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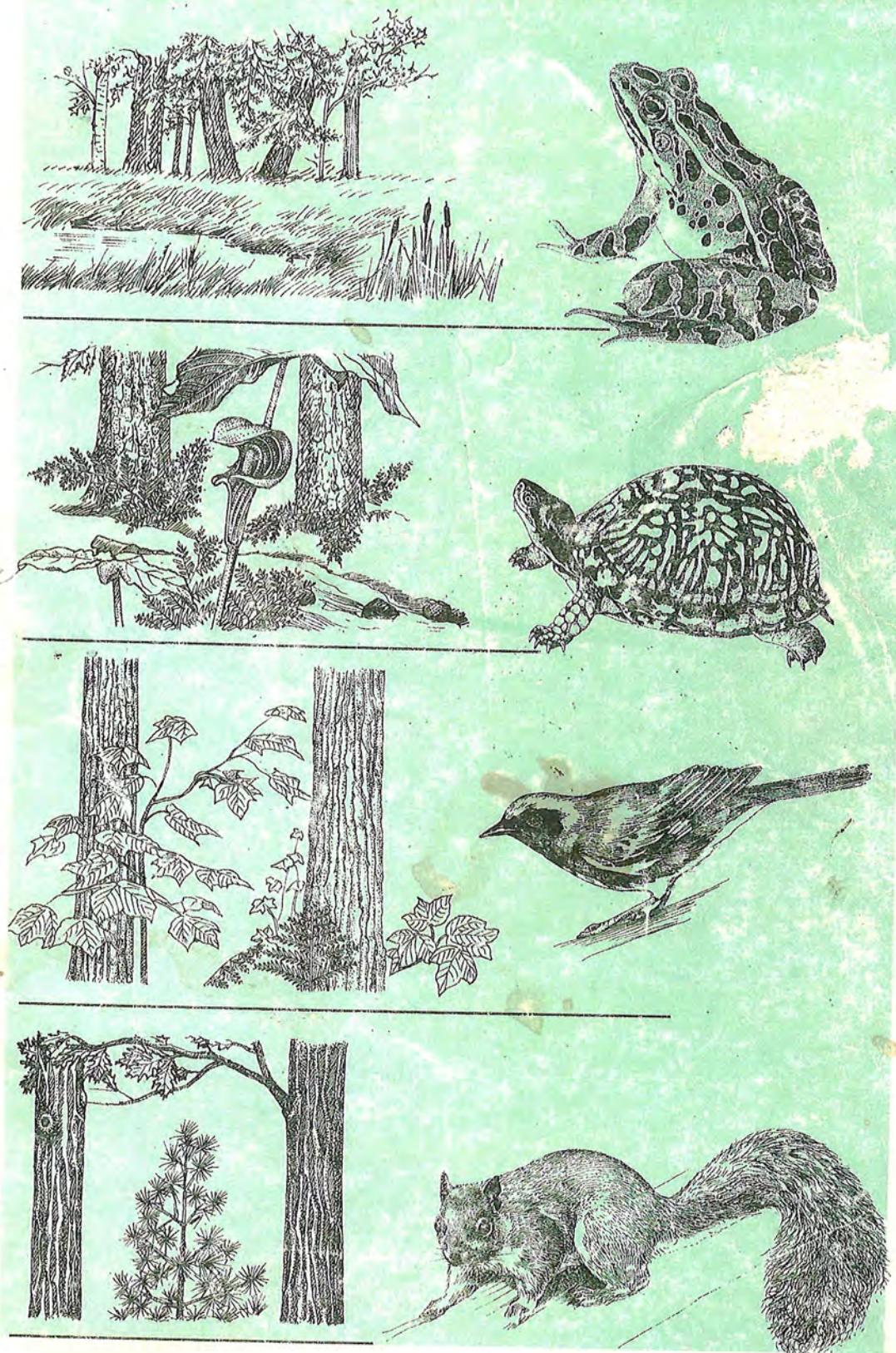
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New England Wildlife: Management of Forested Habitats

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Appendix A

Species Occurrence and Utilization, by Forested Habitat
Amphibians

Species	Local occurrence	Special habitat needs	Forested Habitats																		
			ASPEN-BIRCH			NH			SH			SPRUCE-FIR			HEMLOCK			OAK-PINE			
			S	Sp	St	L	S	Sp	Gr	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St
Eastern white pine																					
White pine—Northern red oak—Red maple																					
Northern red oak																					
Eastern hemlock																					
Red spruce																					
Red spruce-Balsam fir																					
Balsam fir																					
Red maple																					
Northern hardwoods																					
Paper birch																					
Aspen																					
Seasonal use																					
Woodland ponds or swamps for breeding.																					
Marbled Salamander <i>Ambystoma opacum</i>			B																		
Jefferson Salamander <i>Ambystoma jeffersonianum</i>																					
Silvery Salamander <i>Ambystoma platineum</i>			B																		
Blue-spotted Salamander <i>Ambystoma laterale</i>																					
Tremblay's Salamander <i>Ambystoma tremblayi</i>			B																		
Spotted Salamander <i>Ambystoma maculatum</i>																					
Red-spotted Newt <i>Notophthalmus v. viridescens</i>			B																		
Northern Dusky Salamander <i>Desmognathus f. fusca</i>																					
Mountain Dusky Salamander <i>Desmognathus oocincinus</i>			B																		
Redback Salamander <i>Plethodon cinereus</i>			B																		
Slimy Salamander <i>Plethodon g. glutinosus</i>																					

