

SPECIES GUIDELINES

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INTRODUCTION

The tables and other information in this section will help you customize the Birds in Forested Landscapes project for your geographic area or particular interests. The first table lists which species breed in each state and province. After identifying the species that you can potentially study, you should check the individual species accounts located in the *References: Species Accounts* section of this manual for detailed range maps and habitat preferences. This will narrow down the choice of species that you can survey for at any particular study site. The summary table of breeding chronology can then be used to plan when to make your visits to each study site. From the list of possible species, you may choose to survey for as few or as many species as you feel comfortable studying.

We have also included other information such as identification and behavior tips for some species or species groups. We hope to be able to add more of these tips in future years of the BFL project.

WHICH SPECIES CAN I STUDY?

Distribution of BFL study species by state and province

The following table shows which species breed in each state or province. If a species can be found throughout a state or province, or if it breeds in many localities within a state, it is indicated by a diamond (◆). If the breeding distribution is restricted to a small area within the state or province, a letter is used to indicate where the species may be found. Please see the individual species accounts for detailed range maps and habitat information.

- ◆ breeds in most or all of the state or province
- M mountains only
- C center only
- N north only
- E east only
- S south only
- W west only
- NE northeast only
- SE southeast only
- SW southwest only
- NW northwest only

TABLE 3

	AK	AL	AR	AZ	CA	CO	CT	DC	DE	FL	GA
Sharp-shinned Hawk	◆	N		M	◆	◆	◆	◆	◆		N
Yellow-bellied Sapsucker	E						NW				
Veery				E		◆	◆	◆	N		M
Bicknell's Thrush											
Black-throated Blue Warbler							◆				M
Blackburnian Warbler							◆				M
Bay-breasted Warbler											
Canada Warbler							◆				M
Broad-winged Hawk		◆	◆				◆	◆	◆	N	◆
Eastern Wood-Pewee		◆	◆				◆	◆	◆	N	◆
Wood Thrush		◆	◆				◆	◆	◆	N	◆
Cerulean Warbler		N	◆				◆	◆	N		N
Worm-eating Warbler		◆	◆				◆	◆	◆	NW	N
Louisiana Waterthrush		◆	◆				◆	◆	◆	N	◆
Brown-headed Nuthatch		◆	S						S	◆	◆
Red-headed Woodpecker		◆	◆			E	◆	◆	◆	◆	◆
Red-shouldered Hawk		◆	◆		◆		◆	◆	◆	◆	◆
Acadian Flycatcher		◆	◆				◆	◆	◆	N	◆
Yellow-throated Vireo		◆	◆				◆	◆	◆	N	◆
Northern Parula		◆	◆					◆	◆	◆	◆
Prothonotary Warbler		◆	◆				◆	◆	◆	N	◆
Swainson's Warbler		◆	◆							N	◆
Kentucky Warbler		◆	◆					◆	◆	NW	◆
Hooded Warbler		◆	◆				◆	◆	◆	N	◆
Red-breasted Sapsucker	SE				◆						
Williamson's Sapsucker				NE	M	W					
Lewis's Woodpecker				N	◆	◆					
White-headed Woodpecker					M						
Olive-sided Flycatcher	◆			N	◆	M					
Chestnut-backed Chickadee	SE				N						
Cassin's Vireo					◆						
Swainson's Thrush	◆			N	M	M					
Hermit Thrush	S			M	◆	◆	◆				
Varied Thrush	◆				NW						
Black-throated Gray Warbler				M	◆	◆					
Hermit Warbler					◆						
Townsend's Warbler	SE										
Cooper's Hawk		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Yellow-billed Cuckoo		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Willow Flycatcher			N	◆	◆	W	◆	◆	◆		
Strickland's Woodpecker				SE							
Greater Pewee				M							
Bridled Titmouse				M							
Grace's Warbler				M		SW					
Red-faced Warbler				M							
Scott's Oriole				M	S	W					
Nuttall's Woodpecker					◆						
Oak Titmouse					◆						

(Continued)

