

Northern pintail

General information

The northern pintail is a large dabbling duck that ranges from 23 to 30 inches in length. Both sexes have blue-gray bills and gray legs and feet. The drake has a thin white stripe running from the back of its chocolate-brown head down its neck to a mostly white undercarriage. He also has gray, brown, and black patterning on his back and sides and long central tail feathers, which give the species its name. The northern pintail female appears to have drab brown feathers, much like those of other female dabbling ducks. Hens make a coarse quack, whereas drakes make a flute-like whistle. Northern pintails prefer open wetlands. They nest on the ground, and nests are hidden among vegetation in a dry location. Nest construction is a simple shallow scrape in the ground lined with plant material and down.

Habitat requirements

Diet: aquatic plant seeds and rhizomes; grain and other seeds found in fields; aquatic insects, mollusks and crustaceans

Water: water is obtained through diet

Cover: open freshwater wetlands and intertidal marshes

Wildlife management practices

Control Nonnative Invasive Vegetation: when nonnative aquatic weeds reduce or limit space for foraging or loafing, or when nonnative invasive plants degrade quality of nesting cover

Leave Crop Unharvested: to provide additional food for migrating and wintering pintails

Livestock Management: livestock should be excluded from nesting areas, from wetlands managed for waterfowl, and from food plots

Plant Food Plots: shallowly flooded grain food plots can provide a beneficial food source for migrating and wintering northern pintails

Plant Native Grasses and Forbs: where nesting cover is limiting and planting is necessary

Repair Spillway/Levee: if not functioning properly

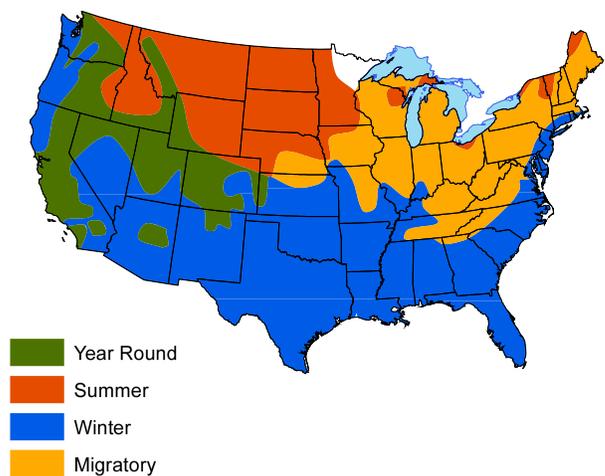
Set-back Succession: *Prescribed Fire* should be used to maintain and rejuvenate nesting cover and maintain proper water and vegetation interspersion in wetlands; *Chainsawing*, *Dozer-clearing*, and *Root-plowing* may be used to clear trees where needed

Soil Conservation Agriculture: eliminating fall tillage can provide waste grain in the winter

Water Developments for Wildlife: shallow impoundments can flood fields and provide important foraging and loafing areas for migrating and wintering northern pintails; water control structures allow the



Dave Menke



water level to be manipulated and provide shallow-water areas for foraging

Wildlife or Fish Survey: observation counts and aerial surveys are used to estimate population trends

Nuttall's woodpecker

General information

Named after naturalist Thomas Nuttall, Nuttall's woodpecker is a small woodpecker that inhabits the oak woodlands and associated riparian areas of California in the Mediterranean ecoregion. Nuttall's woodpeckers use cavities for nesting; nests contain 3-6 eggs. Nuttall's woodpeckers eat insects that they glean mostly from oak, willow, and cottonwood trees.

