

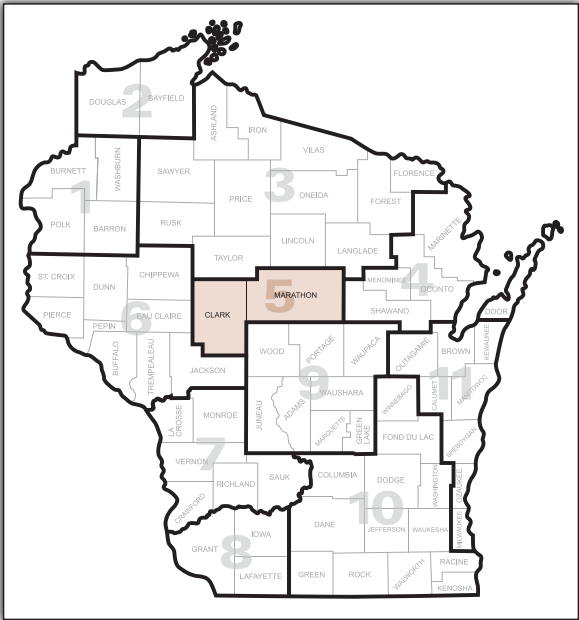


*(Photo from Department of Natural Resources Archives)*

# Region 5

## GENERAL DESCRIPTION

This region encompasses only two counties, Clark and Marathon, and lies mostly outside of the limits of the Wisconsin stage glaciation. Characterized by mainly level to rolling till plains that are predominately silt loam soils. Portions of southern Clark County are poorly drained sandy to loam over shaly sandstone. Forested lowlands are common, especially tamarack and black spruce swamps in the southern portion of the region. Black ash and some northern white cedar exist in the northern portion.



*Region 5: Clark and Marathon Counties*



(Photo from Kemp Natural Resources Station Archives)

## WETLAND FOREST HABITAT TYPES OF REGION 5

### **PmLLe-An**

- *Picea-Larix/Ledum-Aronia* variant
- Black Spruce-Tamarack/Labrador Tea-Black Chokeberry variant

### **PArGy**

- *Pinus-Acer/Gaylussacia*
- Eastern White Pine-Red Maple/Black Huckleberry

### **ArFnRh**

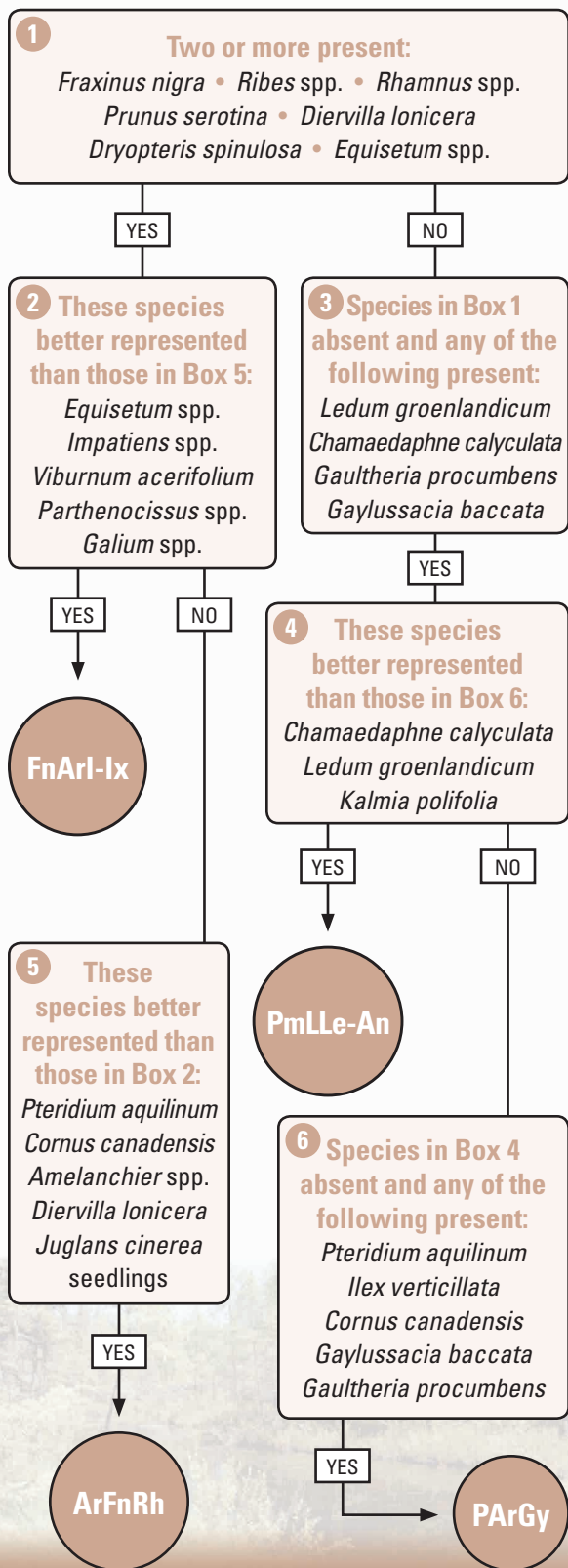
- *Acer-Fraxinus/Rubus*
- Red Maple-Black Ash/Swamp Dewberry

### **FnArl-Ix**

- *Fraxinus-Acer/Impatiens-Ilex* variant
- Black Ash-Red Maple/Spotted Touch-me-not-Winterberry variant