	IA	ID	IL	IN	KS	KY	LA	MA	MD	ME	MI
Sharp-shinned Hawk	◆	◆		◆	E	◆		◆	M	◆	◆
Yellow-bellied Sapsucker	N							W	M	◆	◆
Veery		◆	N	N		M		◆	◆	◆	◆
Bicknell's Thrush										M	
Black-throated Blue Warbler						M		◆	M	◆	◆
Blackburnian Warbler						M		◆	M	◆	◆
Bay-breasted Warbler										◆	N
Canada Warbler						M		◆		◆	◆
Broad-winged Hawk	◆		◆	◆	NE	◆	◆	◆	◆	◆	◆
Eastern Wood-Pewee	◆		◆	◆	E	◆	◆	◆	◆	◆	◆
Wood Thrush	◆		◆	◆	E	◆	◆	◆	◆	◆	◆
Cerulean Warbler	◆		◆	◆	E	◆		◆	◆		◆
Worm-eating Warbler	E		◆	S	E	◆	◆	◆	◆		S
Louisiana Waterthrush	◆		◆	◆	E	◆	◆	◆	◆	SW	S
Brown-headed Nuthatch							◆		S		
Red-headed Woodpecker	◆		◆	◆	◆	◆	◆	◆	◆		◆
Red-shouldered Hawk	E		◆	◆	E	◆	◆	◆	◆	◆	◆
Acadian Flycatcher	◆		◆	◆	E	◆	◆	◆	◆		S
Yellow-throated Vireo	◆		◆	◆	E	◆	◆	◆	◆	SW	◆
Northern Parula	S		◆	S	E	◆	◆		◆	◆	N
Prothonotary Warbler	◆		◆	◆	E	◆	◆		◆		S
Swainson's Warbler			S	S		◆	◆				
Kentucky Warbler	◆		◆	◆	E	◆	◆		◆		
Hooded Warbler	SE		◆	◆	E	◆	◆		◆		S
Red-breasted Sapsucker											
Williamson's Sapsucker		M									
Lewis's Woodpecker		◆									
White-headed Woodpecker		M									
Olive-sided Flycatcher		◆								◆	N
Chestnut-backed Chickadee		N									
Cassin's Vireo		N									
Swainson's Thrush		◆						W	M	◆	N
Hermit Thrush		◆						◆	M	◆	◆
Varied Thrush		N									
Black-throated Gray Warbler		S									
Hermit Warbler											
Townsend's Warbler		N									
Cooper's Hawk	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Yellow-billed Cuckoo	◆	S	◆	◆	◆	◆	◆	◆	◆	S	◆
Willow Flycatcher	◆	◆	◆	◆	E			◆	◆	S	S
Strickland's Woodpecker											
Greater Pewee											
Bridled Titmouse											
Grace's Warbler											
Red-faced Warbler											
Scott's Oriole		S									
Nuttall's Woodpecker											
Oak Titmouse											

(Continued)

	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV
Sharp-shinned Hawk	◆		N	◆	M	◆	◆	◆	◆	M	◆
Yellow-bellied Sapsucker	◆				M	E		◆			
Veery	◆			◆	M	◆		◆	N	W	NE
Bicknell's Thrush								M			
Black-throated Blue Warbler	NE				M			◆	N		
Blackburnian Warbler	N				M			◆	N		
Bay-breasted Warbler	N							N			
Canada Warbler	◆				M			◆	N		
Broad-winged Hawk	◆	◆	◆		◆			◆	◆		
Eastern Wood-Pewee	◆	◆	◆		◆	E	E	◆	◆		
Wood Thrush	◆	◆	◆		◆	S	E	◆	◆		
Cerulean Warbler	◆	◆			◆		E		N		
Worm-eating Warbler		◆	◆		◆				◆		
Louisiana Waterthrush	SE	◆	◆		◆		E	◆	◆		
Brown-headed Nuthatch			◆		◆						
Red-headed Woodpecker	◆	◆	◆	E	◆	◆	◆		◆	E	
Red-shouldered Hawk	◆	◆	◆		◆		SE	◆	◆		
Acadian Flycatcher		◆	◆		◆		E		◆		
Yellow-throated Vireo	◆	◆	◆		◆	E	E	◆	◆		
Northern Parula	N	◆	◆		◆		SE	◆			
Prothonotary Warbler	SE	◆	◆		◆		SE		◆		
Swainson's Warbler		S	◆		◆						
Kentucky Warbler		◆	◆		◆		E		◆		
Hooded Warbler		◆	◆		◆				◆		
Red-breasted Sapsucker											W
Williamson's Sapsucker				W						NW	M
Lewis's Woodpecker				◆			W			◆	◆
White-headed Woodpecker											W
Olive-sided Flycatcher	N			W				◆		NW	◆
Chestnut-backed Chickadee				NW							
Cassin's Vireo				W							W
Swainson's Thrush	N			◆				◆		N	NE
Hermit Thrush	N			◆				◆	N	M	◆
Varied Thrush				NW							
Black-throated Gray Warbler										◆	◆
Hermit Warbler											
Townsend's Warbler				NW							
Cooper's Hawk	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Yellow-billed Cuckoo	◆	◆	◆	SE	◆		◆	◆	◆	◆	S
Willow Flycatcher	◆	◆		◆	M	◆	◆	◆	◆	◆	◆
Strickland's Woodpecker										SW	
Greater Pewee										SW	
Bridled Titmouse										SW	
Grace's Warbler										M	S
Red-faced Warbler										M	
Scott's Oriole										◆	◆
Nuttall's Woodpecker											
Oak Titmouse											

