

## Predators Affecting Breeding Success of Birds at the Pewaukee study site

To learn more about potential mammalian nest predators at the site, we conducted scent station surveys in 1999. Scent stations attract mammals to a specific location where they leave their tracks in sand or soot and can then be identified. (Please see Appendix 3 for more information on the methods used. Please see page 18 for pictures of some of the nest predators.) We detected 12 species of mammals at the scent stations:

- Red fox
- Coyote
- Domestic dog
- Raccoon
- Domestic cat
- Virginia opossum
- Striped skunk
- Long-tailed weasel
- American mink
- North American river otter
- Eastern gray squirrel
- Eastern chipmunk

Surveys also were conducted for eastern chipmunks and eastern gray squirrels. High numbers of eastern chipmunks were found at the study site; 17 to 37 individuals were detected on each survey. These studies revealed that a variety of potential nest predators is present at the study site, which could decrease the breeding success of birds nesting at the site. Please see page 35 to learn how you can avoid providing food for mammalian nest predators.

## ROSENDALE STUDY SITE RESEARCH

Birds Without Borders – *Aves Sin Fronteras*® research conducted at the Rosendale study site in east-central Wisconsin included bird banding during the breeding season, censusing during spring migration, point counts, nest searching and monitoring, and vegetation measurements. Evening surveys for secretive marsh birds also were conducted as part of the Marsh Monitoring Program (LPBO and EC 1997). (Research at the site ended yearly by mid-August so that the landowners could utilize their land for hunting.)

We detected a total of 163 species of birds at the Rosendale study site, including 35 Neotropical migrants, 27 short-distance migrants, and 16 residents. Thirteen species found at Rosendale have populations that are both residents and short-distance migrants; 72 species have populations that are both short-distance and Neotropical

migrants. The 163 species of birds documented at the Rosendale study site represent about 48% of the species likely to be seen in Wisconsin (Mueller 2008).

VICKI PIASKOWSKI



Restored native grassland

C. EVANS, RIVER TO RIVER CWMA, BUGWOOD.ORG



Big bluestem

C. EVANS, RIVER TO RIVER CWMA, BUGWOOD.ORG



Reed canary grass

OHIO ST. WEED LAB ARCHIVE, OSU, BUGWOOD.ORG



Goldenrod

VICKI PIASKOWSKI



Restored native grassland

KARI WILLIAMS



Wetland

KARI WILLIAMS



Wetland

VICKI PIASKOWSKI



Sandhill Cranes at the Rosendale study site

## Habitat Description

A 97-acre restored native grassland was used for research on breeding grassland birds. The grassland was divided by a narrow gravel and grass drive and a 1.5-acre residential lot. The grassland was a diverse mix of native, old-field and non-native grasses, and native and old-field forbs. Big bluestem, timothy, and reed canary grass were the dominant grasses; switch grass and Indian grass were present but less abundant. Native and non-native forbs including Canada thistle, white and yellow sweet clover, common milkweed, goldenrod and willow saplings were scattered

throughout the grassland. Approximately one-fourth of the grassland was burned in April 1999 for willow and non-native plant control.

Directly north of the grassland was a two-lane paved road and row-crop agriculture.

A 20-acre upland oak, black cherry and hickory hardwood forest was present south of the grassland. Shrubs included dogwood, common buckthorn and black currant. Ground-cover included hog peanut, enchanter's nightshade and grape.

An extensive wetland (> 450 acres) was present to the south of the forest and to the southeast and southwest of the grassland. The wetland contained large areas of open water bordered by cattails, rushes and reed canary grass. Scattered trees on the edges of the water included willow, cottonwood and box elder.

### At-Risk Birds Found at the Rosendale Study Site

A total of 73 species of conservation concern utilized the Rosendale study site during spring migration and the breeding season, indicating the importance of this site to these at-risk species. These species and the conservation plans in which they are listed appear in Appendix 8, and are summarized below.