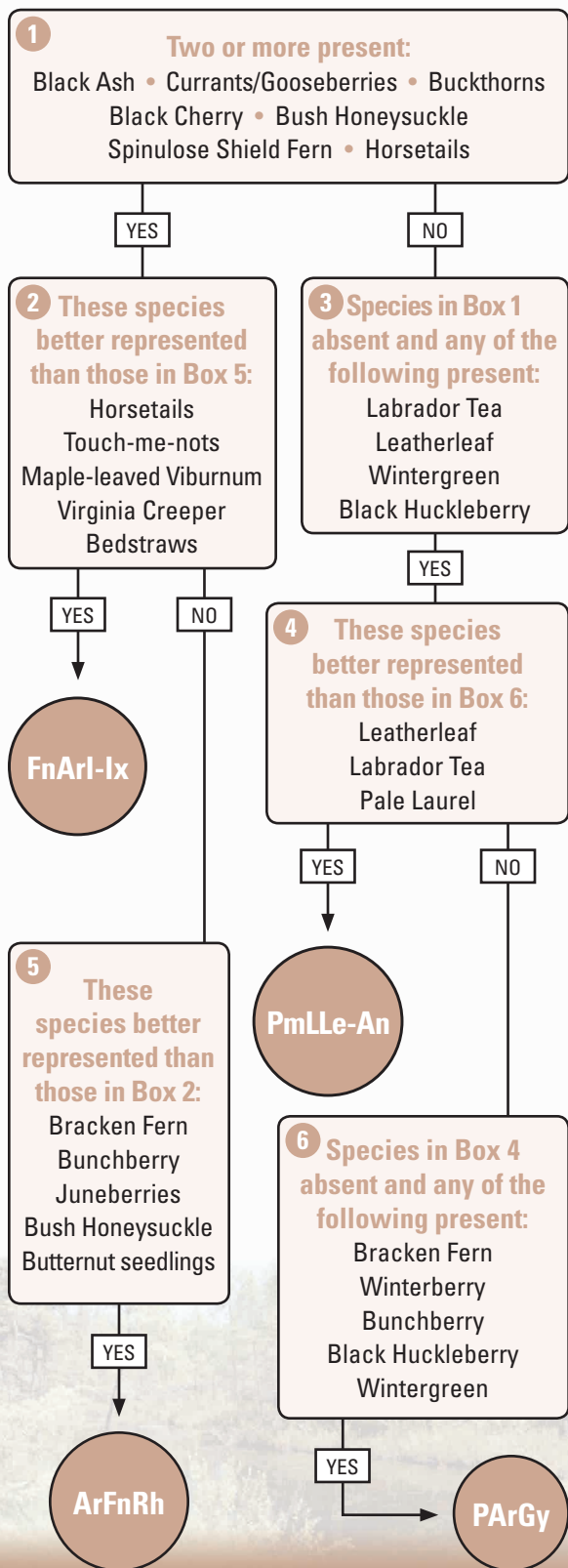
## REGION 5

### Key to Wetland Habitat Types (Scientific Names)

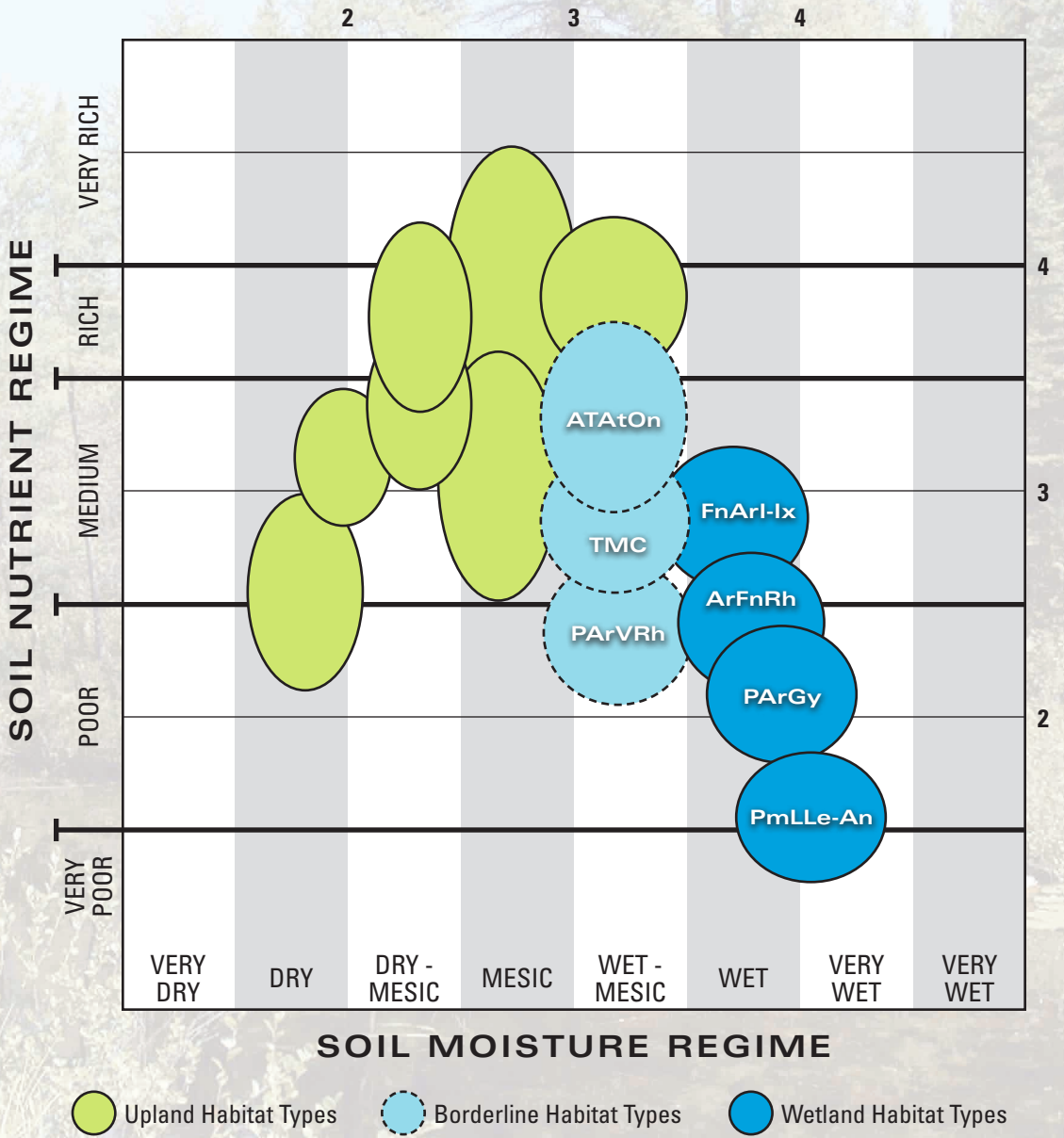


## REGION 5

### Key to Wetland Habitat Types (Common Names)



# RELATIONSHIP OF HABITAT TYPES TO SOIL MOISTURE AND NUTRIENT REGIMES IN REGION 5



# Region 5 Habitat Type Descriptions

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## **PmLLe-An**

*Picea-Larix/Ledum-Aronia*

*Picea mariana-Larix laricina/Ledum groenlandicum*  
(*Aronia melanocarpa* variant)

Black Spruce-Tamarack/Labrador Tea  
(Black Chokeberry variant)

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### **DISTRIBUTION**

Clark and Marathon Counties and adjacent regions.

### **LANDFORM AND SOILS**

Deep organics – peatlands.

### **VEGETATION**

**Common Forest Cover Types:** Stands are dominated entirely by black spruce and tamarack. Only paper birch and white pine occur as temporary associates. Advance reproduction consists almost entirely of black spruce and tamarack, although paper birch saplings are sometimes well represented. Other species that sometimes occur as saplings, but typically do not reach maturity, are red maple, eastern hemlock and yellow birch.

**Shrub and Small Tree Layer:** Tall shrubs are not well represented. In most stands the only conspicuous species with relatively high coverage is Labrador Tea (*Ledum groenlandicum*). Leatherleaf (*Chamaedaphne calyculata*) typically is the most common low shrub. Canada Blueberry (*Vaccinium myrtilloides*) and Low-sweet Blueberry (*Vaccinium