Local occurrence		Species	Special habitat needs												NH	SH	SPRUCE-FIR	HEMLOCK	OAK-PINE	Eastern white pine	
			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L							
		Four-toed Salamander <i>Hemidactylum scutatum</i>																			
		Northern Spring Salamander <i>Gyrinophilus p. porphyriticus</i>																			
		Northern Two-lined Salamander <i>Eurycea b. bislineata</i>																			
		Eastern Spadefoot <i>Scaphiopus h. holbrookii</i>																			
		Eastern American Toad <i>Bufo a. americanus</i>																			
		Fowler's Toad <i>Bufo woodhousii fowleri</i>																			
		Northern Spring Peeper <i>Hyla c. crucifer</i>																			
		Gray Treefrog <i>Hyla versicolor</i>																			
		Bullfrog <i>Rana catesbeiana</i>																			
		Green Frog <i>Rana clamitans melanota</i>																			
		Mink Frog <i>Rana septentrionalis</i>																			

OAK-PINE	Eastern white pine								S	Sp	St	L			
	White pine— Northern red oak— Red maple								S	Sp	St	L			
HEMLOCK	Northern red oak								S	Sp	St	L			
SPRUCE-FIR	Eastern hemlock								S	Sp	St	L			
	Red spruce								S	Sp	St	L			
SH	Red spruce-Balsam fir								S	Sp	St	L			
ASPEN-BIRCH	Balsam fir								S	Sp	St	L			
NH	Red maple								S	Sp	St	L			
	Northern hardwoods								S	Sp	St	L	U		
	Paper birch								S	Sp	St	L			
	Aspen								B						
	Seasonal use								W						
	Species	Special habitat needs													
	Wood Frog <i>Rana sylvatica</i>	Vernal woodland pools, back-waters of slow-moving streams.													
	Northern Leopard Frog <i>Rana pipiens</i>	Wet meadows.													
	Pickeral Frog <i>Rana palustris</i>	Shallow, clear water of bogs or woodland streams.													
	Local occurrence														

Species Occurrence and Utilization, by Forested Habitat
Reptiles

Species		Local occurrence		Special habitat needs		ASPEN-BIRCH		NH		SH		SPRUCE-FIR		HEMLOCK		OAK-PINE		Eastern white pine	
		B	W	B	W	S Sp St L	S Sp St L	S Sp St L U	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L				
	Common Snapping Turtle <i>Chelydra s. serpentina</i>			Aquatic habitat, sandy or gravelly soil or banks.															
	Bog Turtle <i>Clemmys muhlenbergii</i>			Wet meadow in full sun.		B	B												
	Wood Turtle <i>Clemmys insculpta</i>			Wooded river or stream banks.		B	B												
	Eastern Box Turtle <i>Terrapene c. carolina</i>			Old fields, clearings, ecotones with sandy soils.		B	B												
	Eastern Painted Turtle <i>Chrysemys p. picta</i>			Ponds with projecting or floating logs.		B	B												
	Five-lined Skink <i>Eumeces fasciatus</i>			Open woods with logs and slash piles.		B	B												
	Northern Water Snake <i>Nerodia s. sipedon</i>			Branches, logs overhanging water, or boulders of dams and causeways in reservoirs.		B	B												
	Northern Brown Snake <i>Storeria d. dekayi</i>					B	B												
	Northern Redbelly Snake <i>Storeria o. occipitomaculata</i>					B	B												
	Eastern Garter Snake <i>Thamnophis s. sirtalis</i>					B	B												
	Eastern Ribbon Snake <i>Thamnophis s. sauritus</i>			Mesic woodlands with aquatic habitat.		B	B												

Species		Special habitat needs											
Local occurrence													
ASPEN-BIRCH	NH	S-H											
OAK-PINE													
HEMLOCK													
SPRUCE-FIR													
Eastern white pine													
White pine— Northern red oak— Red maple													
Northern red oak													
Eastern hemlock													
Red spruce													
Red spruce-Balsam fir													
Balsam fir													
Red maple													
Northern hardwoods													
Paper birch													
Aspen													
Seasonal use													
Easter Hog-nose Snake <i>Heterodon platirhinos</i>													
Northern Ringneck Snake <i>Diadophis punctatus edwardsii</i>													
Eastern Worm Snake <i>Carpophis a. amoenus</i>													
Northern Black Racer <i>Crotaphopeltis c. constrictor</i>													
Eastern Smooth Green Snake <i>Ophioedrys v. ventralis</i>													
Black Rat Snake <i>Elaphe o. obsoleta</i>													
Eastern Milk Snake <i>Lampropeltis t. triangulum</i>													
Northern Copperhead <i>Agristostodon contortrix mokosense</i>													
Timber Rattlesnake <i>Crotalus horridus</i>													