- 10 are on the USFWS National Conservation Concern List.
- 8 are PIF Watch List species of Continental Importance.
- 1 is a PIF Stewardship Species for the Prairie Avifaunal Biome (this designation is for the wintering population).
- 8 of Moderate concern and 4 of High concern are on the Waterbird Plan.
- 6 of Moderate concern and 3 of High concern are on the Shorebird Plan.
- 58 are WBCI Wisconsin All-Bird Plan Priority Species.
- 30 are WI DNR Species of Greatest Conservation Need.

Twenty of the above at-risk species bred at the Rosendale study site.

Pictured are some of the species of conservation concern that were detected at the Rosendale site.

USFWS/JOHN & KAREN HOLLINGSWORTH



Northern Pintail

USFWS/GARY KRAMER



American Bittern

USFWS/GARY KRAMER



Black-crowned Night-Heron

USFWS/DONNA DEWHURST



Greater Yellowlegs

USFWS/LEE KARNEY



Forster's Tern

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Golden-winged Warbler

USFWS/DAVE MENKE



American Tree Sparrow

JACK BARTHOLMAI



Swamp Sparrow

USFWS/DAVE MENKE



Rusty Blackbird

USFWS/DONNA DEWHURST



USFWS/EUGENE HESTER



Canvasback female and male

## Bird Species Using the Rosendale Study Site During Spring Migration

The restored native grassland, oak forest and restored extensive wetland present at the Rosendale study site provided stopover habitat for many species of landbirds, shorebirds and waterbirds. During spring migration, BWB-ASF staff conducted a standardized census and made observations. The census route began in the grassland, continued through the oak forest and into the wetland. Through these methods, we detected a total of 163 species of birds. A list of species detected and photos of some of the highlights appear below. The high number of bird species using this site during spring migration shows the importance of restoring and preserving habitats, as the landowners at the Rosendale site have done. Forty-seven of the species remained at the site to breed. (Please see pages 65-66 for a complete list of the bird species that bred at the Rosendale study site.)

### Bird species detected at the Rosendale study site during spring migration

Canada Goose (*Branta canadensis*)\*  
Tundra Swan (*Cygnus columbianus*)\*  
Wood Duck (*Aix sponsa*)  
Gadwall (*Anas strepera*)  
American Wigeon (*Anas americana*)  
American Black Duck (*Anas rubripes*)\*  
Mallard (*Anas platyrhynchos*)\*  
Blue-winged Teal (*Anas discors*)\*  
Northern Shoveler (*Anas clypeata*)  
Northern Pintail (*Anas acuta*)\*  
Green-winged Teal (*Anas crecca*)  
Canvasback (*Aythya valisineria*)\*  
Redhead (*Aythya americana*)\*  
Ring-necked Duck (*Aythya collaris*)  
Common Merganser (*Mergus merganser*)  
Ruddy Duck (*Oxyura jamaicensis*)  
Ring-necked Pheasant (*Phasianus colchicus*)  
Wild Turkey (*Meleagris gallopavo*)  
Common Loon (*Gavia immer*)\*  
Pied-billed Grebe (*Podilymbus podiceps*)\*  
Double-crested Cormorant (*Phalacrocorax auritus*)  
American Bittern (*Botaurus lentiginosus*)\*  
Least Bittern (*Ixobrychus exilis*)\*  
Great Blue Heron (*Ardea herodias*)  
Great Egret (*Ardea alba*)\*  
Green Heron (*Butorides virescens*)  
Black-crowned Night-Heron (*Nycticorax nycticorax*)\*  
Turkey Vulture (*Cathartes aura*)  
Northern Harrier (*Circus cyaneus*)\*  
Sharp-shinned Hawk (*Accipiter striatus*)  
Cooper's Hawk (*Accipiter cooperii*)