angustifolium*) are also relatively common. Black Chokeberry (*Aronia melanocarpa*) and Black Huckleberry (*Gaylussacia baccata*) were present in about half of sample stands. Several other woody species characteristic of this type are inconspicuous and best described with ground flora.

**Leatherleaf (*Chamaedaphne calyculata*)**



(Photo from Department of Natural Resources Archives)

**Purple-stemmed Aster (*Aster puniceus*)**



(Photo from Department of Natural Resources Archives)

**Ground Flora Characteristics:** *Sphagnum* spp. is a dominant characteristic. Herb species are poorly represented. The following occur with moderate frequencies (50 to 80 percent): Purple-stemmed Aster (*Aster puniceus*), Interrupted Fern (*Osmunda claytoniana*), Spinulose Shield Fern (*Dryopteris spinulosa*), Starflower (*Trientalis borealis*), Wild Lily-of-the-valley (*Maianthemum canadense*) and various species of Lady's Slippers (*Cypripedium* spp.). Also frequent are Swamp Dewberry (*Rubus hispidus*) and Shining Clubmoss (*Lycopodium lucidulum*). Less conspicuous are several species of the Heath family (*Ericaceae*) such as Creeping Snowberry (*Gaultheria hispidula*), Pale Laurel (*Kalmia polifolia*) and Large Cranberry (*Vaccinium macrocarpon*).

**Disturbance and Succession:** See the Introduction.

**Management Implications:** On the relative scale of wetland habitat type productivity (very poor, poor, poor to medium, medium, medium to rich) **PmLLe-An** is classified as "very poor" (see the **Management Implications** section).