(Continued)

	NY	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT
Sharp-shinned Hawk	◆	◆		◆	◆	◆		◆	◆	SW	◆
Yellow-bellied Sapsucker	◆				◆			E	M		
Veery	◆	N		NE	◆	◆		W	M		N
Bicknell's Thrush	M										
Black-throated Blue Warbler	◆				◆		M		M		
Blackburnian Warbler	◆	E			◆				M		
Bay-breasted Warbler	M										
Canada Warbler	◆				◆	◆			M		
Broad-winged Hawk	◆	◆	E		◆	◆	◆		◆	E	
Eastern Wood-Pewee	◆	◆	◆		◆	◆	◆	E	◆	E	
Wood Thrush	◆	◆	E		◆	◆	◆	◆	◆	E	
Cerulean Warbler	◆	◆	E		◆	◆		E	◆		
Worm-eating Warbler	S	◆	E		◆	◆	◆		◆	E	
Louisiana Waterthrush	◆	◆	E		◆	◆	◆		◆	E	
Brown-headed Nuthatch			SE				◆		S	E	
Red-headed Woodpecker	◆	◆	◆		◆		◆	◆	◆	◆	
Red-shouldered Hawk	◆	◆	E		◆	◆	◆		◆	E	
Acadian Flycatcher	◆	◆	E		◆	◆	◆	SE	◆	E	
Yellow-throated Vireo	◆	◆	E		◆	◆	◆	E	◆	E	
Northern Parula	◆	◆	E		◆		◆		◆	E	
Prothonotary Warbler	◆	◆	E		◆		◆		◆	E	
Swainson's Warbler		S	E				◆		◆	E	
Kentucky Warbler	SE	◆	E		◆		◆		◆	E	
Hooded Warbler	◆	◆	E		◆	◆	◆		◆	E	
Red-breasted Sapsucker				W							
Williamson's Sapsucker				M							M
Lewis's Woodpecker			W	◆				W			◆
White-headed Woodpecker				M							
Olive-sided Flycatcher	M			◆							◆
Chestnut-backed Chickadee				◆							
Cassin's Vireo				◆							
Swainson's Thrush	M			◆	M			W			◆
Hermit Thrush	◆			M	◆	◆				W	◆
Varied Thrush				◆							
Black-throated Gray Warbler				◆							◆
Hermit Warbler				W							
Townsend's Warbler				◆							
Cooper's Hawk	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Yellow-billed Cuckoo	◆	◆	◆		◆	◆	◆	◆	◆	◆	◆
Willow Flycatcher	◆	◆	NE	◆	◆	◆		◆	M	W	◆
Strickland's Woodpecker											
Greater Pewee											
Bridled Titmouse											
Grace's Warbler										W	S
Red-faced Warbler											
Scott's Oriole										W	◆
Nuttall's Woodpecker											
Oak Titmouse				SW							

(Continued)

	VA	VT	WA	WI	WV	WY	AB	BC	MB	NB	NF
Sharp-shinned Hawk	M	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Yellow-bellied Sapsucker	M	◆		◆	M		◆	N	◆	◆	◆
Veery	M	◆	E	◆	M	◆	S	SE	S	◆	SW
Bicknell's Thrush		M								M	
Black-throated Blue Warbler	M	◆		N	◆					◆	
Blackburnian Warbler	M	◆		N	◆		C		S	◆	SW
Bay-breasted Warbler		N					N	NE	◆	◆	S
Canada Warbler	M	◆		◆	M		N	NE	◆	◆	
Broad-winged Hawk	◆	◆		◆	◆		C		S	◆	
Eastern Wood-Pewee	◆	◆		◆	◆				S	◆	
Wood Thrush	◆	◆		◆	◆					◆	
Cerulean Warbler	◆	W		◆	◆						
Worm-eating Warbler	◆			S	◆						
Louisiana Waterthrush	◆	◆		W	◆						
Brown-headed Nuthatch	E										
Red-headed Woodpecker	◆	W		◆	◆	E			S		
Red-shouldered Hawk	◆	◆		◆	◆					S	
Acadian Flycatcher	◆			S	◆						
Yellow-throated Vireo	◆	◆		◆	◆				S		
Northern Parula	◆	◆		N	◆				SE	◆	
Prothonotary Warbler	◆			S	◆						
Swainson's Warbler	◆				S						
Kentucky Warbler	◆			S	◆						
Hooded Warbler	◆			SE	◆						
Red-breasted Sapsucker			W					◆			
Williamson's Sapsucker			M			M		S			
Lewis's Woodpecker			E			◆	SW	SE			
White-headed Woodpecker			M					S			
Olive-sided Flycatcher		◆	◆	N		◆	◆	◆	◆	◆	◆
Chestnut-backed Chickadee			◆					◆			
Cassin's Vireo			◆				SW	S			
Swainson's Thrush	M	◆	◆	N	M	◆	◆	◆	◆	◆	◆
Hermit Thrush		◆	M	N	E	◆	◆	◆	◆	◆	◆
Varied Thrush			◆				SW	◆			
Black-throated Gray Warbler			W			◆		SW			
Hermit Warbler			SW								
Townsend's Warbler			◆				SW	◆			
Cooper's Hawk	◆	◆	◆	◆	◆	◆	S	S	S	W	
Yellow-billed Cuckoo	◆	◆		◆	◆	E					
Willow Flycatcher	M	◆	◆	◆	◆	◆	S	S	S	◆	
Strickland's Woodpecker											
Greater Pewee											
Bridled Titmouse											
Grace's Warbler											
Red-faced Warbler											
Scott's Oriole						SW					
Nuttall's Woodpecker											
Oak Titmouse											