Broad-winged Hawk (*Buteo platypterus*)\*  
Red-tailed Hawk (*Buteo jamaicensis*)  
American Kestrel (*Falco sparverius*)  
Virginia Rail (*Rallus limicola*)\*  
Sora (*Porzana carolina*)\*  
Common Moorhen (*Gallinula chloropus*)\*  
American Coot (*Fulica americana*)  
Sandhill Crane (*Grus canadensis*)  
Semipalmated Plover (*Charadrius semipalmatus*)  
Killdeer (*Charadrius vociferus*)\*  
Spotted Sandpiper (*Actitis macularius*)  
Solitary Sandpiper (*Tringa solitaria*)\*  
Greater Yellowlegs (*Tringa melanoleuca*)\*  
Lesser Yellowlegs (*Tringa flavipes*)\*  
Upland Sandpiper (*Bartramia longicauda*)\*  
Least Sandpiper (*Calidris minutilla*)\*  
Dunlin (*Calidris alpina*)\*  
Wilson's Snipe (formerly Common Snipe, *Gallinago delicata*)\*  
American Woodcock (*Scolopax minor*)\*  
Franklin's Gull (*Larus pipixcan*)\*  
Bonaparte's Gull (*Larus philadelphia*)\*  
Ring-billed Gull (*Larus delawarensis*)  
Herring Gull (*Larus argentatus*)  
Black Tern (*Chlidonias niger*)\*  
Common Tern (*Sterna hirundo*)\*  
Forster's Tern (*Sterna forsteri*)\*  
Rock Pigeon (*Columba livia*)  
Mourning Dove (*Zenaida macroura*)  
Black-billed Cuckoo (*Coccyzus erythrophthalmus*)\*  
Great Horned Owl (*Bubo virginianus*)  
Barred Owl (*Strix varia*)  
Chimney Swift (*Chaetura pelagica*)\*  
Ruby-throated Hummingbird (*Archilochus colubris*)  
Belted Kingfisher (*Megaceryle alcyon*)\*  
Red-bellied Woodpecker (*Melanerpes carolinus*)  
Yellow-bellied Sapsucker (*Sphyrapicus varius*)\*  
Downy Woodpecker (*Picoides pubescens*)  
Hairy Woodpecker (*Picoides villosus*)  
Northern Flicker (*Colaptes auratus*)\*  
Eastern Wood-Pewee (*Contopus virens*)  
Alder Flycatcher (*Empidonax alnorum*)\*  
Traill's Flycatcher (*Empidonax alnorum/traillii*)  
Willow Flycatcher (*Empidonax traillii*)\*  
Least Flycatcher (*Empidonax minimus*)\*  
Eastern Phoebe (*Sayornis phoebe*)  
Great Crested Flycatcher (*Myiarchus crinitus*)  
Eastern Kingbird (*Tyrannus tyrannus*)  
Yellow-throated Vireo (*Vireo flavifrons*)\*  
Warbling Vireo (*Vireo gilvus*)\*  
Philadelphia Vireo (*Vireo philadelphicus*)\*  
Red-eyed Vireo (*Vireo olivaceus*)  
Blue Jay (*Cyanocitta cristata*)