Species Occurrence and Utilization, by Forested Habitat
Birds

Local occurrence		Species		Special habitat needs		Seasonal use		ASPEN-BIRCH		NH		SH		SPRUCE-FIR		HEMLOCK		OAK-PINE		Eastern white pine			
								S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
		Great Blue Heron <i>Ardea herodias</i>						B	BF	W	WF												
		Green-backed Heron <i>Butorides striatus</i>						B	BF	W	WF												
		Wood Duck <i>Aix sponsa</i>						B	BF	W	WF												
		American Black Duck <i>Anas rubripes</i>						B	BF	W	WF												
		Common Goldeneye <i>Bucephala clangula</i>						B	BF	W	WF												
		Bufflehead <i>Bucephala albeola</i>						B	BF	W	WF												
		Hooded Merganser <i>Lophodytes cucullatus</i>						B	BF	W	WF												
		Common Merganser <i>Mergus merganser</i>						B	BF	W	WF												
		Turkey Vulture <i>Cathartes aura</i>						B	BF	W	WF												
	▲	Bald Eagle <i>Haliaeetus leucocephalus</i>						B	BF	W	WF												
		Sharp-shinned Hawk <i>Accipiter striatus</i>						B	BF	W	WF												

Species		Special habitat needs											
Local occurrence		Habitat types											
OAK-PINE		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Eastern white pine		●	●	●	●	●	●	●	●	●	●	●	●
White pine—Northern red oak—Red maple		●	●	●	●	●	●	●	●	●	●	●	●
Northern red oak		●	●	●	●	●	●	●	●	●	●	●	●
HEMLOCK		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Eastern hemlock		●	●	●	●	●	●	●	●	●	●	●	●
SPRUCE-FIR		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Red spruce		●	●	●	●	●	●	●	●	●	●	●	●
Red spruce-Balsam fir		●	●	●	●	●	●	●	●	●	●	●	●
Balsam fir		●	●	●	●	●	●	●	●	●	●	●	●
NH	SH	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Red maple		●	●	●	●	●	●	●	●	●	●	●	●
Northern hardwoods		●	●	●	●	●	●	●	●	●	●	●	●
ASPEN-BIRCH	Paper birch	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Aspen		●	●	●	●	●	●	●	●	●	●	●	●
Seasonal use		B	BF	W	WF	B	BF	W	WF	B	BF	W	WF
Cooper's Hawk <i>Accipiter cooperii</i>													
Northern Goshawk <i>Accipiter gentilis</i>													
Red-shouldered Hawk <i>Buteo lineatus</i>													
Red-tailed Hawk <i>Buteo jamaicensis</i>													
Broad-winged Hawk <i>Buteo platypterus</i>													
Red-tailed Hawk <i>Buteo jamaicensis</i>													
Golden Eagle <i>Aquila chrysaetos</i>													
American Kestrel <i>Falco sparverius</i>													
Merlin <i>Falco columbarius</i>													
Peregrine Falcon <i>Falco peregrinus</i>	▲												
Spruce Grouse <i>Dendragapus canadensis</i>													
Ruffed Grouse <i>Bonasa umbellus</i>													

		S S _p S _t L						S S _p S _t L						S S _p S _t L						S S _p S _t L						S S _p S _t L					
		OAK-PINE			HEMLOCK			SPRUCE-FIR			ASH-BIRCH			NH			SH			RED MAPLE			WHITE PINE			NORTHERN RED OAK			EASTERN WHITE PINE		
Species	Special habitat needs	S	S _p	S _t	L	S	S _p	S _t	L	S	S _p	S _t	L	S	S _p	S _t	L	S	S _p	S _t	L	S	S _p	S _t	L	S	S _p	S _t	L		
Wild Turkey <i>Meleagris gallopavo</i>	Open, mast-producing woodlands, large conifers for roosting, woodland clearings	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF		
Northern Bobwhite <i>Colinus virginianus</i>	Brushy field edges, well-drained sandy or loamy soils.																														
American Woodcock <i>Scolopax minor</i>	Fertile moist soil containing earthworms, clearings and dense swales.																														
Mourning Dove <i>Zenaidura macroura</i>	Open land with bare ground.																														
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i>	Low, dense thickets.																														
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	Low, dense thickets.																														
Eastern Screech-Owl <i>Otus asio</i>	Cavity trees (12" dbh minimum).																														
Great Horned Owl <i>Bubo virginianus</i>	Large abandoned hawk nests, large tree cavities.																														
Northern Hawk-Owl <i>Surnia ulula</i>	Open coniferous or mixed woodland, burns with standing stubs.																														
Barred Owl <i>Strix varia</i>	Cool, damp lowlands; cavity trees with minimum dbh of 20"																														
Great Gray Owl <i>Strix nebulosa</i>	Meadows, swamps near woodlands.																														
Local occurrence																															

		OAK-PINE											
		HEMLOCK											
		SPRUCE-FIR											
Species		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Eastern white pine		●	●	●	●	●	●	●	●	●	●	●	
White pine—Northern red oak—Red maple													
Northern red oak													
		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Eastern hemlock		●	●	●	●	●	●	●	●	●	●	●	
Red spruce													
Red spruce-Balsam fir													
Balsam fir													
SH		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Red maple													
Northern hardwoods													
NH		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
Paper birch													
Aspen													
Seasonal use		B	BF	W	WF	B	BF	W	WF	B	BF	W	WF
Special habitat needs		Dense conifer thickets in open country.											
Long-eared Owl <i>Asio otus</i>		Cavity trees, often with large woodpecker holes.											
Boreal Owl <i>Aegolius funereus</i>		Cavity trees with minimum dbh of 12" near forest clearings.											
Northern Saw-whet Owl <i>Aegolius acadicus</i>		Common Nighthawk <i>Chordeiles minor</i>											
Whip-poor-will <i>Caprimulgus vociferus</i>		Ruby-throated Hummingbird <i>Archilochus colubris</i>											
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>		Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>											
Red-bellied Woodpecker <i>Melanerpes carolinus</i>		Downy Woodpecker <i>Picoides pubescens</i>											
Hairy Woodpecker <i>Picoides villosus</i>		Trees, limbs with decay column (minimum dbh 6").											
Local occurrence		Trees, with minimal dbh of 10" especially aspens containing sound decayed wood.											