Habitat requirements

Diet: 80 percent insects and other invertebrates and 20 percent plant material, including seeds and soft mast

Water: water requirements unknown

Cover: oak woodlands; cavities are excavated in softwoods (willow, cottonwood)

Wildlife management practices

Control Nonnative Invasive Vegetation: when nonnative invasive species begin to compete with native vegetation and reduce habitat quality for Nuttall's woodpecker

Forest Management: *Forest Stand Improvement* can reduce tree density where needed and promote desirable species; where standing dead trees are limiting, softwood species >6" in diameter can be killed by girdling and spraying to provide more foraging areas and potential cavities in the future; existing snags should be retained when implementing forest management

Plant Trees: in large open areas to provide future habitat

Wildlife Damage Management: may be needed in residential areas if the woodpeckers are damaging property

Wildlife or Fish Survey: point counts are used to estimate population trends



Greg Lavaty



Peregrine falcon

General information

Peregrine falcons are found primarily along the coasts and mountain ranges of North America where congregations of shorebirds, songbirds, and waterfowl occur. They also may be found in urban and industrial areas with skyscrapers, smokestacks, bridges, and other tall structures and where abundant rock dove and European starling populations occur. Nests are often located on the ledges of cliffs or buildings from 25 to more than 1,300 feet high. They are one of the fastest birds on the planet, with a cruising speed of 25-34 mph to more than 200 mph in pursuit of prey.



Habitat requirements

Diet: mostly birds, but also bats, which falcons catch during flight

Water: requirements largely unknown; likely obtain water needs from foods they consume

Cover: require tall cliffs, buildings, and other tall structures for nesting and perching

Wildlife management practices

Nesting Structures: nesting platforms can be added to cliffs and skyscrapers

Wildlife Damage Management: peregrine falcons can prey upon domestic birds, such as homing pigeons; exclusion practices should be used to discourage damage

Wildlife or Fish Survey: visual surveys near known nesting areas can be used to monitor population trends



Prairie falcon

General information

Prairie falcons are large, pale brown falcons with pointed wings and a distinct dark mustache marking on their face. Prairie falcons are found in arid grasslands, shrublands, and deserts. They nest primarily on cliffs, laying their eggs in small depressions. They prey primarily on ground squirrels, but also on other small mammals and birds and occasionally lizards and insects.

Habitat requirements

Diet: ground squirrels, small mammals, birds, and occasionally lizards and insects

Water: water is obtained from the diet

Cover: nest in cliffs, rock outcrops, canyon walls, ridges, and cave walls; overhanging rocks serve as cover from the sun and weather.

Wildlife management practices

Nesting Structures: nesting platforms may be added to cliffs

Set-back Succession: *Prescribed Fire* can be used to maintain an open landscape that prairie falcons require when searching for prey; *Chaining* and *Drum-chopping* may be used to limit shrub and tree encroachment, such as juniper, and promote increased herbaceous groundcover

Wildlife or Fish Survey: monitoring active nests and observation counts along road transects are used to estimate population trends



USFWS



Prothonotary warbler

General information

Prothonotary warblers are song birds that occur in mature bottomland hardwood forests near water, primarily in the southern U.S. They are most often found in forested wetlands, such as cypress swamps, and along blackwater streams and rivers. Prothonotary warblers are cavity nesters, so large, overmature trees and standing dead trees are important. They often use old cavities excavated by downy woodpeckers, but also will use nest boxes, even those designed for wood ducks. Cavities are often found in sweetgum, tupelo gum, willow, and bald cypress. Nests usually contain 3-7 eggs. Prothonotary warblers may have 1-3 broods per year. Prothonotary warblers feed primarily on insects in the lower canopy or at ground level. Thus, mature hardwood forest with complex vertical structure provides the structure necessary for insect populations that prothonotary warblers require. Prothonotary warblers winter primarily in Central and South America.

Habitat requirements

Diet: insects, especially ants, beetles, butterflies, moths, mayflies, aquatic larvae; snails and isopods; occasionally various seeds and fruits

Water: necessary water is obtained through the diet

Cover: mature bottomland hardwood forests; cypress swamps; dead standing timber help ensure presence of cavities

Wildlife management practices

Control Nonnative Invasive Vegetation: where nonnative invasive vegetation is competing with native vegetation and reducing habitat quality for prothonotary warblers

Forest Management: *Forest Stand Improvement* can stimulate vertical structure of tree saplings to provide increased insect availability where limiting; trees >8" in diameter can be killed via girdling and spraying to provide potential cavities where standing dead trees of sufficient size are limiting

Livestock Management: should exclude livestock from bottomland hardwoods

Nesting Structures: nest boxes are readily used and will provide suitable nesting cover where natural cavities are limiting

