	x	x			
D. simulata	x	x	x	x	x	x[a]
D. spinulosa var. *spinulosa*	x	x	x	x	x	
D. spinulosa var. *intermedia*	x	x	x	x		
D. *thelypteris* var. *pubescens*	x	x	x	x	x	x

	COUNTIES					
	P	K	W	B	N	BI
Dryopteris clintoniana × *cristata*			x			
D. cristata × *intermedia*	x	x	x	x		
D. cristata × *marginalis*				x		
D. intermedia × *spinulosa*					x	
Onoclea sensibilis	x	x	x	x	x	x
Pellaea atropurpurea	x					
Polypodium virginianum	x	x	x	x	x	
Polystichum acrostichoides	x	x	x	x	x	
Pteretis pensylvanica	x					
Pteridium aquilinum var. *latiusculum*	x	x	x	x		
Woodsia ilvensis	x					
W. obtusa	x	x	x			
Woodwardia *areolata*	x	x	x	x	x	x
W. virginica	x	x	x	x	x	x[a]

[a]Not listed by Bailey and Collins (1893)

SUMMARY.—Exclusive of varieties, forms, and hybrids, the existing herbarium specimens represent 16 species of fern allies and 40 species of ferns. These records are summarized by counties as follows:

	Fern Allies	*Ferns*
Providence	16	39
Kent	9	24
Washington	11	29
Bristol	2	19
Newport	8	19

There are known collections of all ferns and fern allies from Providence County except *Dryopteris disjuncta* which has been collected only in Washington County. In order to have as complete a list as possible, I would appreciate hearing of additional verified reports of county records of ferns and fern allies within the state.

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UPDATED NOMENCLATURE

The nomenclature used in this article is listed in **bolded** type.
The current nomenclature is beneath it, indented and in *italics*.

Equisetum arvense L.
Equisetum arvense L.
Equisetum fluviatile L.
Equisetum fluviatile L.
Equisetum hyemale L. var. affine (Engelm.) A. A. Eat.
Equisetum hyemale L. var. affine (Engelm.) A. A. Eat.
Equisetum sylvaticum L. var. pauciramosum Milde
Equisetum sylvaticum L.
Equisetum sylvaticum f. multiramosum Fern.
Equisetum sylvaticum L.
Lycopodium clavatum L.
Lycopodium clavatum L.
Lycopodium clavatum var. megastachyon Fern. and Bissell
Lycopodium lagopus (Laest. ex Hartm.) Zinserl. ex Kuzen
Lycopodium complanatum var. flabelliforme Fern.
Lycopodium digitatum Dill. ex A. Braun
Lycopodium. inundatum L.
Lycopodiella inundata (L.) Holub
Lycopodium lucidulum Michx.
Huperzia lucidula (Michx.) Trevis
Lycopodium obscurum L.
Lycopodium obscurum L.
Lycopodium obscurum var. dendroideum (Mich.) D. C. Eat.
Lycopodium dendroideum Michx.
Lycopodium tristachyum
Lycopodium tristachyum Pursh
Selaginella apoda (L.) Fern.
Selaginella apoda (L.) Spring
Selaginella rupestris (L.) Spring
Selaginella rupestris (L.) Spring
Isoetes engelmannii A. Br.
Isoëtes engelmanni A. Br.
Isoetes muricata Dur.
Isoetes tenella Léman
Isoetes riparia var. riparia Engelm.
Isoetes riparia Engelm. ex A. Braun
Isoetes riparia var. canadensis Engelm.
Isoetes riparia Engelm. ex A. Braun var. riparia
Isoetes tuckermanii A. Br.
Isoetes ×harveyi A.A. Eaton (pro sp.) [lacustris × truncata]