Local occurrence		Species	Special habitat needs	ASPEN-BIRCH		NH		SH		SPRUCE-FIR		HEMLOCK		OAK-PINE		Eastern white pine			
				S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
B		Three-toed Woodpecker <i>Picoides tridactylus</i>	Spruce, fir trees with column of decayed wood (minimum dbh 12"); dead trees with loose bark.		BF	W	WF												
		Black-backed Woodpecker <i>Picoides arcticus</i>	Spruce, fir trees with column of decayed wood (minimum dbh 10"); dead trees with loose bark, often near water.		BF	W	WF												
		Northern Flicker <i>Colaptes auratus</i>	Open areas; trees with column of decayed wood (minimum dbh 12"); forest edges.		B	W	WF												
		Pileated Woodpecker <i>Dryocopus pileatus</i>	Mature forest; trees with column of decayed wood at least 20" dbh.		BF	W	WF												
		Olive-sided Flycatcher <i>Contopus borealis</i>	Low, wet coniferous forest, bog, etc. with high song perch.		B	BF	W												
		Eastern Wood-Pewee <i>Contopus virens</i>	Forest edge or open woods.		B	BF	W												
		Yellow-bellied Flycatcher <i>Empidonax flaviventris</i>	Low, wet coniferous forest.		B	BF	W												
		Acadian Flycatcher <i>Empidonax virescens</i>	Mature woodlands with openings in the canopy.		B	BF	W												
		Alder Flycatcher <i>Empidonax alnorum</i>	Thickets, low shrubs and clearings.		B	BF	W												
		Willow Flycatcher <i>Empidonax traillii</i>	Low deciduous trees and shrubs with clearings, thick hardwood seedlings.		B	BF	W												
		Least Flycatcher <i>Empidonax minimus</i>	Open deciduous or mixed forest, edges.		B	BF	W												

		Species	Special habitat needs												Local occurrence					
			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	W	WF
		Eastern white pine																		
		White pine—Northern red oak—Red maple																		
		Northern red oak																		
HEMLOCK		Eastern hemlock																		
		Red spruce																		
		Red spruce-Balsam fir																		
		Balsam fir																		
SPRUCE-FIR		Red maple																		
		Northern hardwoods																		
ASPEN-BIRCH		Paper birch																		
		Aspen																		
		Seasonal use	B																	
		Exposed perches; cliffs or ledges in streamside clearings; woodland edges.	BF																	
		Mature cavity trees; deciduous forest, edges.	W																	
		Clearings, fields, orchards.	WF																	
		Martin houses near ponds, lakes.	B																	
		Cavity trees (minimum dbh 10'); open areas, especially near water.	BF																	
		Sandy or clay banks stabilized by a grassy overhang.	W																	
		Open areas; mud; vertical wall with an overhang.	WF																	
		Abandoned or little-used buildings.	B																	
		Coniferous forests.	BF																	
		Gray Jay <i>Persoreus canadensis</i>	W																	
		Blue Jay <i>Cyanocitta cristata</i>	WF																	

	Species	Special habitat needs	S	Sp	St	L																									
	Eastern white pine																														
OAK-PINE	White pine—Northern red oak—Red maple				●																										
	Northern red oak																														
HEMLOCK	Eastern hemlock																														
SPRUCE-FIR	Red spruce																														
	Red spruce-Balsam fir																														
	Balsam fir																														
SH	Red maple																														
NH	Northern hardwoods																														
ASPIN-BIRCH	Paper birch																														
	Aspen																														
	Seasonal use		B	BF	W	WF																									
	American Crow <i>Corvus brachyrhynchos</i>	Cliffs																													
	Common Raven <i>Corvus corax</i>																														
	Black-capped Chickadee <i>Parus atricapillus</i>	Cavity trees or stubs in small woodlands, clearings or open woodlands.																													
	Tufted Titmouse <i>Parus bicolor</i>	Softwood snags, stubs.																													
	Boreal Chickadee <i>Parus hudsonicus</i>	Cavity trees at least 8" dbh.																													
	Red-breasted Nuthatch <i>Sitta canadensis</i>	Cavity trees in mixed or coniferous woods (minimum dbh 12").																													
	White-breasted Nuthatch <i>Sitta carolinensis</i>	Woodlands containing trees with sloughing or loose bark.																													
	Brown Creeper <i>Certhia americana</i>	Cavity trees amid brushy vegetation, thickets, swamps.																													
	Carolina Wren <i>Thryothorus ludovicianus</i>	Cavity trees, shrubs.																													
	House Wren <i>Troglodytes aedon</i>																														
	Winter Wren <i>Troglodytes troglodytes</i>	Moist, mixed or coniferous woodlands with down logs; low woody vegetation.																													