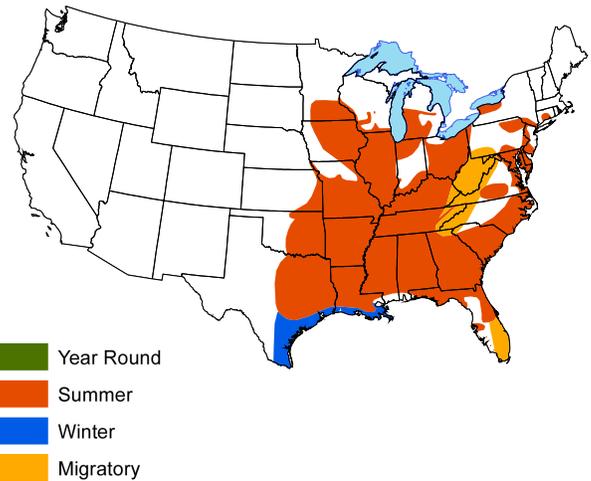
Plant Trees: in large bottomland fields where forest cover is lacking and natural regeneration is not sufficient or of desirable composition

Repair Spillway/Levee: if not functioning properly

Water Developments for Wildlife: shallow impoundments can be established in bottomland



Mark Musselman



hardwoods for habitat enhancement; water control structures allow manipulation of the water level to influence vegetation and enhance cover and food availability

Wildlife or Fish Survey: point counts and autonomous recording units (ARUs) can be used to detect species occurrence and monitor population trends

Pyrrhuloxia

General information

Pyrrhuloxias are a close relative to the northern Cardinal with a characteristic tall crest and stout, curved, parrot-like bill for cracking seeds. These gray or gray-brown birds have distinct red markings on their face, crest, breast, and tail, though the female will look grayer. Pyrrhuloxias are found year-round in arid regions of the Southwest, including Texas, New Mexico, Arizona, and Mexico. They prefer desert vegetation types, such as shrubby, dry grasslands, mesquite savannas, shrub-cactus, riparian woodlands, and farm-field hedgerows. They are commonly seen at bird feeders. Most of their water during the spring and summer months comes from the insects they eat, but in the winter they often relocate closer to free water sources. Pyrrhuloxias are very territorial during the breeding season, calling their sharp notes from perches and making short flights between scrub patches. The females construct their cup-like nest out of twigs, bark, and grass. The nest is often placed up in a tree 5-15 feet off the ground and away from the main trunk. They usually lay a clutch of 2-4 eggs and may have 1-2 broods per year. During winter, pyrrhuloxias come together in large flocks that may number as many as 1,000 birds. Predators include feral and domestic cats, ferruginous pygmy-owls, and greater roadrunners. Although it is not threatened, the pyrrhuloxia has experienced decline because of the conversion of shrubland to agriculture and urbanization.

Habitat requirements

Diet: seeds, including doveweed, sandbur, panicum, and pigweed; fruit, such as cactus and nightshade; insects, including grasshoppers, caterpillars, beetles, cicadas, and weevils

Water: get the majority of their water from their diet, but will drink free-standing water

Cover: shrubs, mesquite savannas, woodlands near streams, farm hedgerows; dense brush (mesquite, elderberry, paloverde) is often used for nesting cover

Wildlife management practices

Control Nonnative Invasive Vegetation: controlling areas of invasive vegetative can help maintain a diverse source of food resources and ensure food availability throughout all seasons

Edge Feathering: can enhance structure for nesting and foraging

Field Borders: can provide nesting and escape cover in areas lacking patches of dense brush

Plant Shrubs: can enhance escape cover and food sources in areas lacking adequate brush



Gary Kramer



Set-back Succession: Prescribed Fire, Disking, and Herbicide Applications can be used to maintain open areas for foraging and scattered brush; Chainsawing may be used to reduce tree cover

Water Developments for Wildlife: small ponds, guzzlers, and windmills may provide free-standing water, especially during winter months

Wildlife or Fish Survey: point counts and autonomous recording units (ARUs) can be used to detect species occurrence and monitor population trends