(Continued)

	NS	NT	ON	PE	QC	SK	YT
Sharp-shinned Hawk	◆	SW	◆	◆	◆	◆	◆
Yellow-bellied Sapsucker	◆	SW	◆	◆	◆	◆	S
Veery	◆		◆	◆	S	S	
Bicknell's Thrush	M				S		
Black-throated Blue Warbler	◆		S	◆	S		
Blackburnian Warbler	◆		◆	◆	S	C	
Bay-breasted Warbler	◆	SW	◆	◆	S	◆	
Canada Warbler	◆		◆	◆	S	C	
Broad-winged Hawk	◆		◆	◆	S	C	
Eastern Wood-Pewee	◆		S	◆	S	SE	
Wood Thrush	S		S		S		
Cerulean Warbler			S		S		
Worm-eating Warbler							
Louisiana Waterthrush			S				
Brown-headed Nuthatch							
Red-headed Woodpecker			S		S	S	
Red-shouldered Hawk			S		S		
Acadian Flycatcher			S				
Yellow-throated Vireo			S		S		
Northern Parula	◆		S	◆	S		
Prothonotary Warbler			S				
Swainson's Warbler							
Kentucky Warbler							
Hooded Warbler			S				
Red-breasted Sapsucker							
Williamson's Sapsucker							
Lewis's Woodpecker							
White-headed Woodpecker							
Olive-sided Flycatcher	◆	SW	◆	◆	◆	◆	◆
Chestnut-backed Chickadee							
Cassin's Vireo							
Swainson's Thrush	◆	SW	◆	◆	◆	◆	◆
Hermit Thrush	◆	SW	◆	◆	◆	◆	S
Varied Thrush		W					◆
Black-throated Gray Warbler							
Hermit Warbler							
Townsend's Warbler							◆
Cooper's Hawk	S		S		S	S	
Yellow-billed Cuckoo			S		S		
Willow Flycatcher			S		S	S	
Strickland's Woodpecker							
Greater Pewee							
Bridled Titmouse							
Grace's Warbler							
Red-faced Warbler							
Scott's Oriole							
Nuttall's Woodpecker							
Oak Titmouse							

Summary of breeding chronology

This table gives a rough idea of the breeding chronology for each BFL study species. In general, you should use earlier dates in southern parts of the breeding range or at lower elevations, and later dates in northern parts of the breeding range or at higher elevations. Feel free to use personal knowledge or local references to fine-tune the table for your area. You may be able to find a more detailed breeding chronology for your state or province in a local birdfinding guide or breeding bird atlas.