	Species	Special habitat needs	B	BF	W	WF																					
	Local occurrence																										
OAK-PINE	Eastern white pine	Dense conifer thickets or stands, esp. spruce.																									
OAK-PINE	White pine—Northern red oak—Red maple	Conifer stands, or mixed stands with a predominance of softwoods, esp. spruce or fir.																									
OAK-PINE	Northern red oak	Open deciduous woodland.																									
HEMLOCK	Eastern hemlock	Vireo <i>Catharus fuscescens</i>																									
SPRUCE-FIR	Red spruce	Ruby-crowned Kinglet <i>Regulus calendula</i>																									
SPRUCE-FIR	Red spruce-Balsam fir	Blue-gray Gnatcatcher <i>Polioploca caerulea</i>																									
SPRUCE-FIR	Balsam fir	Eastern Bluebird <i>Sialia sialis</i>																									
SH	Red maple	Gray-cheeked Thrush <i>Catharus minimus</i>																									
NH	Northern hardwoods	Swainson's Thrush <i>Catharus ustulatus</i>																									
ASPBEN-BIRCH	Paper birch	Hermit Thrush <i>Catharus guttatus</i>																									
ASPBEN-BIRCH	Aspen	Wood Thrush <i>Hylocichla mustelina</i>																									
	Seasonal use	American Robin <i>Turdus migratorius</i>																									
		Gray Catbird <i>Dumetella carolinensis</i>																									

Species		Special habitat needs	Habitat											
Local occurrence			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	<i>Northern Mockingbird</i> <i>Mimus polyglottos</i>	Low thickets; high perches; persistent fruits.	B	BF	BF	W	W	WF						
	<i>Brown Thrasher</i> <i>Toxostoma rufum</i>	Hardwood forest-field ecotone.	B	BF	BF	W	W	WF						
	<i>Bohemian Waxwing</i> <i>Bombycilla garrulus</i>	Open country, shrubs, trees, thickets with persistent fruits (winter).	B	BF	BF	W	W	WF						
	<i>Cedar Waxwing</i> <i>Bombycilla cedrorum</i>	Open country with scattered trees, thickets with persistent fruits (winter).	B	BF	BF	W	W	WF						
	<i>Northern Shrike</i> <i>Lanius excubitor</i>	Scattered trees or shrubs in an open country.	B	BF	BF	W	W	WF						
	<i>Loggerhead Shrike</i> <i>Lanius ludovicianus</i>	Open country with short grasses, scattered trees, shrubs.	B	BF	BF	W	W	WF						
	<i>European Starling</i> <i>Sturnus vulgaris</i>	Cavity trees with 10" minimum dbh.	B	BF	BF	W	W	WF						
	<i>White-eyed Vireo</i> <i>Vireo griseus</i>	Low shrubs, thickets.	B	BF	BF	W	W	WF						
	<i>Solitary Vireo</i> <i>Vireo solitarius</i>	Mixed or predominantly coniferous woodland.	B	BF	BF	W	W	WF						
	<i>Yellow-throated Vireo</i> <i>Vireo flavifrons</i>	Mature deciduous forest.	B	BF	BF	W	W	WF						
	<i>Warbling Vireo</i> <i>Vireo gilvus</i>	Scattered deciduous trees, shade trees.	B	BF	BF	W	W	WF						

Species		Special habitat needs									
Local occurrence											
		OAK-PINE	HEMLOCK	SPRUCE-FIR	SH	NH	ASPEN-BIRCH				
Eastern white pine		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
White pine— Northern red oak— Red maple		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Northern red oak		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Eastern hemlock		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Red spruce		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Red spruce-Balsam fir		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Balsam fir		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Red maple		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Northern hardwoods		S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U	S S _p S _t L U
Paper birch		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Aspen		S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L	S S _p S _t L
Seasonal use		B BF W WF	B BF W WF	B BF W WF	B BF W WF	B BF W WF	B BF W WF	B BF W WF	B BF W WF	B BF W WF	B BF W WF
Philadelphia Vireo <i>Vireo philadelphicus</i>		Hardwood forest edges.									
Red-eyed Vireo <i>Vireo olivaceus</i>		Old fields with scattered shrubs and small trees.									
Blue-winged Warbler <i>Vermivora pinus</i>		Old fields with scattered shrubs and small trees.									
Golden-winged Warbler <i>Vermivora chrysopera</i>		Open areas with saplings in deciduous woodlands.									
Tennessee Warbler <i>Vermivora peregrina</i>		Brushy, semi-open country.									
Nashville Warbler <i>Vermivora ruficapilla</i>		Scattered trees interspersed with brush, thickets, slash.									
Northern Parula <i>Parula americana</i>		Presence of bearded lichen.									
Yellow Warbler <i>Dendroica petechia</i>		Scattered small trees or dense shrubs, esp. near water.									
Chestnut-sided Warbler <i>Dendroica pensylvanica</i>		Sprouts and brush at wood margins; hardwood seedling stands.									
Magnolia Warbler <i>Dendroica magnolia</i>		Young stands of spruce or fir, sometimes of hemlock.									
Cape May Warbler <i>Dendroica tigrina</i>		Spruce forest.									