Red-cockaded woodpecker

General information

The red-cockaded woodpecker (RCW) is about 7 to 8 inches in length and lives in mature pine forests across the South. Historically, RCWs ranged from east Texas to Florida and northward to Missouri, Kentucky, and Maryland, but its range has been sharply reduced because of fire suppression and hardwood encroachment. The species was federally listed as an endangered species in 1970. RCWs have an unusual social organization. They live in a group called a clan. Each clan typically contains 2 to 9 birds, but there is never more than one pair of breeding birds. Some clans have non-breeding birds called helpers, which generally consist of male offspring 1 to 3 years of age that help incubate eggs, feed young, make new cavities, and defend the clan's territory against other RCWs. A clan nests and roosts in a group of as many as 20 cavity trees (called a cluster). RCWs have very specific habitat requirements. Cavity trees are live pine trees, rarely less than 30 to 40 years old and are often more than 70 years old. Older pines inflicted with red-heart fungal disease make it easier for RCWs to excavate cavities.

Habitat requirements

Water: necessary water is obtained through diet

Diet: ants, beetles, roaches, caterpillars, wood-boring insects, spiders, and occasionally fruits and berries

Cover: mature stands of Southern yellow pines, especially longleaf and shortleaf; relatively open stands with very little midstory and a diverse herbaceous understory are most desirable for foraging; a cluster site is the stand of trees surrounding and containing cavity trees and should be at least 100 acres

Wildlife management practices

Conservation Easement: can protect longleaf and shortleaf pine systems for this declining species

Control Nonnative Invasive Species: when nonnative species begin to compete with native vegetation and reduce habitat quality for RCWs

Forest Management: *Forest Regeneration (Single-tree Selection)* is the preferred method to regenerate and manage longleaf pine; *Forest Stand Improvement* can be used to thin pine stands, especially shortleaf and loblolly pine, and thus enhance structure for foraging

Nesting Structures: artificial cavity inserts can be installed into mature pine trees at cluster sites where cavity trees are limiting

Plant Trees: loblolly and shortleaf pine can be planted where lacking within the distribution of RCWs to provide habitat; this may be where there are large open areas or where hardwoods dominate



James Hanula



Set-back Succession: *Prescribed Fire* is required to reduce hardwood encroachment, limit midstory development, and encourage herbaceous groundcover; *Chainsawing* and *Herbicide Applications* may be necessary where hardwoods have become too large to effectively reduce with fire

Wildlife or Fish Survey: observational counts and cluster monitoring are used to monitor RCWs; autonomous recording units (ARUs) can be used to detect species occurrence

Red-eyed vireo

General information

The red-eyed vireo is a common migratory songbird found in mature deciduous forests throughout eastern North America and the upper Midwest. They are also found in forested urban parks. They are more often heard than seen, with their persistent song that sounds like they are saying “where-are-you, here-I-am, over-here.” Red-eyed vireos have olive-green backs with a pale breast and dark red eyes. Red-eyed vireos usually forage in the middle to upper layer of the forest canopy, but often nest in the understory or midstory. The nest is made of twigs, bark, and grasses, usually in an open cup shape and suspended from a branch. They eat insects and fruits.



Greg Lavaty

Habitat requirements

Diet: mostly insects and spiders during spring and summer; more soft mast during winter

Water: necessary water is obtained from diet

Cover: midstory and overstory of mature mixed deciduous forest

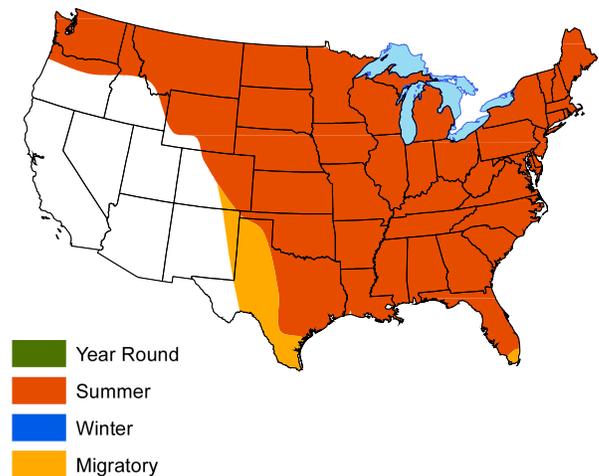
Wildlife management practices

Control Nonnative Invasive Vegetation: when it begins to reduce habitat quality for red-eyed vireos; a common example in the South is kudzu, which can reduce forest cover by overtaking and killing trees