## REGION 5: PLANT SPECIES BY HABITAT TYPE (PmLLe-An)

### *Understory Species in Order of Decreasing Frequency of Occurrence*

<b>Common Name (<i>Scientific Name</i>)</b>	<b>Freq. Cover</b>	
	<b>%</b>	<b>%</b>
Sphagnum Mosses ( <i>Sphagnum</i> spp.).....	100	88
Labrador Tea ( <i>Ledum groenlandicum</i> ) .....	100	32
Low-sweet Blueberry <i>Vaccinium angustifolium</i> ).....	100	21
Shining Clubmoss ( <i>Lycopodium lucidulum</i> )...	100	2
Leatherleaf ( <i>Chamaedaphne calyculata</i> ) .....	100	9
Pale Laurel ( <i>Kalmia polifolia</i> ) .....	83	1
Swamp Dewberry ( <i>Rubus hispidus</i> ) .....	67	30
Interrupted Fern ( <i>Osmunda claytoniana</i> ).....	67	19
Black Chokeberry ( <i>Aronia melanocarpa</i> ) .....	67	6
Purple-stemmed Aster ( <i>Aster puniceus</i> ).....	67	4
Larger Blue Flag ( <i>Iris versicolor</i> ).....	67	1
Large Cranberry ( <i>Vaccinium macrocarpon</i> )...	67	4
Black Huckleberry ( <i>Gaylussacia baccata</i> )...	50	27
Juneberries ( <i>Amelanchier</i> spp.).....	50	1
Spinulose Shield Fern ( <i>Dryopteris spinulosa</i> ) ...	50	1
Wild Lily-of-the-valley <i>(Maianthemum canadense)</i> .....	50	1
Raspberries/Blackberries ( <i>Rubus</i> spp.) .....	50	1
Starflower ( <i>Trientalis borealis</i> ).....	50	1
Small Cranberry ( <i>Vaccinium oxycoccus</i> ).....	33	23
Speckled Alder ( <i>Alnus rugosa</i> ).....	33	4
Yellow Beadlily ( <i>Clintonia borealis</i> ).....	33	5
Bunchberry ( <i>Cornus canadensis</i> ) .....	33	2
American Hazelnut ( <i>Corylus americana</i> ).....	33	2
Creeping Snowberry ( <i>Gaultheria hispidula</i> ) ...	33	3
Winterberry ( <i>Ilex verticillata</i> ).....	33	1
Whorled Loosestrife ( <i>Lysimachia quadrifolia</i> ) ...	33	1
Cinnamon Fern ( <i>Osmunda cinnamomea</i> ).....	33	2
Currants/Gooseberries ( <i>Ribes</i> spp.) .....	33	1
Skunk Cabbage ( <i>Symplocarpus foetidus</i> ).....	33	5
Field Bindweed ( <i>Convolvulus arvensis</i> ) .....	17	18
Feather Mosses ( <i>Feather Moss</i> spp.).....	17	1
Spotted Touch-me-not ( <i>Impatiens capensis</i> )....	17	1
Dwarf Raspberry ( <i>Rubus pubescens</i> ) .....	17	1
Canada Blueberry ( <i>Vaccinium myrtilloides</i> )...	17	1
Downy Arrowwood <i>(Viburnum rafinesquianum)</i> .....	17	3



## REGION 5: TREE SPECIES BY HABITAT TYPE (PmLLe-An)

### *Tree Species Frequency of Occurrence and Average Cover by Size Class*

<b>Sawtimber</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Larix laricina</i> .....	83.....	12
<i>Picea mariana</i> .....	17.....	3
<i>Pinus strobus</i> .....	17.....	3

<b>Poles</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Larix laricina</i> .....	100.....	37
<i>Picea mariana</i> .....	67.....	20
<i>Betula papyrifera</i> .....	33.....	3
<i>Pinus strobus</i> .....	33.....	5
<i>Acer rubrum</i> .....	17.....	8
<i>Tsuga canadensis</i> .....	17.....	1

<b>Saplings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Larix laricina</i> .....	100.....	6
<i>Picea mariana</i> .....	83.....	2
<i>Pinus strobus</i> .....	67.....	1
<i>Acer rubrum</i> .....	33.....	4
<i>Betula papyrifera</i> .....	33.....	13

<b>Large Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Larix laricina</i> .....	100.....	1
<i>Picea mariana</i> .....	83.....	3
<i>Acer rubrum</i> .....	67.....	1
<i>Betula papyrifera</i> .....	50.....	1
<i>Pinus strobus</i> .....	50.....	1
<i>Quercus velutina</i> .....	33.....	1
<i>Tsuga canadensis</i> .....	33.....	1
<i>Populus grandidentata</i> .....	17.....	1

<b>Small Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	100.....	1
<i>Larix laricina</i> .....	100.....	1
<i>Picea mariana</i> .....	100.....	1
<i>Quercus velutina</i> .....	100.....	1
<i>Betula papyrifera</i> .....	83.....	1
<i>Pinus strobus</i> .....	50.....	1
<i>Quercus alba</i> .....	33.....	1

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## PArGy

*Pinus-Acer/Gaylussacia*

*Pinus strobus-Acer rubrum/Gaylussacia baccata*

Eastern White Pine-Red Maple/Black Huckleberry

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### DISTRIBUTION

Clark and Marathon Counties and surrounding region.

### LANDFORM AND SOILS

At the surface, a shallow organic layer is typically less than one foot thick. Mineral soil is clayey sand to depth of more than five feet, or changing to sand at a depth of three to five feet. The year of sampling, the soil profile was saturated to the surface, or at least below two foot depth.

### VEGETATION

**Common Forest Cover Types:** Stand species composition is extremely varied. Most frequent species are red maple, white pine and paper birch, although a number of sample stands had high representation or even dominance of black spruce, jack pine, red pine, quaking aspen or black oak. Advance reproduction is typically sparse. Red maple is most often the dominant sapling. Only white pine, white oak and black oak saplings occurred in more than half of the sample stands.

**Shrub and Small Tree Layer:** Only low shrubs typically are well represented. Low-sweet Blueberry (*Vaccinium angustifolium*) is best represented, but Black Huckleberry (*Gaylussacia baccata*) was most abundant and characteristic of the type on about 70 percent of the sample stands. Other species with relatively high frequency of occurrence are Raspberries/Blackberries (*Rubus* spp.) and Winterberry (*Ilex verticillata*).



**Black Huckleberry (*Gaylussacia baccata*)**

(Photo from Department of Natural Resources Archives)

**Bunchberry (*Cornus canadensis*)**



(Photo from Department of Natural Resources Archives)

**Ground Flora Characteristics:** Presence and relatively high cover of *Sphagnum* spp. is characteristic. Other species with high frequency of occurrence are Purple-stemmed Aster (*Aster puniceus*), Starflower (*Trientalis borealis*), Wild Lily-of-the-valley (*Maianthemum canadense*), Swamp Dewberry (*Rubus hispidus*), Bracken Fern (*Pteridium aquilinum*), Shining Clubmoss (*Lycopodium lucidulum*), Wintergreen (*Gaultheria procumbens*), and Bunchberry (*Cornus canadensis*).