TABLE 4

	<i>Spring arrival</i>	<i>Eggs in nest</i>	<i>Young in nest</i>	<i>Fledglings</i>	<i>Fall departure</i>
Sharp-shinned Hawk	resident in many areas	late April–mid-July	late May–mid-Aug	late June–early Sept	resident in many areas
Yellow-bellied Sapsucker	late April–late May	May and June	late May–June	late June–July	late Aug–early Nov
Veery*	late April–mid-May	late May–mid-July	early June–late July	mid-June–mid-Aug	late Aug–early Oct
Bicknell's Thrush	late May–mid-June	early June–early July	late June–late July	early July–early Aug	mid-Aug–early Oct
Black-throated Blue Warbler*	late April–mid-May	mid-May–early Aug	early June–late Aug	mid-June–early Sept	late Aug–early Sept
Blackburnian Warbler	mid-April–mid-May	late May–mid-July	early June–late July	mid-June–early Aug	Aug–Sept
Bay-breasted Warbler	mid-May–June	late May–early July	late June–late July	early July–early Aug	mid-Aug–Sept
Canada Warbler	early May–early June	late May–late July	early June–early Aug	mid-June–mid-Aug	mid-July–late Aug
Broad-winged Hawk	early April–May	late April–early June	mid-May–mid-Aug	late June–Aug	mid-Aug–early Oct
Eastern Wood-Pewee	early April–early June	mid-May–early Sept	late May–late Sept	mid-June–Oct	mid-Aug–early Nov
Wood Thrush*	mid-April–late May	mid-May–late July	early June–mid-Aug	mid-June–late Aug	mid-Aug–late Sept
Cerulean Warbler	early April–late May	late April–early July	mid-May–early Aug	June–Aug	late July–early Oct
Worm-eating Warbler	mid-April–mid-May	late May–mid-July	mid-June–late July	late June–mid-Aug	mid-July–Sept
Louisiana Waterthrush	mid-March–late April	mid-April–early July	late April–late July	mid-May–Aug	mid-July–Aug
Brown-headed Nuthatch*	mostly resident	early March–late May	mid-March–mid-June	mid-April–mid-July	mostly resident
Red-headed Woodpecker*	late March–late May	mid-May–early Aug	late May–early Sept	early July–late Sept	late Aug–early Nov

* = multiple brooded

(Continued)

	<i>Spring arrival</i>	<i>Eggs in nest</i>	<i>Young in nest</i>	<i>Fledglings</i>	<i>Fall departure</i>
Red-shouldered Hawk	resident or Feb.– April	late March– early May	late April– mid-July	early June– Sept	resident or mid-Oct
Acadian Flycatcher*	early April– mid-May	late April– mid-July	mid-May– late July	June– Aug	late July– Oct
Yellow-throated Vireo	mid-March– early June	mid-May– mid-July	early June– late July	mid-June– Aug	mid-Aug– Oct
Northern Parula	mid-February– late May	early April– mid-July	late April– mid-Aug	early May– Aug	Aug– Oct
Prothonotary Warbler*	mid-March– mid-May	early April– mid-July	late April– late July	mid-May– Aug	late July– mid-Aug
Swainson’s Warbler	late March– early May	early May– late July	mid-May– early Aug	early June– late Aug	mid-Aug– mid-Oct
Kentucky Warbler	early April– mid-May	late April– late July	late May– mid-Aug	early June– early Sept	late July– mid-Sept
Hooded Warbler*	early March– mid-May	mid-May– late July	late May– early Aug	early June– early Sept	early Aug– late Sept
Red-breasted Sapsucker	resident or early April	mid-May– mid-June	June– mid-July	July	resident or Sept
Williamson’s Sapsucker	resident or Mar–mid-May	early May– mid-June	mid-May– late July	mid-June– early Aug	resident or mid-Aug–Oct
Lewis’s Woodpecker	resident or early May	late April– late Aug	mid-May– late Sept	mid-June– Oct	resident or late Aug–Sept
White-headed Woodpecker	resident	early May– late June	mid-May– mid-Aug	mid-June– late Aug	resident
Olive-sided Flycatcher	mid-April– mid-June	late May– late July	mid-June– late Aug	mid-July– mid-Sept	late July– Oct
Chestnut-backed Chickadee	mostly resident	mid-March– early June	April– June	May– July	mostly resident
Cassin’s Vireo*	late March– late May	late April– early July	mid-May– late July	June– Aug	Sept– early Nov
Swainson’s Thrush	early May– early June	late May– early Aug	late June– mid-Aug	late June– late Aug	late Aug– mid-Oct
Hermit Thrush*	late April– late May	mid-May– early Aug	early June– mid-Aug	mid-June– late Aug	late Aug– mid-Oct
Varied Thrush*	late March– late April	mid-May– early July	mid-June– late July	early July– mid-Aug	late Aug– late Oct
Black-throated Gray Warbler	mid-March– late May	early May– late June	late May– mid-July	mid-June– July	early Aug– Oct
Hermit Warbler	mid-April– mid-May	early May– late June	late May– mid-July	mid-June– July	mid-July– mid-Oct
Townsend’s Warbler	early April– late May	mid-May– late June	early June– late July	mid-June– early Aug	early Aug– early Oct

(Continued)