American Crow (*Corvus brachyrhynchos*)  
 Horned Lark (*Eremophila alpestris*)  
 Purple Martin (*Progne subis*)  
 Tree Swallow (*Tachycineta bicolor*)  
 Northern Rough-winged Swallow  
 (*Stelgidopteryx serripennis*)\*  
 Barn Swallow (*Hirundo rustica*)\*  
 Black-capped Chickadee (*Poecile atricapillus*)  
 Red-breasted Nuthatch (*Sitta canadensis*)  
 White-breasted Nuthatch (*Sitta carolinensis*)  
 Brown Creeper (*Certhia americana*)  
 House Wren (*Troglodytes aedon*)  
 Winter Wren (*Troglodytes troglodytes*)  
 Sedge Wren (*Cistothorus platensis*)\*  
 Marsh Wren (*Cistothorus palustris*)\*  
 Golden-crowned Kinglet (*Regulus satrapa*)  
 Ruby-crowned Kinglet (*Regulus calendula*)  
 Blue-gray Gnatcatcher (*Poliptila caerulea*)  
 Eastern Bluebird (*Sialia sialis*)  
 Veery (*Catharus fuscescens*)\*  
 Gray-cheeked Thrush (*Catharus minimus*)  
 Swainson's Thrush (*Catharus ustulatus*)  
 Hermit Thrush (*Catharus guttatus*)  
 Wood Thrush (*Hylocichla mustelina*)\*  
 American Robin (*Turdus migratorius*)  
 Gray Catbird (*Dumetella carolinensis*)  
 Brown Thrasher (*Toxostoma rufum*)\*  
 European Starling (*Sturnus vulgaris*)  
 Cedar Waxwing (*Bombycilla cedrorum*)  
 Blue-winged Warbler (*Vermivora pinus*)\*  
 Golden-winged Warbler (*Vermivora chrysoptera*)\*  
 Tennessee Warbler (*Vermivora peregrina*)\*  
 Nashville Warbler (*Vermivora ruficapilla*)\*  
 Yellow Warbler (*Dendroica petechia*)  
 Chestnut-sided Warbler (*Dendroica pensylvanica*)\*  
 Magnolia Warbler (*Dendroica magnolia*)\*  
 Cape May Warbler (*Dendroica tigrina*)\*  
 Black-throated Blue Warbler (*Dendroica caerulescens*)\*  
 Yellow-rumped Warbler (*Dendroica coronata*)  
 Black-throated Green Warbler (*Dendroica virens*)\*  
 Blackburnian Warbler (*Dendroica fusca*)\*  
 Palm Warbler (*Dendroica palmarum*)\*  
 Bay-breasted Warbler (*Dendroica castanea*)\*  
 Blackpoll Warbler (*Dendroica striata*)  
 Black-and-white Warbler (*Mniotilta varia*)  
 American Redstart (*Setophaga ruticilla*)  
 Ovenbird (*Seiurus aurocapilla*)  
 Northern Waterthrush (*Seiurus noveboracensis*)  
 Mourning Warbler (*Oporornis philadelphia*)\*  
 Common Yellowthroat (*Geothlypis trichas*)\*  
 Wilson's Warbler (*Wilsonia pusilla*)  
 Canada Warbler (*Wilsonia canadensis*)\*

Scarlet Tanager (*Piranga olivacea*)  
 Eastern Towhee (*Pipilo erythrophthalmus*)  
 American Tree Sparrow (*Spizella arborea*)\*  
 Chipping Sparrow (*Spizella passerina*)  
 Clay-colored Sparrow (*Spizella pallida*)\*  
 Field Sparrow (*Spizella pusilla*)\*  
 Vesper Sparrow (*Pooecetes gramineus*)\*  
 Savannah Sparrow (*Passerculus sandwichensis*)  
 Henslow's Sparrow (*Ammodramus henslowii*)\*  
 Song Sparrow (*Melospiza melodia*)  
 Swamp Sparrow (*Melospiza georgiana*)\*  
 White-throated Sparrow (*Zonotrichia albicollis*)\*  
 White-crowned Sparrow (*Zonotrichia leucophrys*)  
 Dark-eyed Junco (*Junco hyemalis*)  
 Northern Cardinal (*Cardinalis cardinalis*)  
 Rose-breasted Grosbeak (*Pheucticus ludovicianus*)\*  
 Indigo Bunting (*Passerina cyanea*)  
 Bobolink (*Dolichonyx oryzivorus*)\*  
 Red-winged Blackbird (*Agelaius phoeniceus*)  
 Eastern Meadowlark (*Sturnella magna*)\*  
 Yellow-headed Blackbird  
 (*Xanthocephalus xanthocephalus*)\*  
 Rusty Blackbird (*Euphagus carolinus*)\*  
 Common Grackle (*Quiscalus quiscula*)  
 Brown-headed Cowbird (*Molothrus ater*)  
 Baltimore Oriole (*Icterus galbula*)  
 Purple Finch (*Carpodacus purpureus*)\*  
 House Finch (*Carpodacus mexicanus*)  
 American Goldfinch (*Carduelis tristis*)  
 House Sparrow (*Passer domesticus*)

\*Species marked with an asterisk are of conservation concern on one or more of the Conservation Plans listed on pages 38.