**Disturbance and Succession:** See the Introduction.

**Management Implications:** On the relative scale of wetland habitat type productivity (very poor, poor, poor to medium, medium, medium to rich)

**PARGy** is classified as “poor” (see the **Management Implications** section).

**Winterberry (*Ilex verticillata*)**



(Photo from Department of Natural Resources Archives)

## REGION 5: PLANT SPECIES BY HABITAT TYPE (PARGY)

### *Understory Species in Order of Decreasing Frequency of Occurrence*

<b>Common Name (<i>Scientific Name</i>)</b>	<b>Freq. Cover</b>	
	%	%
Sphagnum Mosses ( <i>Sphagnum</i> spp.).....	100	57
Low-sweet Blueberry <i>(Vaccinium angustifolium)</i> .....	98	10
Purple-stemmed Aster ( <i>Aster puniceus</i> ).....	91	4
Winterberry ( <i>Ilex verticillata</i> ).....	91	7
Starflower ( <i>Trientalis borealis</i> ).....	91	2
Swamp Dewberry ( <i>Rubus hispidus</i> ).....	89	14
Shining Clubmoss ( <i>Lycopodium lucidulum</i> )....	86	4
Bracken Fern ( <i>Pteridium aquilinum</i> ).....	77	21
Wild Lily-of-the-valley <i>(Maianthemum canadense)</i> .....	75	5
Raspberries/Blackberries ( <i>Rubus</i> spp.).....	75	6
Wintergreen ( <i>Gaultheria procumbens</i> ).....	73	8
Black Huckleberry ( <i>Gaylussacia baccata</i> )....	70	24
Bunchberry ( <i>Cornus canadensis</i> ).....	68	7
Whorled Loosestrife <i>(Lysimachia quadrifolia)</i> .....	59	1
Juneberry ( <i>Amelanchier</i> spp.).....	57	2
Interrupted Fern ( <i>Osmunda claytoniana</i> ).....	55	11
Dwarf Raspberry ( <i>Rubus pubescens</i> ).....	41	1
Black Chokeberry ( <i>Aronia melanocarpa</i> ).....	34	1
Canada Blueberry ( <i>Vaccinium myrtilloides</i> )...	34	5
Goldenrods ( <i>Solidago</i> spp.).....	32	1
Sessile-leaved Bellwort <i>(Uvularia sessifolia)</i> .....	32	1
Speckled Alder ( <i>Alnus rugosa</i> ).....	27	8
Partridgeberry ( <i>Mitchella repens</i> ).....	27	3
Three-leaved Solomon's Seal <i>(Smilacina trifolia)</i> .....	23	5
Wild Sarsaparilla ( <i>Aralia nudicaulis</i> ).....	20	1
American Hazelnut ( <i>Corylus americana</i> ).....	20	4
Violets ( <i>Viola</i> spp.).....	20	1
Spinulose Shield Fern ( <i>Dryopteris spinulosa</i> ) ...	18	1
Ground Pine ( <i>Lycopodium obscurum</i> ).....	18	1
Lady Fern ( <i>Athyrium filix-femina</i> ).....	16	1
Leatherleaf ( <i>Chamaedaphne calyculata</i> ).....	16	14
Yellow Beadlily ( <i>Clintonia borealis</i> ).....	16	1
Cinnamon Fern ( <i>Osmunda cinnamomea</i> ).....	16	7
Hairy Solomon's Seal <i>(Polygonatum pubescens)</i> .....	14	1

## REGION 5: TREE SPECIES BY HABITAT TYPE (PArGy)

### *Tree Species Frequency of Occurrence and Average Cover by Size Class*

<b>Sawtimber</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Pinus strobus</i> .....	32.....	20
<i>Picea mariana</i> .....	18.....	15
<i>Pinus banksiana</i> .....	18.....	18
<i>Acer rubrum</i> .....	16.....	7
<i>Quercus velutina</i> .....	16.....	11
<i>Betula papyrifera</i> .....	14.....	5
<i>Pinus resinosa</i> .....	14.....	19

<b>Poles</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	61.....	18
<i>Betula papyrifera</i> .....	55.....	11
<i>Pinus strobus</i> .....	48.....	9
<i>Quercus velutina</i> .....	39.....	13
<i>Picea mariana</i> .....	32.....	52
<i>Pinus banksiana</i> .....	32.....	32
<i>Populus tremuloides</i> .....	20.....	22
<i>Quercus alba</i> .....	18.....	4
<i>Larix laricina</i> .....	11.....	28

<b>Saplings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	82.....	26
<i>Quercus velutina</i> .....	59.....	8
<i>Betula papyrifera</i> .....	57.....	6
<i>Pinus strobus</i> .....	45.....	5
<i>Quercus alba</i> .....	45.....	2
<i>Fraxinus nigra</i> .....	23.....	6
<i>Pinus banksiana</i> .....	23.....	2
<i>Picea mariana</i> .....	20.....	2

<b>Large Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	86.....	4
<i>Quercus velutina</i> .....	86.....	2
<i>Betula papyrifera</i> .....	59.....	2
<i>Pinus strobus</i> .....	50.....	1
<i>Quercus alba</i> .....	50.....	1
<i>Pinus banksiana</i> .....	30.....	1
<i>Fraxinus nigra</i> .....	18.....	2
<i>Populus tremuloides</i> .....	16.....	1

<b>Small Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	93.....	3
<i>Quercus velutina</i> .....	93.....	2
<i>Quercus alba</i> .....	75.....	2
<i>Pinus strobus</i> .....	64.....	1
<i>Betula papyrifera</i> .....	59.....	1
<i>Picea mariana</i> .....	36.....	1
<i>Pinus banksiana</i> .....	30.....	1
<i>Fraxinus nigra</i> .....	25.....	1



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## ArFnRh

*Acer-Fraxinus/Rubus*

*Acer rubrum-Fraxinus nigra/Rubus hispidus*

Red Maple-Black Ash/Swamp Dewberry

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### DISTRIBUTION

Clark and Marathon Counties and surrounding region, more likely in areas of glacial outwash rather than till.