	<i>Spring arrival</i>	<i>Eggs in nest</i>	<i>Young in nest</i>	<i>Fledglings</i>	<i>Fall departure</i>
Cooper's Hawk	resident in many areas	early April–mid-June	mid-May–mid-July	late June–mid-Sept	resident in many areas
Yellow-billed Cuckoo	April–June	mid-May–early Sept	early June–early Oct	mid-June–Oct	late Aug–Nov
Willow Flycatcher	early May–early June	late May–early Aug	mid-June–late Aug	late June–mid-Sept	late July–late Sept
Strickland's Woodpecker	resident	mid-April–mid-June	early May–late June	early June–early July	resident
Greater Pewee	late March–mid-April	mid-May–early July	late May–mid-July	mid-June–early Aug	early Sept–late Sept
Bridled Titmouse	mostly resident	mid-April–mid-June	early May–late July	late May–Aug	mostly resident
Grace's Warbler*	mid-March–late April	early May–late June	late May–mid-July	June–July	Aug–early Sept
Red-faced Warbler	early April–late May	early May–late June	late May–mid-July	mid-June–July	late July–mid-Sept
Scott's Oriole*	mid-March–mid-May	late April–late June	mid-May–mid-July	June–July	July–mid-Oct
Nuttall's Woodpecker	resident	April–late May	mid-April–mid-June	May–July	resident
Oak Titmouse	resident	mid-March–late June	early April–mid-July	late April–mid-Aug	resident

GUIDE TO SPECIES GROUPS

Because BFL covers numerous species from several taxonomic groups, it's important to know a little bit about the identification, ecology, and behavior of each group before going into the field. Learning a little about each species group will allow you to quickly and accurately interpret your observations. The purpose of the *Species Guidelines* section is to cue you in on important behaviors or observations that relate specifically to responses you might see while conducting the survey protocol.

There is a detailed description of each species in the *References: Species Accounts* section. Please refer to this section for complete information on distributions, vocalizations, behaviors, and ecology for each species. For example, when reading the taxonomic summaries below, if you are unsure about the sound or context of a hawk begging call, you could refer to the Sharp-shinned Hawk species account for a thorough description. In the summaries below, we often discuss **sexual dimorphism**. This term refers to differences that occur between the sexes of a given species. For example, when we say that warblers exhibit **sexual color dimorphism** it simply means that there is some difference in plumage color between males and females that allow us to distinguish the sexes.

Hawks

All hawk vocalizations are defined as calls, not songs, which are sometimes heard overhead, above the forest canopy. Begging calls from fledglings are often also obvious. We are interested in forest hawks which include the Broad-winged Hawk, Red-shouldered Hawk, and accipiters.

Hawks exhibit sexual size dimorphism, with the female larger than the male, but do not exhibit color dimorphism. In some species, both sexes can occur in light or dark

forms, so we recommend studying a field guide to distinguish between the two, as well as to learn the distinctive body shapes of different groups and species specific behaviors.

Hawks are often seen soaring or in flapping flight, so learning flight profiles is very important. The shape of the bird and the way it flies are generally the best clues to its identification. The Broad-winged and Red-shouldered hawks are *buteos*, which tend to soar with open, flat wings, while accipiters fly with more rapid wingbeats.

Hawks will often approach quietly to assess what's going on, so stay alert if they respond to your playback. Alternatively, they may leave an area in response to mobbing calls because they believe potential prey have been alerted to their presence. Also, keep an eye out for their stick nests high in the canopy. Some squirrel species also build similar sized nests; however, their nests are mostly constructed of leaves. Note that fledglings remain with adults for an extended period (weeks) after leaving the nest, so look for family groups in late spring to mid-summer.

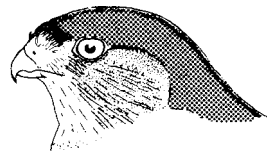
A comparison of Sharp-shinned and Cooper's Hawks

Sharp-shinned and Cooper's hawks are two of the most difficult raptors to tell apart in the field. They have similar plumages; one of the most noticeable differences between them is their size.

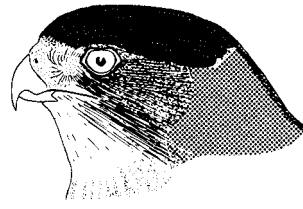
When the birds are flying, veteran hawk watchers look for the long rounded tail of the Cooper's Hawk and the shorter, squared-off tail of the sharp-shin. Another excellent field mark is neck length. In flight, the Sharp-shinned Hawk's head does not extend past the leading edge of the wing, giving this hawk a "short-necked" appearance. The Cooper's Hawk's head, on the other hand, extends past the leading edge of the wing, giving this

hawk a comparatively “long-necked” appearance. A perched accipiter, however, is a real identification challenge—even when it is as close as your bird feeder.

A perched bird’s size can be surprisingly difficult to judge, and to make matters worse, both species exhibit reverse sexual dimorphism—that is, the females are considerably larger than the males. A male sharp-shin may be as small as a jay, and a female Cooper’s may be larger than a crow, but a female sharp-shin and a male Cooper’s may appear to be the same size.