Northern Shoveler



Green-winged Teal



USFWS/JOHN & KAREN HOLLINGSWORTH



USFWS/DONNA DEWHURST

Common Merganser male and female

Many species of waterfowl used the Rosendale wetland during spring migration.

USFWS/GARY KRAMER



Green Herons used the Rosendale site during migration and stayed for the breeding season.

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Broad-winged Hawks were seen soaring over the Rosendale grassland in 1998, 1999, and 2000.

USFWS/DAVE MENKE



Indigo Buntings spend winters from southern Florida to northern South America and return to Rosendale in the spring.

JACK BARTHOLMAI



Common Grackles are frequently seen at the Rosendale study site.

USFWS/GARY KRAMER



American Coot were often present during spring migration.

USFWS



Lesser Yellowlegs, an at-risk species, were detected at Rosendale in spring.

JACK BARTHOLMAI



Ruby-throated Hummingbirds used the Rosendale habitats during migration.

USFWS/DONNA DEWHURST



Golden-crowned Kinglets can be seen at Rosendale as they migrate north to their breeding areas in spring.

JACK BARTHOLMAI



Swainson's Thrushes were captured at spring bird banding demonstrations at Rosendale.

USFWS/DONNA DEWHURST



White-crowned Sparrows used the Rosendale site during migration.

USFWS/STEVE MASLOWSKI



Cape May Warbler

USFWS/DONNA DEWHURST



Wilson's Warbler

These are 2 of the 23 species of warblers detected during spring migration at Rosendale.

### Bird Species Breeding at the Rosendale Study Site

Forty-seven species of birds bred at the Rosendale study site from 1997 to 2000. We determined this by searching for and monitoring nests, by examining birds during banding to determine if they were in breeding condition, and by doing behavioral observations. Some of the behaviors that demonstrated breeding included: courtship displays, carrying nesting material, carrying food, or feeding fledglings (young that had left the nest).

More information on the methods we used to document breeding at the site can be found in Appendix 3. Detailed information on the nests monitored at the site and their nest success can be found in Appendix 8.

Of the 47 species of birds that bred at the Rosendale site, 20 (42.6%) are listed as species of conservation concern in one of the bird conservation plans described on page 38. *The high number of birds of conservation concern that bred at the site indicates that the habitats at the Rosendale study site are very important to these breeding birds.*

Six of the bird species that bred at the site are termed "obligate grassland species," meaning that they require grasslands to survive. These species are the Northern Harrier, Sedge Wren, Savannah Sparrow, Henslow's Sparrow, Bobolink and Eastern Meadowlark; and they require grasslands for all parts of their breeding cycle (Sample and Mossman 1997).

### The birds documented as breeding at the Rosendale study site are listed below.

- Canada Goose (*Branta canadensis*)\*
- Mallard (*Anas platyrhynchos*)\*
- Blue-winged Teal (*Anas discors*)\*
- Ring-necked Pheasant (*Phasianus colchicus*)
- Green Heron (*Butorides virescens*)
- Black-crowned Night-Heron (*Nycticorax nycticorax*)\*
- Northern Harrier (*Circus cyaneus*)\*
- Cooper's Hawk (*Accipiter cooperii*)
- American Kestrel (*Falco sparverius*)