### LANDFORM AND SOILS

Shallow organic layer, typically less than one foot thick, over predominantly sandy substrate. Often there is a clay layer within sandy profile with mottling or saturated condition above it.

### VEGETATION:

**Common Forest Cover Types:** Stand species composition is extremely varied. The most frequent species are red maple, paper birch, black spruce, quaking aspen and eastern hemlock, although none were present in more than 50 percent of the study plots. Advance reproduction is typically sparse. Red maple, black ash and Black Cherry saplings each occurred in about one third of sample stands and with modest density.

**Shrub and Small Tree Layer:** This layer is not well developed. Most common dominant shrubs are Raspberries/Blackberries (*Rubus* spp.), Currants/Gooseberries (*Ribes* spp.) and Winterberry (*Ilex verticillata*). Beaked Hazel (*Corylus cornuta*) was relatively abundant in about half of the study stands.

**Ground Flora Characteristics:** Presence of *Sphagnum* spp. is characteristic. Other species with high frequency of occurrence are Purple-stemmed Aster (*Aster puniceus*), Starflower (*Trientalis borealis*), Wild Lily-of-the-valley (*Maianthemum canadense*), Swamp Dewberry (*Rubus hispidus*), Bracken Fern (*Pteridium aquilinum*) and Bunchberry (*Cornus canadensis*). All other species occur with frequencies under 50 percent.

**Disturbance and Succession:** See the Introduction.

**Management Implications:** On the relative scale of wetland habitat type productivity (very poor, poor, poor to medium, medium, medium to rich) **ArFnRh** is classified as “poor to medium” (see the **Management Implications** section).

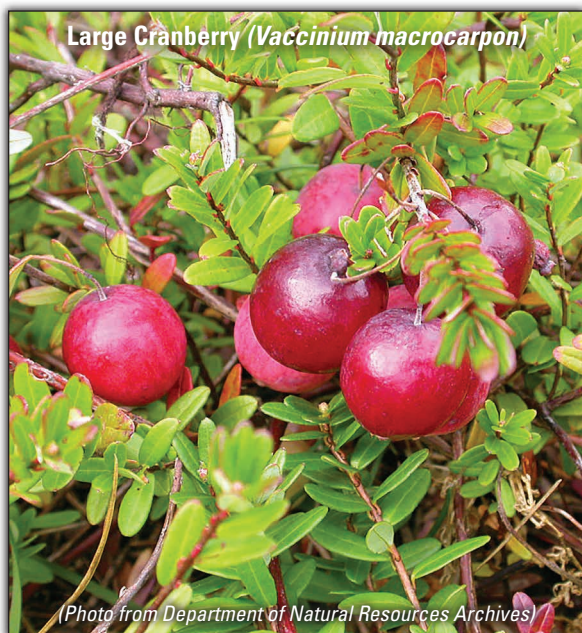
## REGION 5: PLANT SPECIES BY HABITAT TYPE (ArFnRh)

### *Understory Species in Order of Decreasing Frequency of Occurrence*

<b>Common Name (<i>Scientific Name</i>)</b>	<b>Freq. Cover</b>	
	%	%
Sphagnum Mosses ( <i>Sphagnum</i> spp.).....	100	33
Raspberries/Blackberries ( <i>Rubus</i> spp.).....	100	12
Purple-stemmed Aster ( <i>Aster puniceus</i> ).....	100	3
Starflower ( <i>Trientalis borealis</i> ).....	88	3
Wild Lily-of-the-valley ( <i>Maianthemum canadense</i> ).....	84	7
Swamp Dewberry ( <i>Rubus hispidus</i> ).....	84	8
Juneberry ( <i>Amelanchier</i> spp.).....	72	1
Winterberry ( <i>Ilex verticillata</i> ).....	72	4
Common Buckthorn ( <i>Rhamnus cathartica</i> )...64	64	1
Currants/Gooseberries ( <i>Ribes</i> spp.).....	60	25
Bracken Fern ( <i>Pteridium aquilinum</i> ).....	60	7
Violets ( <i>Viola</i> spp.).....	60	5
Bunchberry ( <i>Cornus canadensis</i> ).....	56	5
Bush Honeysuckle ( <i>Diervilla lonicera</i> ).....	52	5
Interrupted Fern ( <i>Osmunda claytoniana</i> ).....	52	8
Goldenrods ( <i>Solidago</i> spp.).....	52	4
Spinulose Shield Fern ( <i>Dryopteris spinulosa</i> )...48	48	6
Shining Clubmoss ( <i>Lycopodium lucidulum</i> )... 48	48	14
Low-sweet Blueberry ( <i>Vaccinium angustifolium</i> ).....	44	4
American Hazelnut ( <i>Corylus americana</i> ).....	40	13
Nodding Trillium ( <i>Trillium cernuum</i> ).....	40	1
Partridgeberry ( <i>Mitchella repens</i> ).....	36	1
Cinnamon Fern ( <i>Osmunda cinnamomea</i> ).....	36	4
Common Wood Sorrel ( <i>Oxalis montana</i> ).....	36	3
Asters ( <i>Aster</i> spp.).....	32	5
Horsetails ( <i>Equisetum</i> spp.).....	32	1
Oak Fern ( <i>Dryopteris disjuncta</i> ).....	32	1
Sensitive Fern ( <i>Onoclea sensibilis</i> ).....	32	2
Lady Fern ( <i>Athyrium filix-femina</i> ).....	28	11
Beaked Hazelnut ( <i>Corylus cornuta</i> ).....	28	3
Sessile-leaved Bellwort ( <i>Uvularia sessifolia</i> ).....	24	1