Sharp-shinned Hawk
(adult male)



Cooper’s Hawk
(adult male)

A perched Sharp-shinned or Cooper’s hawk can be identified by a combination of subtle field marks. The information in the table below comes from two field guides that are excellent for raptor identification:

A Field Guide to Advanced Birding, by Kenn Kaufman, and *A Field Guide to Hawks*, by William S. Clark, illustrated by Brian K. Wheeler.

Although none of the field marks listed here will cinch an identification by itself, you can use a combination of characters to increase your confidence in identifying perched raptors.

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Illustration by Kenn Kaufman, reprinted with permission from Kaufman 1990

TABLE 5. A COMPARISON OF SHARP-SHINNED AND COOPER’S HAWKS

	SHARP-SHINNED HAWK	COOPER’S HAWKS
BIRDS OF ALL AGES		
Size	10 inches to 14 inches (25 cm to 36 cm) (the size of a jay or dove)	14 inches to 20 inches (36 cm to 51 cm) (the size of a crow or grouse)
Tail	Tail has a narrow white tip	Tail has a wide white tip
Legs	Very thin; bird looks long-legged	Legs are thicker, look shorter
Eye	Seen from the side, eye seems to be placed in the middle of the head	Eye appears to be placed forward on head, close to bill
ADULTS (birds with gray backs, reddish underparts, red eyes)		
Top of head	Crown and nape are uniformly gray	Crown of head is blackish, contrasts with paler face and nape
IMMATURES (birds with brown backs, streaked underparts, yellow eyes)		
Under parts	Heavily streaked, especially on lower breast and belly; streaks reddish in color	Streaks are finer and mostly on upper breast, belly mostly white
Eye-stripe	Usually has pale eye-stripe	Lacks eye-stripe
Side of head and nape	Lacks reddish color	Often with reddish cast

Adapted from an article by Kenneth V. Rosenberg, *Birdscope*, Summer 1995. Reprinted with permission.

Woodpeckers

Woodpecker vocalizations include calls but not songs. For woodpeckers, drumming serves as the primary mate-attraction and territory-defense sound. Drumming is as distinct as a song, and can often be used to identify a bird to the species level. Woodpeckers make irregular hammering sounds as they excavate insects from trees, and sapsuckers produce irregular drumming patterns as they cut sap wells in trees. Note that it is possible and important to distinguish drumming from feeding or nest excavation.

Woodpeckers exhibit some sexual color dimorphism. Most males have some red on the head. Please check a field guide for examples.

All woodpeckers nest in cavities, and many are very vocal and active in the immediate vicinity of their nest hole.

Woodpeckers have a distinct flight pattern: a quick flutter of wings followed by a short tuck with no flapping that gives their flight an undulating, wavy pattern.

Thrushes

Thrush vocalizations include songs, performed mainly by the male, and distinctive call notes. Thrushes are often heard calling or singing more frequently than they are seen. Thrushes also give a “whisper song,” or a softer, quieter version of their primary song. This may serve as an attempt to disguise their location, making it seem as though they are farther away than their true location.

The spotted thrushes are best identified by face and breast pattern and overall color, including the flanks.

The only thrush that exhibits sexual color dimorphism is the Varied Thrush.

See Table 6 for a thrush identification guide to help you in the field.

Warblers

Some warbler species remain high in the canopy or are frequently hidden in the understory, so learning the songs and calls of these species is often the best way to identify them. Songs are high pitched notes and trills, performed mainly by male, sometimes from a conspicuous perch. Females are typically inconspicuous, and are more difficult to see during nesting as they don't sing. Call notes and alarm chips are given by both males and females.

Warblers usually exhibit sexual color dimorphism, with the female's plumage generally being a duller version of the male's.

Although warblers can range from understory to canopy, the area where a warbler is seen feeding is often a good key to its identity. Check the *References: Species Accounts* section for species specific behaviors.

Nuthatches

Distinctive nuthatch behavior includes creeping along tree trunks like woodpeckers. In contrast, however, they often move from the top of the tree to the bottom, head down, frequently craning their neck backwards for a better view of their surroundings.

Nuthatches use their strong, sharp bill to probe into furrows of tree bark. They also feed on insects at the tips of tree branches and on seeds of pine cones.

Nuthatches are secondary cavity nesters and often use abandoned woodpecker holes as a nest site. Little sexual color dimorphism makes it difficult to determine sex by plumage.

Flycatchers

Flycatcher's short, simple songs are perhaps the most reliable method of identifying the similar looking species in this group. They exhibit little sexual color dimorphism, and because catching insects is a solitary pursuit, flycatchers are frequently seen alone.