- Sora (*Porzana carolina*)\*
- Sandhill Crane (*Grus canadensis*)
- Killdeer (*Charadrius vociferus*)\*
- American Woodcock (*Scolopax minor*)\*
- Black Tern (*Chlidonias niger*)\*
- Mourning Dove (*Zenaidura macroura*)
- Black-billed Cuckoo (*Coccyzus erythrophthalmus*)\*
- Downy Woodpecker (*Picoides pubescens*)
- Eastern Phoebe (*Sayornis phoebe*)
- Eastern Kingbird (*Tyrannus tyrannus*)
- Blue Jay (*Cyanocitta cristata*)
- Tree Swallow (*Tachycineta bicolor*)
- Barn Swallow (*Hirundo rustica*)\*
- Black-capped Chickadee (*Poecile atricapillus*)
- White-breasted Nuthatch (*Sitta carolinensis*)
- House Wren (*Troglodytes aedon*)
- Sedge Wren (*Cistothorus platensis*)\*
- Marsh Wren (*Cistothorus palustris*)\*
- American Robin (*Turdus migratorius*)
- Gray Catbird (*Dumetella carolinensis*)
- European Starling (*Sturnus vulgaris*)
- Yellow Warbler (*Dendroica petechia*)
- Common Yellowthroat (*Geothlypis trichas*)\*
- Chipping Sparrow (*Spizella passerina*)
- Savannah Sparrow (*Passerculus sandwichensis*)
- Henslow's Sparrow (*Ammodramus henslowii*)\*
- Song Sparrow (*Melospiza melodia*)
- Swamp Sparrow (*Melospiza georgiana*)\*
- Rose-breasted Grosbeak (*Pheucticus ludovicianus*)\*
- Bobolink (*Dolichonyx oryzivorus*)\*
- Red-winged Blackbird (*Agelaius phoeniceus*)
- Eastern Meadowlark (*Sturnella magna*)\*
- Yellow-headed Blackbird  
(*Xanthocephalus xanthocephalus*)\*
- Brown-headed Cowbird (*Molothrus ater*)
- Baltimore Oriole (*Icterus galbula*)
- House Finch (*Carpodacus mexicanus*)
- American Goldfinch (*Carduelis tristis*)
- House Sparrow (*Passer domesticus*)

\*Species marked with an asterisk are of conservation concern on one or more of the Conservation Plans listed on page 38.

Pictured are some of the bird species that bred at the Rosendale study site.



Blue-winged Teal nest with eggs



Blue-winged Teal female and ducklings



Ring-necked Pheasant



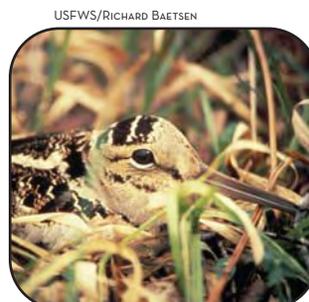
Sandhill Crane



Northern Harrier nest with eggs



Northern Harrier nestlings



American Woodcock on nest



Common Yellowthroat



Mallard nest with eggs



Mallard male



Barn Swallow nestling



Barn Swallow adult

BWB-ASF STAFF



Sedge Wren nest

BWB-ASF STAFF



Sedge Wren

USFWS/DAVE MENKE



Savannah Sparrow

JACK BARTHOLMAI



Henslow's Sparrow

USFWS/LEE KARNEY



Song Sparrow

STEPHEN LANG



Bobolink

USFWS/DONNA DEWHURST



Red-winged Blackbird

JACK BARTHOLMAI



Eastern Meadowlark

actually observed by researchers checking the scent stations included rabbit, white-tailed deer and eastern gray squirrel. Additional mammal species seen at the site include feral cat, North American river otter and American mink. All except the rabbit and otter are known to be nest predators. Please see page 35 to learn how you can avoid providing food for mammalian nest predators.

### Birds Banded at the Rosendale site during the Breeding Season

To learn more about the birds breeding at the Rosendale site from 1998 to 2001, we conducted bird banding once every 10 days during the breeding season (June to early August). We captured and banded birds in an area that was a transition zone between the restored native grassland and the extensive wetland. We banded 545 birds of 29 species; the bird species banded are listed below. (For the number of each species banded and their migration status, please see Appendix 8.)