				S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L		
	OAK-PINE		Eastern white pine																							
			White pine—Northern red oak—Red maple																							
		NORTHERN RED OAK	Northern red oak																							
	HEMLOCK		Eastern hemlock																							
	SPRUCE-FIR		Red spruce																							
			Red spruce-Balsam fir																							
		BALSAM FIR	Balsam fir																							
	SH		Red maple																							
	NH		Northern hardwoods					S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	S Sp St L U	
	ASPEN-BIRCH		Paper birch																							
			Aspen					S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	
		Seasonal use		B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	B BF WF	
				Special habitat needs	Hardwood or mixed woodlands with well-developed understory.	Coniferous trees (summer), bayberry thickets (winter).	Coniferous or mixed woodlands.	Pine forest.	Coniferous cover in old fields, hardwood saplings, slash.	Scattered trees, thick shrub growth.	Thick stands of spruce, fir, spruce-fir.	Stunted spruce, esp. at high elevations.	Mature deciduous woodland.													
		Species		Black-throated Blue Warbler <i>Dendroica caerulea</i>		Yellow-rumped Warbler <i>Dendroica coronata</i>	Black-throated Green Warbler <i>Dendroica virens</i>	Blackburnian Warbler <i>Dendroica fusca</i>	Prairie Warbler <i>Dendroica discolor</i>	Palm Warbler <i>Dendroica palmarum</i>	Bay-breasted Warbler <i>Dendroica castanea</i>	Blackpoll Warbler <i>Dendroica striata</i>	Cerulean Warbler <i>Dendroica cerulea</i>	Black-and-White Warbler <i>Mniotilla varia</i>												
		Local occurrence																								

		Species	Special habitat needs	Habitat											
				S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
		Local occurrence		B	BF	W	WF	B	BF	W	WF	B	BF	W	WF
OAK-PINE	American Redstart <i>Setophaga ruticilla</i>		Tree cavities in moist hardwood forest.												
	Prothonotary Warbler <i>Protonotaria citrea</i>														
	Worm-eating Warbler <i>Helminthorus vermivorus</i>		Well-developed understory.												
	Ovenbird <i>Seiurus aurocapillus</i>														
	Northern Waterthrush <i>Seiurus noveboracensis</i>		Cool, shaded, wet ground with shallow pools.												
	Louisiana Waterthrush <i>Seiurus motacilla</i>		Woodlands with flowing water.												
	Mourning Warbler <i>Oporornis philadelphica</i>		Extensive stands of hardwood regeneration.												
	Common Yellowthroat <i>Geothlypis trichas</i>														
	Hooded Warbler <i>Wilsonia citrina</i>		Dense understory.												
	Wilson's Warbler <i>Wilsonia pusilla</i>		Cold shrub swamps, bogs.												
HEMLOCK	Canada Warbler <i>Wilsonia canadensis</i>		Dense deciduous or ericaceous understory.												
	Eastern white pine			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	White pine—Northern red oak—Red maple			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	Northern red oak														
	Eastern hemlock														
	Red spruce														
	Red spruce-Balsam fir														
	Balsam fir														
	Red maple			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	Northern hardwoods			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
SPRUCE-FIR	Paper birch			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	Aspen			S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	Seasonal use			B	BF	W	WF	B	BF	W	WF	B	BF	W	WF

				S	Sp	St	L
	OAK-PINE						
	Eastern white pine						
	White pine— Northern red oak— Red maple						
	Northern red oak						
	HEMLOCK			S	Sp	St	L
	Eastern hemlock						
	SPRUCE-FIR			S	Sp	St	L
	Red spruce						
	Red spruce-Balsam fir						
	Balsam fir						
	SH			S	Sp	St	L
	Red maple						
	NH			S	Sp	St	L
	Northern hardwoods						
	ASPEN-BIRCH			S	Sp	St	L
	Paper birch						
	Aspen						
	Seasonal use			B			
		Species	Special habitat needs	BF			
				BF			
			Yellow-breasted Chat <i>Icteria virens</i>	W			
				WF			
			Scarlet Tanager <i>Piranga olivacea</i>	B			
				BF			
			Northern Cardinal <i>Cardinalis cardinalis</i>	W			
				WF			
			Rose-breasted Grosbeak <i>Pheucticus ludovicianus</i>	B			
				BF			
			Indigo Bunting <i>Passerina cyanea</i>	W			
				WF			
			Rufous-sided Towhee <i>Pipilo erythrourhynchus</i>	B			
				BF			
			American Tree Sparrow <i>Spizella arborea</i>	W			
				WF			
			Chipping Sparrow <i>Spizella passerina</i>	B			
				BF			
			Field Sparrow <i>Spizella pusilla</i>	W			
				WF			
			Old fields .	B			
				BF			
			Fox Sparrow <i>Passerella iliaca</i>	W			
				WF			
			Song Sparrow <i>Melospiza melodia</i>	B			
				BF			
				W			
				WF			

		Special habitat needs						Local occurrence														
		Species			OAK-PINE			HEMLOCK			SPRUCE-FIR			SH			NH			ASPEN-BIRCH		
		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	
	Eastern white pine																					
	White pine— Northern red oak— Red maple																					
	Northern red oak																					
OAK-PINE	Eastern hemlock																					
	Red spruce																					
	Red spruce-Balsam fir																					
	Balsam fir																					
HEMLOCK	Red maple																					
	Northern hardwoods																					
	Paper birch																					
	Aspen																					
SPRUCE-FIR	Seasonal use	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	
	Lincoln's Sparrow <i>Melospiza lincolini</i>																					
	Swamp Sparrow <i>Melospiza georgiana</i>																					
	White-throated Sparrow <i>Zonotrichia albicollis</i>																					
	Dark-eyed Junco <i>Junco hyemalis</i>																					
	Red-winged Blackbird <i>Agelaius phoeniceus</i>																					
	Rusty Blackbird <i>Euphagus carolinus</i>																					
	Common Grackle <i>Quiscalus quiscula</i>																					
	Brown-headed Cowbird <i>Molothrus ater</i>																					
	Orchard Oriole <i>Icterus spurius</i>																					
	Northern Oriole <i>Icterus galbula</i>																					
	Pine Grosbeak <i>Pinicola enucleator</i>																					