<b>Common Name (<i>Scientific Name</i>)</b>	<b>Freq. Cover</b>	
	<b>%</b>	<b>%</b>
Wild Sarsaparilla ( <i>Aralia nudicaulis</i> ).....	20	2
Yellow Beadlily ( <i>Clintonia borealis</i> ).....	20	2
Bedstraws ( <i>Galium</i> spp.).....	20	1
Whorled Loosestrife ( <i>Lysimachia quadrifolia</i> ).....	20	1
Gray Dogwood ( <i>Cornus racemosa</i> ) .....	16	2
Spotted Touch-me-not ( <i>Impatiens capensis</i> )....	16	5
Large Cranberry ( <i>Vaccinium macrocarpon</i> )....	16	2
Hog Peanut ( <i>Amphicarpa bracteata</i> ) .....	12	2
Marsh Cinquefoil ( <i>Potentilla palustris</i> ).....	12	2
Downy Arrowwood ( <i>Viburnum rafinesquianum</i> ).....	12	1



## REGION 5: TREE SPECIES BY HABITAT TYPE (ArFnRh)

### *Tree Species Frequency of Occurrence and Average Cover by Size Class*

<b>Sawtimber</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Populus tremuloides</i> .....	28.....	12
<i>Picea mariana</i> .....	24.....	41
<i>Acer rubrum</i> .....	20.....	9
<i>Tsuga canadensis</i> .....	20.....	16
<i>Betula papyrifera</i> .....	16.....	7
<i>Thuja occidentalis</i> .....	16.....	26

<b>Poles</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	48.....	18
<i>Picea mariana</i> .....	44.....	25
<i>Betula papyrifera</i> .....	36.....	32
<i>Populus tremuloides</i> .....	32.....	40
<i>Tsuga canadensis</i> .....	32.....	31
<i>Prunus serotina</i> .....	24.....	5
<i>Fraxinus nigra</i> .....	16.....	4
<i>Quercus velutina</i> .....	16.....	7
<i>Thuja occidentalis</i> .....	16.....	34

<b>Saplings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	60.....	11
<i>Prunus serotina</i> .....	44.....	14
<i>Fraxinus nigra</i> .....	28.....	4
<i>Quercus velutina</i> .....	28.....	2
<i>Betula papyrifera</i> .....	24.....	23
<i>Carpinus caroliniana</i> .....	24.....	5
<i>Picea mariana</i> .....	24.....	2
<i>Tsuga canadensis</i> .....	24.....	5
<i>Ostrya virginiana</i> .....	20.....	5

<b>Large Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	64.....	1
<i>Quercus velutina</i> .....	52.....	2
<i>Populus tremuloides</i> .....	44.....	3
<i>Prunus serotina</i> .....	44.....	4
<i>Carpinus caroliniana</i> .....	24.....	3
<i>Fraxinus nigra</i> .....	24.....	2
<i>Tsuga canadensis</i> .....	20.....	2

<b>Small Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	92.....	2
<i>Quercus velutina</i> .....	68.....	1
<i>Picea mariana</i> .....	48.....	1
<i>Tsuga canadensis</i> .....	48.....	1
<i>Populus tremuloides</i> .....	36.....	1
<i>Fraxinus nigra</i> .....	32.....	1
<i>Betula papyrifera</i> .....	24.....	1



*(Photo from Department of Natural Resources Archives)*

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## **FnArl-Ix**

*Fraxinus-Acer/Impatiens (Ilex variant)*

*Fraxinus nigra-Acer rubrum/Impatiens capensis*  
*(Ilex verticillata variant)*

**Black Ash-Red Maple/Spotted Touch-me-not**  
**(Winterberry variant)**

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### **DISTRIBUTION**

Clark and Marathon Counties and adjacent regions; primarily areas of till rather than outwash.

### **LANDFORM AND SOILS**

Typically shallow (less than one foot) organic layer over finer texture mineral soil, e.g., loamy sand, sandy clay loam, loamy clay.

### **VEGETATION:**

**Common Forest Cover Types:** Black ash is the most consistently present and dominant species, but red maple and quaking aspen are common associates and are dominant in many stands. Conifers are absent or rare.

**Shrub and Small Tree Layer:** This layer may be well developed or sparse. Most common species are Currants/Gooseberries (*Ribes* spp.), Raspberries/Blackberries (*Rubus* spp.), Winterberry (*Ilex verticillata*), and Common Buckthorn (*Rhamnus cathartica*). In some stands, speckled alder (*Alnus rugosa*) is also well represented.

**Ground Flora Characteristics:** *Sphagnum* spp. is well represented, or at least present, in most stands. Spotted Touch-me-not (*Impatiens capensis*) was present in about 80 percent of study stands. Other species with a frequency of occurrence greater than 70 percent are Purple-stemmed Aster (*Aster puniceus*), Spinulose Shield Fern (*Dryopteris spinulosa*), Wild Lily-of-the-valley (*Maianthemum canadense*) and Swamp Dewberry (*Rubus hispidus*).

**Disturbance and Succession:** See the Introduction.

**Management Implications:** On the relative scale of wetland habitat type productivity (very poor, poor, poor to medium, medium, medium to rich) **FnArl-Ix** type is classified as “medium” (see the **Management Implications** section). It is the richest type in Region 5.