(Continued on page 3.3.16)

TABLE 6. IDENTIFICATION GUIDE TO NORTH AMERICAN FOREST THRUSHES

SPECIES	UPPERPARTS	THROAT/BREAST	FLANKS	EYE-RING	VOCALIZATION	NEST
VEERY	uniform reddish-brown (East); reddish-olive (West)	orange hue, light spotting throat, upper breast (East); heavier spotting, slightly less orange on breast (West)	gray	indistinct, grayish	song: spirals down calls: vee-ur, vece-oo, njernt	ground, sometimes tree, <4 ft (<1.2m) (to 2.5 ft or 7.5m)
GRAY-CHEEKED THRUSH	uniform gray-olive; brownish (Newfoundland)	white, bold dark spots throat, upper breast	brownish-gray	indistinct	song: jumbled series, low trill at end calls: whee-ah, quee-a	tree, 2–12 ft (0.5–2m) (to 20 ft or 6m), sometimes on ground
BICKNELL'S THRUSH	olive-brown back, slightly reddish tail and primaries	yellow tinge, bold dark spots throat, upper breast	brownish-gray	indistinct	song: like Gray-cheeked, higher trill at end calls: whee-ah, quee-a	tree, 2–6 ft (0.5–4m) (to 2.5 ft or 7.5m)
SWAINSON'S THRUSH	uniform olive (East); uniform reddish-brown (Pacific)	buffy, dark spots throat, upper breast	brownish-gray	bold, buffy	song: spirals up calls: feee-ee, spring peeper, whit	tree, 4–7 ft (1.2–2m) (0.5–60 ft or 0.2–18m)
HERMIT THRUSH	reddish-tail, brownish-gray back (paler-West)	white, dark spots throat, upper breast (West); buffy, dark spots throat, upper breast (Pacific/East)	buff-brown (East); grayish (West/Pacific)	white, conspicuous	song: long introductory note calls: chup, wee-er	mostly on ground (East); tree (West), 2–8 ft (0.5–2.4m) (1.5–30 ft or 0.5–
WOOD THRUSH	reddish-head, olive-brown back	white, large black spots on breast and belly	white, large black spots	white, bold	song: flute-like, ee-oh-lay calls: wik,wik,wik,wik,wik	tree, 10–13 ft (3–4m) (2–70 ft or 0.5–21m)
VARIED THRUSH	slate-grayish (male); brownish-gray (female); orange wing bars (both sexes)	orange, black breast band	orange	none	song: single notes, long pauses in-between calls: chook, ringing whistles	tree, 6–20 ft (2–6m)

Individuals typically sit erect on an exposed perch, flicking their wings and tails, while waiting for a passing insect. After darting out to catch their prey, they return to their perch to try again. Other birds, including warblers, also flycatch, but are rarely as patient and persistent as flycatchers.

Look for wood-pewees high in the forest canopy. Olive-sided Flycatchers are frequently seen flycatching from a dead snag in a forest clearing or bog. The Empidonax flycatchers (including the Willow and Acadian flycatchers) are best identified by voice because their plumage and other characteristics are so similar.

Flycatchers can be separated from warblers and vireos by their sit-and-wait foraging behavior, their distinctive vertical profile when perched, and physically by their large triangular heads.

Vireos

Different species of vireo are often confused with each other and can easily be confused with warblers. A vireo's bill is more "swollen" than a warbler's and has a slightly hooked tip that is difficult to see at a distance. Songs, mostly sung by the male, are useful in identifying to species level. Adults show little sexual color dimorphism.

Chickadees

The only chickadee studied by BFL is the Chestnut-backed Chickadee. This species is similar in behavior to other species of chickadees, but with a slightly different song and call. It is also easily distinguished by its chestnut back and flanks.

Cuckoos

The only cuckoo studied by BFL is the Yellow-billed Cuckoo. The bill color, tail pattern, and eye ring are the best ways to separate the Yellow-billed from the Black-billed cuckoo where the two species overlap. Cuckoos are sometimes difficult to see as they stealthily pluck caterpillars in dense, leafy trees. They are never seen in flocks and are very secretive, seldom straying far from cover and thus best identified by voice. They are often seen darting between patches of cover, so pay attention to shape and plumage to distinguish cuckoos from thrashers and other similar species.

Titmice

Titmice are similar in behavior to chickadees, but slightly larger. The facial pattern of the Bridled Titmouse is striking and distinctive.

The Oak Titmouse was formerly considered a sub-species of the Plain Titmouse, and as the name suggests, this species exhibits no distinctive markings except its crest.

Orioles

The only oriole studied by BFL is the Scott's Oriole. The male's black breast and back are distinctive. The adult female is more easily confused with other female orioles, particularly female Hooded and Orchard orioles where their ranges overlap. Scott's Orioles are often located by following their call note, a sharp *chuck*.