		Eastern white pine	S Sp St L																						
	OAK-PINE	White pine— Northern red oak— Red maple	S Sp St L																						
	NORTHERN RED OAK	Northern red oak	S Sp St L																						
	HEMLOCK	Eastern hemlock	S Sp St L																						
	SPRUCE-FIR	Red spruce	S Sp St L	● ●																					
		Red spruce-Balsam fir	S Sp St L	● ● ● ●																					
		Balsam fir	S Sp St L	● ●																					
	SH	Red maple	S Sp St L																						
	NH	Northern hardwoods	S Sp St L U																						
	ASPEN-BIRCH	Paper birch	S Sp St L																						
		Aspen	S Sp St L																						
		Seasonal use	B BF W WF																						
		Special habitat needs																							
		Purple Finch <i>Carpodacus purpureus</i>	Coniferous trees.																						
		House Finch <i>Carpodacus mexicanus</i>	Open ground with low seed-producing plants.																						
		Red Crossbill <i>Loxia curvirostra</i>	Northern coniferous trees.																						
		White-winged Crossbill <i>Loxia leucoptera</i>	Northern coniferous trees.																						
		Common Redpoll <i>Carduelis flammea</i>	Open country.																						
		Hoary Redpoll <i>Carduelis hornemanni</i>	Open country—																						
		Pine Siskin <i>Carduelis pinus</i>	Conifers.																						
		American Goldfinch <i>Carduelis tristis</i>	Open, weedy fields with scattered small trees.																						
		Evening Grosbeak <i>Coccothraustes vespertinus</i>	Spruce and fir forest (breeding season).																						

Species Occurrence and Utilization, by Forested Habitat
Mammals

				OAK-PINE														
	Species	Special habitat needs	Local occurrence	Eastern white pine	White pine—Northern red oak—Red maple	Northern red oak									S	Sp	St	L
				S	Sp	St	L	S	Sp	St	L	S	Sp	St	L	S	Sp	St
HEMLOCK	Eastern hemlock																	
	Red spruce																	
	Red spruce-Balsam fir																	
	Balsam fir																	
SPRUCE-FIR	Red maple																	
	Northern hardwoods																	
	Paper birch																	
	Aspen																	
ASPEN-BIRCH	Seasonal use			B	BF	W	WF	B	BF	W	WF	B	BF	W	WF	B	BF	W
	Virginia Opossum <i>Didelphis virginiana</i>	Log or tree cavity.																
	Masked Shrew <i>Scorex cinereus</i>	Damp woodlands, ground cover.																
	Water Shrew <i>Scorex palustris</i>	Herbaceous cover, cold-water wet-lands.																
	Smoky Shrew <i>Scorex fumatus</i>	Loose damp leaf litter.																
	Long-tailed Shrew <i>Scorex dispar</i>	Rocky, wooded sites.																
	Pygmy Shrew <i>Scorex hoyi</i>	Moist leaf mold near water.																
	Northern Short-tailed Shrew <i>Blarina brevicauda</i>	Low vegetation, damp, loose leaf litter.																
	Least Shrew <i>Cryptotis parvus</i>	Loose soil.																
	Hairy-tailed Mole <i>Parascalops breweri</i>	Loose, moist, well-drained soil.																
	Eastern Mole <i>Scalopus aquaticus</i>	Soft, moist soils containing earthworms.																
	Star-nosed Mole <i>Condylura cristata</i>	Wet muck, humus.																

Species		Special habitat needs											
Local occurrence													
		S	Sp	St	L	S	Sp	St	L	S	Sp	St	L
	Eastern white pine												
OAK-PINE	White pine—Northern red oak—Red maple												
	Northern red oak												
HEMLOCK	Eastern hemlock												
	Red spruce												
SPRUCE-FIR	Red spruce-Balsam fir												
	Balsam fir												
SH	Red maple												
NH	Northern hardwoods												
ASPEN-BIRCH	Paper birch												
	Aspen												
	Seasonal use												
		B	BF	W	WF	B	BF	W	WF	B	BF	W	WF
	Little Brown Myotis <i>Myotis lucifugus</i>												
		Females: dark, warm sites for maternity colonies. Forest openings for feeding.											
	Keen's Myotis <i>Myotis keenii</i>												
		Caves, mine shafts with temperatures near 40°F; high relative humidity and calm air.											
	Indiana Myotis <i>Myotis sodalis</i>												
		Caves for hibernation; cool stable temperature of 40° to 46°F thru winter.											
	Small-footed Myotis <i>Myotis leibii</i>												
		B	BF	W	WF	B	BF	W	WF	B	BF	W	WF
	Silver-haired Bat <i>Lasionycteris noctivagans</i>												
		Dead trees with loose bark or cavities; streams.											
	Eastern Pipistrelle <i>Pipistrellus subflavus</i>												
		Warm, draft-free, damp sites for hibernation; open woods.											
	Big Brown Bat <i>Eptesicus fuscus</i>												
		Cold, dry areas of caves or buildings for hibernation.											
	Red Bat <i>Lasionycteris borealis</i>												
		Deciduous trees on forest edges for roosting.											
	Hoary Bat <i>Lasionycteris cinereus</i>												
		Edges of coniferous forests.											
	Eastern Cottontail <i>Sylvilagus floridanus</i>												
		Brush piles, stone walls, dens or burrows; herbaceous and shrubby cover.											
	New England Cottontail <i>Sylvilagus transitionalis</i>												
		Young woodlands with thick cover.											