### Birds banded at the Rosendale study site during the breeding season

Virginia Rail (*Rallus limicola*)\*  
 Black-billed Cuckoo (*Coccyzus erythrophthalmus*)\*  
 Downy Woodpecker (*Picoides pubescens*)  
 Trail's Flycatcher (*Empidonax alnorum/traillii*)  
 Least Flycatcher (*Empidonax minimus*)\*  
 Eastern Phoebe (*Sayornis phoebe*)  
 Eastern Kingbird (*Tyrannus tyrannus*)  
 Blue Jay (*Cyanocitta cristata*)  
 Tree Swallow (*Tachycineta bicolor*)  
 Black-capped Chickadee (*Poecile atricapillus*)  
 House Wren (*Troglodytes aedon*)  
 Sedge Wren (*Cistothorus platensis*)\*  
 Veery (*Catharus fuscescens*)\*  
 American Robin (*Turdus migratorius*)  
 Gray Catbird (*Dumetella carolinensis*)  
 Cedar Waxwing (*Bombycilla cedrorum*)  
 Yellow Warbler (*Dendroica petechia*)  
 Ovenbird (*Seiurus aurocapilla*)  
 Common Yellowthroat (*Geothlypis trichas*)\*  
 Song Sparrow (*Melospiza melodia*)  
 Swamp Sparrow (*Melospiza georgiana*)\*  
 Rose-breasted Grosbeak (*Pheucticus ludovicianus*)\*  
 Indigo Bunting (*Passerina cyanea*)  
 Bobolink (*Dolichonyx oryzivorus*)\*  
 Red-winged Blackbird (*Agelaius phoeniceus*)  
 Common Grackle (*Quiscalus quiscula*)  
 Brown-headed Cowbird (*Molothrus ater*)  
 Baltimore Oriole (*Icterus galbula*)  
 American Goldfinch (*Carduelis tristis*)

\*Species marked with an asterisk are of conservation concern on one or more of the Conservation Plans listed on page 38.

### Predators Affecting Breeding Success of Birds at the Rosendale Study Site

To learn more about the potential mammalian nest predators at the site, we conducted scent station surveys in 2000. Scent stations attract mammals to a specific location where they leave their tracks in sand or soot and can be identified. Mammals observed while checking the scent stations were also recorded. (Please see Appendix 3 for more information on the methods used. Please see page 18 for photos of some nest predators.) The tracks of three species of mammals were detected at the scent stations: raccoon, eastern chipmunk, and striped skunk. Species

Pictured are some of the species that were banded during the breeding season at the Rosendale study site.

BWB-ASF STAFF



Black-billed Cuckoo

USFWS/DONNA DEWHURST



Black-capped Chickadee

USFWS/DONNA DEWHURST



Red-winged Blackbird

USFWS/LEE KARNEY



American Goldfinch

BWB-ASF STAFF



Sedge Wren

BWB-ASF STAFF



Gray Catbird

USFWS/DAVE MENKE



Cedar Waxwing

VICKI PIASKOWSKI



Yellow Warbler

BWB-ASF STAFF



Common Yellowthroat

USFWS/LEE KARNEY



Song Sparrow

JACK BARTHOLMAI



Swamp Sparrow

USFWS/STEVE MASLOWSKI



Bobolink

## LAND O' LAKES STUDY SITE RESEARCH

Research conducted at the Land O' Lakes study site in far northern Wisconsin included bird banding during spring and fall migration, censusing, point counts, spot mapping, nest searching and monitoring, and vegetation measurements.

We detected a total of 146 species of birds at the Land O' Lakes study site, including 32 Neotropical migrants, 32 short-distance migrants, and 18 residents. Eleven species found at Land O' Lakes have populations that are both residents and short-distance migrants; 53 species have populations that are both short-distance and Neotropical migrants. The 146 species of birds documented at the Land O' Lakes study site represent about 43% percent of the species likely to be seen in Wisconsin (Mueller 2008). For the complete list of bird species detected at the Land O' Lakes study site, please see pages 45-49.

LARRY HOPWOOD



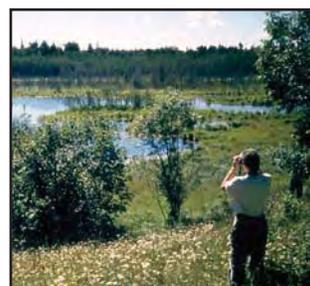
Bog forest

LARRY HOPWOOD



Speckled alder area of bog forest

VICKI PIASKOWSKI



Spring Creek

VICKI PIASKOWSKI



Pink ladyslipper orchid