## REGION 5: PLANT SPECIES BY HABITAT TYPE (FnArl-Ix)

### *Understory Species in Order of Decreasing Frequency of Occurrence*

Common Name ( <i>Scientific Name</i> )	Freq. Cover	
	%	%
Raspberries/Blackberries ( <i>Rubus</i> spp.)	100	33
Sphagnum Mosses ( <i>Sphagnum</i> spp.)	100	26
Goldenrods ( <i>Solidago</i> spp.)	100	6
Currants/Gooseberries ( <i>Ribes</i> spp.)	93	32
Purple-stemmed Aster ( <i>Aster puniceus</i> )	93	3
Horsetails ( <i>Equisetum</i> spp.)	93	1
Winterberry ( <i>Ilex verticillata</i> )	93	7
Violets ( <i>Viola</i> spp.)	86	2
Spotted Touch-me-not ( <i>Impatiens capensis</i> )	79	11
Common Buckthorn ( <i>Rhamnus cathartica</i> )	79	10
Spinulose Shield Fern ( <i>Dryopteris spinulosa</i> )	79	4
Wild Lily-of-the valley ( <i>Maianthemum canadense</i> )	71	3
Swamp Dewberry ( <i>Rubus hispidus</i> )	71	3
Nodding Trillium ( <i>Trillium cernuum</i> )	64	2
Maple-leaved Viburnum ( <i>Viburnum acerifolium</i> )	64	2
Bedstraws ( <i>Galium</i> spp.)	57	3
Sensitive Fern ( <i>Onoclea sensibilis</i> )	57	1
Virginia Creeper ( <i>Parthenocissus</i> spp.)	57	3
Hog Peanut ( <i>Amphicarpa bracteata</i> )	50	7
Wild Sarsaparilla ( <i>Aralia nudicaulis</i> )	50	2
Bittersweet Nightshade ( <i>Solanum dulcamara</i> )	50	3
Stinging Nettle ( <i>Urtica dioica</i> )	43	7
Speckled Alder ( <i>Alnus rugosa</i> )	36	20
Interrupted Fern ( <i>Osmunda claytoniana</i> )	36	13
Columbine ( <i>Aquilegia canadensis</i> )	36	1
Asters ( <i>Aster</i> spp.)	36	1
Field Bindweed ( <i>Convolvulus arvensis</i> )	36	9
Starflower ( <i>Trientalis borealis</i> )	36	1
Lady Fern ( <i>Athyrium filix-femina</i> )	29	15
Bunchberry ( <i>Cornus canadensis</i> )	29	1
Geraniums ( <i>Geranium</i> spp.)	29	3
Larger Blue Flag ( <i>Iris versicolor</i> )	29	5
Skunk Cabbage ( <i>Symplocarpus foetidus</i> )	29	2
Juneberries ( <i>Amelanchier</i> spp.)	21	2
Bush Honeysuckle ( <i>Diervilla lonicera</i> )	21	6

<b>Common Name (<i>Scientific Name</i>)</b>	<b>Freq. Cover</b>	
	<b>%</b>	<b>%</b>
Common Wood Sorrel ( <i>Oxalis montana</i> ).....	21	1
Bracken Fern ( <i>Pteridium aquilinum</i> ).....	21	1
Carrion Flower ( <i>Smilax herbacea</i> ).....	21	1
Beaked Hazel ( <i>Corylus cornuta</i> ).....	14	28
Feather Mosses ( <i>Feather Moss spp.</i> ).....	14	1
Fly Honeysuckles ( <i>Lonicera spp.</i> ).....	14	2
Whorled Loosestrife ( <i>Lysimachia quadrifolia</i> ).....	14	3
Low-sweet Blueberry ( <i>Vaccinium angustifolium</i> ).....	14	9
Riverbank Grape ( <i>Vitis riparia</i> ).....	14	2



## REGION 5: TREE SPECIES BY HABITAT TYPE (FnArl-Ix)

### *Tree Species Frequency of Occurrence and Average Cover by Size Class*

<b>Sawtimber</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Populus tremuloides</i> .....	50.....	17
<i>Fraxinus nigra</i> .....	43.....	33
<i>Acer rubrum</i> .....	21.....	19
<i>Picea mariana</i> .....	21.....	24

<b>Poles</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Fraxinus nigra</i> .....	86.....	24
<i>Populus tremuloides</i> .....	50.....	47
<i>Acer rubrum</i> .....	43.....	16
<i>Picea mariana</i> .....	29.....	35
<i>Acer saccharum</i> .....	21.....	8
<i>Abies balsamea</i> .....	14.....	2
<i>Betula papyrifera</i> .....	14.....	3
<i>Ostrya virginiana</i> .....	14.....	3

<b>Saplings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Fraxinus nigra</i> .....	86.....	26
<i>Acer rubrum</i> .....	29.....	20
<i>Acer saccharum</i> .....	21.....	2
<i>Betula papyrifera</i> .....	21.....	4
<i>Prunus serotina</i> .....	21.....	4
<i>Ostrya virginiana</i> .....	14.....	4
<i>Tilia americana</i> .....	14.....	1
<i>Tsuga canadensis</i> .....	14.....	1

<b>Large Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Fraxinus nigra</i> .....	93.....	4
<i>Acer rubrum</i> .....	79.....	1
<i>Acer negundo</i> .....	14.....	1
<i>Acer saccharum</i> .....	14.....	1
<i>Betula papyrifera</i> .....	14.....	2
<i>Quercus velutina</i> .....	14.....	1

<b>Large Seedlings</b>	<b>Freq. %</b>	<b>Cover %</b>
<i>Acer rubrum</i> .....	93.....	1
<i>Fraxinus nigra</i> .....	71.....	1
<i>Quercus velutina</i> .....	57.....	1
<i>Populus tremuloides</i> .....	29.....	1
<i>Acer saccharum</i> .....	21.....	1
<i>Picea mariana</i> .....	14.....	1