Species		Special habitat needs									
		Local occurrence									
OAK-PINE	Eastern white pine	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	White pine— Northern red oak— Red maple	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
HEMLOCK	Northern red oak	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
SPRUCE-FIR	Eastern hemlock	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
ASPEN-BIRCH	Red spruce	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	Red spruce-Balsam fir	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	Balsam fir	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
NH	Red maple	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	Northern hardwoods	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	Paper birch	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	Aspen	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L	S Sp St L
	Seasonal use	B BF W WF	Dense brushy or softwood cover.								
		B BF W WF	Fields, meadows.								
		B BF W WF	Forest edge or shrub cover, elevated perches, lgs.								
		B BF W WF	Open land.								
		B BF W WF	Tall trees for dens or leaf nests.								
		B BF W WF	Woodlands with mature trees, conifers preferred.								
		B BF W WF	Mature woodland with cavity trees; favors cavities with entrance diameters of 1.6 to 2 in.								
		B BF W WF	Mature trees, cavities for winter dens; arboreal lichens.								
		B BF W WF	Woodland streams, lack of disturbance.								
		B BF W WF	Northern hardwoods or northern coniferous forests.								
		B BF W WF	White-footed Mouse <i>Peromyscus leucopus</i>								

Species		Special habitat needs									
Local occurrence		Habitat needs									
		Springs, brooks, seeps, bogs; debris or slash cover.	Meadow Vole <i>Microtus pennsylvanicus</i>	Cool, moist, rocky woodlands with herbaceous ground cover and flowing water.	Ground cover of leaves or grass; moist well-drained soils.	Moist soils.	Moist to wet loose soils or leaf mulch.	Herbaceous groundcover, loose soils.	Moist cool woodland, loose soils, hardaceous cover. No WF. hibernates.	Rock ledges or den trees.	Wet soil.
OAK-PINE	Eastern white pine	W	W	W	W	W	W	W	W	W	W
OAK-PINE	White pine—Northern red oak—Red maple	W	W	W	W	W	W	W	W	W	W
HEMLOCK	Northern red oak	W	W	W	W	W	W	W	W	W	W
HEMLOCK	Eastern hemlock	W	W	W	W	W	W	W	W	W	W
SPRUCE-FIR	Red spruce	W	W	W	W	W	W	W	W	W	W
SPRUCE-FIR	Red spruce-Balsam fir	W	W	W	W	W	W	W	W	W	W
SPRUCE-FIR	Balsam fir	W	W	W	W	W	W	W	W	W	W
NH	Red maple	W	W	W	W	W	W	W	W	W	W
NH	Northern hardwoods	W	W	W	W	W	W	W	W	W	W
ASPEN-BIRCH	Paper birch	W	W	W	W	W	W	W	W	W	W
ASPEN-BIRCH	Aspen	W	W	W	W	W	W	W	W	W	W
Seasonal use		B	BF	W	WF	B	BF	W	WF	B	BF

						S	Sp	St	L			
	OAK-PINE	Eastern white pine										
		White pine— Northern red oak— Red maple										
		Northern red oak										
	HEMLOCK	Eastern hemlock										
		Red spruce										
		Red spruce-Balsam fir										
		Balsam fir										
	SH	Red maple										
		Northern hardwoods										
	ASPIN BIRCH	Paper birch										
		Aspen										
		Seasonal use										
		Species	Special habitat needs									
			Hollow logs, tree cavities, rock crevices.									
		Gray Fox <i>Urocyon cinereoargenteus</i>										
		Black Bear <i>Ursus americanus</i>	Fallen trees, hollow logs, rock ledges, slash piles.									
		Raccoon <i>Procyon lotor</i>	Hollow trees, dens usually located 10 ft. or more above ground.									
		Marten <i>Martes americana</i>	Hollow trees, logs.									
		Fisher <i>Martes pennanti</i>	Hollow trees, logs.									
		Ermine <i>Mustela erminea</i>	Dense brushy cover, slash.									
		Long-tailed Weasel <i>Mustela frenata</i>										
		Mink <i>Mustela vison</i>	Hollow logs, natural cavities, under tree roots, riparian habitat.									
		Striped Skunk <i>Mephitis mephitis</i>	Body of water such as stream, pond, lake, river.									
		River Otter <i>Lutra canadensis</i>										
		Mountain Lion <i>Puma concolor</i>	Seclusion; deer.									

		Eastern white pine													
	OAK-PINE														
		White pine— Northern red oak— Red maple													
		Northern red oak													
	HEMLOCK														
		Eastern hemlock													
	SPRUCE-FIR														
		Red spruce													
		Red spruce-Balsam fir													
		Balsam fir													
	SH														
		Red maple													
	NH														
		Northern hardwoods													
	ASPEN-BIRCH														
		Paper birch													
		Aspen													
		Seasonal use													
			Special habitat needs												
			Lynx <i>Felis lynx</i>												
			Bobcat <i>Felis rufus</i>												
			White-tailed Deer <i>Odocoileus virginianus</i>												
			Moose <i>Alces alces</i>												
				Secluded den sites, extensive forests.											
				Rock ledges, under windfalls or in hollow logs.											
				Softwood yarding cover in North.											
				Wetlands (in summer).											
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