Botrychium dissectum Spreng var. dissectum
Botrychium dissectum Spreng.
Botrychium dissectum f. elongatum (Gilbert and Haberer) Weath.
Botrychium dissectum Spreng.
Botrychium dissectum f. obliquum (Muhl.) Fern.
Botrychium dissectum Spreng.
Botrychium dissectum f. oneidense (Gilbert) Clute.
Botrychium oneidense (Gilbert) House
Botrychium lanceolatum (Gmel.) Angstr. var. angustisegmentum Pease and Moore.
Botrychium lanceolatum (S.G.Gmel.) Ångstr.
subsp. angustisegmentum (Pease & A.H.Moore) R.T.Clausen
Botrychium matricariifolium A. Br.
Botrychium matricariifolium (Döll) A. Braun
ex W. D. J. Koch, Syn. Deut. Schweiz. Fl.,
Botrychium multifidum (Gmel.) Rupr. var. intermedium (D. C. Eat.) Farw.
Botrychium multifidum (S.G.Gmel.) Rupr.
Botrychium simplex E. Hitchc.
Botrychium simplex E. Hitchc.
Botrychium virginianum (L.) Sw.
Botrychium virginianum L. Swartz, J. Bot. (Schrader).
Ophioglossum vulgatum L.
Ophioglossum vulgatum L.
Osmunda cinnamomea L.
Osmunda cinnamomea L.
Osmunda cinnamomea var. glandulosa Waters
Osmunda cinnamomea L.
Osmunda claytoniana L.
Osmunda claytoniana L.
Osmunda regalis L. var. spectabilis (Willd.) Gray.
Osmunda regalis L. var. spectabilis (Willd.) Gray
Lygodium palmatum
Lygodium palmatum (Bernh.) Sw.
Adiantum pedatum L.
Adiantum pedatum L.
Asplenium montanum Willd.
Asplenium montanum Willd.
Asplenium platyneuron (L.) Oakes
Asplenium platyneuron (Linnaeus) Britton, Sterns & Poggenburg,
Asplenium trichomanes L.
Asplenium trichomanes L.
Athyrium felix-femina (L.) Roth var. asplenioides (Michx.) Farw.
Athyrium filix-femina (L.) Roth ssp. asplenioides (Michx.) Hultén
Athyrium felix-femina var. michauxii (Spreng.) Farw.
Athyrium filix-femina (L.) Roth ex Mert.
var. angustum (Willd.) G.Lawson

Athyrium thelypteroides (Michx.) Derv.
Deparia acrostichoides (Sw.) M. Kato
Camptosorus rhizophyllus (L.) Link
Asplenium rhizophyllum L.
Cystopteris bulbifera (L.) Bernh.
Cystopteris bulbifera
Cystopteris fragilis var. fragilis (L.) Bernh.
NO EQUIVALENT FOUND
Cystopteris fragilis var. mackayi Lawson
Cystopteris tenuis (Michx.) Desv
Dennstaedtia punctilobula (Michx.) Moore
Dennstaedtia punctilobula (Michx.) Moore
Dryopteris cristata (L.) Gray
Dryopteris cristata (L.) Gray
Dryopteris disjuncta (Ledeb.) C. V. Mort.
Gymnocarpium disjunctum (Rupr.) Ching
Dryopteris hexagonoptera (Michx.) Christens.
Phegopteris hexagonoptera (Michx.) Fée
Dryopteris marginalis (L.) Gray
Dryopteris marginalis (L.) Gray
Dryopteris noveboracensis (L.) Gray
Thelypteris noveboracensis (L.) Nieuwl.
Dryopteris phegopteris (L.) Christens.
Phegopteris connectilis (Michx.) Watt
Dryopteris simulata Davenp.
Thelypteris simulata (Davenp.) Nieuwl.
Dryopteris spinulosa var. spinulosa (0. F. Muell.) Watt
NO EQUIVALENT FOUND
Dryopteris spinulosa var. intermedia (Muhl.) Underw.
Dryopteris intermedia (Muhl. ex Willd.) A.Gray
Dryopteris thelypteris (L.) Gray var. pubescens (Lawson) Nakei
Thelypteris palustris Schott var. pubescens (Lawson)
Dryopteris cristata x marginalis Davenp.
Dryopteris X slossonae Wherry ex Lellinger
Dryopteris intermedia x spinulosa Wherry
Dryopteris intermedia x marginalis
Onoclea sensibilis L.
Onoclea sensibilis L.
Pellaea atropurpurea (L.) Link
Pellaea atropurpurea (L.) Link
Polypodium virginianum L.
Polypodium virginianum L.
Polystichum acrostichoides (Michx.) Schott
Polystichum acrostichoides (Michx.) Schott
Pteretis pensylvanica (Willd.) Fern.
Matteuccia struthiopteris (L.) Todaro

Pteridium aquilinum (L.) Kuhn var. latiusculum (Desv.) Underw
Pteridium aquilinum (L.) Kuhn
var. latiusculum (Desv.) Underw. ex A. Heller
Woodsia ilvensis (L.) R. Br.
Woodsia ilvensis (L.) R. Br.
Woodsia obtusa (Sprang.) Torr.
Woodsia obtusa (Spreng.) Torr.
Woodwardia areolata (L.) Moore
Woodwardia areolata (L.) Moore
Woodwardia virginica (L.) Sm.
Woodwardia virginica (L.) Sm.