Forest Management: *Forest Regeneration (Single-tree Selection and Group Selection)* can encourage insect and soft mast availability; *Forest Stand Improvement* (light thinning) can also stimulate understory and midstory development to enhance nesting cover in relatively open woods and encourage additional soft mast availability

Plant Trees: in large open areas, trees may be planted to provide future habitat

Wildlife or Fish Survey: point counts and autonomous recording units (ARUs) can be used to detect species occurrence and monitor population trends



Red-tailed hawk

General information

Red-tailed hawks are one of the most abundant hawks in the U.S. They are large raptors with a pale breast, brown back, and red-topped tail, for which they are named. They usually have a dark band across their breast, but the overall plumage can vary. Red-tailed hawks are often seen soaring or perching near open grasslands, pastures, and fields where they search for prey. They dive and catch prey with sharp talons. Red-tailed hawks most often nest in tall trees where they have a good view of the surrounding land. Nests are primarily made of dry sticks that can create piles over 6 feet tall. A pair will continue to build upon nests where 1 to 5 eggs are subsequently laid.



Mark Bohn

Habitat requirements

Diet: small mammals, such as squirrels, rabbits, and mice, reptiles, and other birds

Water: necessary water is obtained from diet

Cover: nests are usually built 30 to 90 feet aboveground, often in the fork of a tree branch; cliffs may be used for nest sites when trees are not present; small trees, electric poles, and similar structures are used for perching

Wildlife management practices

Control Nonnative Invasive Vegetation: when nonnative invasive vegetation begins to compete with native vegetation and degrade habitat for red-tailed hawks or their prey

Edge Feathering: to increase usable space for prey, especially around row crop fields

Field Borders: to increase usable space for prey, especially around row crop fields

Forest Management: *Forest Regeneration (Clearcut)* to improve habitat for prey and increase usable space for red-tailed hawks in large expanses of mature forest; large dead standing trees should be retained for perches

Plant Native Grasses and Forbs: to enhance early successional cover where limiting and where planting is necessary

Plant Shrubs: in large open areas where trees and shrubs are not present to create perching sites and provide cover for various prey species

Plant Trees: (in some ecoregions) in large open areas where trees are not present to create perching and nest sites

Set-back Succession: *Prescribed Fire, Disking, and Mowing* may be used to maintain early successional communities for various prey species; *Chaining, Root-plowing, and Drum-chopping* may be used to set-back succession in areas dominated by shrubs where more



open space is needed

Soil Conservation Agriculture: to facilitate hunting prey when waste grain is available

Wildlife Damage Management: such as exclusion and fencing, may be necessary where livestock predation, such as chickens, is problematic

Wildlife or Fish Survey: observational surveys and autonomous recording units (ARUs) may be used to detect species occurrence and monitor population trends

Redhead

General information

Redheads are diving ducks found across the U.S. and Mexico. They winter in southern areas of the U.S. and into Mexico. Redheads use open-water wetlands (especially for loafing) as well as those with a mosaic of open water with floating islands of organic material and some emergent vegetation. Redheads do not build nests, but instead use old nests of other ducks and wetland birds that are above water or very near the shore in dense emergent vegetation providing concealment. Like other waterfowl, chicks are precocial. That is, they are feathered with down and are able to swim about and forage upon hatching.

Habitat requirements

Diet: chicks primarily eat aquatic invertebrates (mollusks, snails, crustaceans) during late spring and early summer; during the rest of the year, redheads eat aquatic plants, such as pondweeds, muskgrass, bulrush seeds, wild celery, water lily seeds, and coontail

Water: obtained in diet

Cover: during spring and summer, dense emergent vegetation for nesting; open-water wetlands are used for loafing and foraging; wetlands with a mosaic of open water with submerged and emergent aquatic vegetation are used for foraging

Wildlife management practices

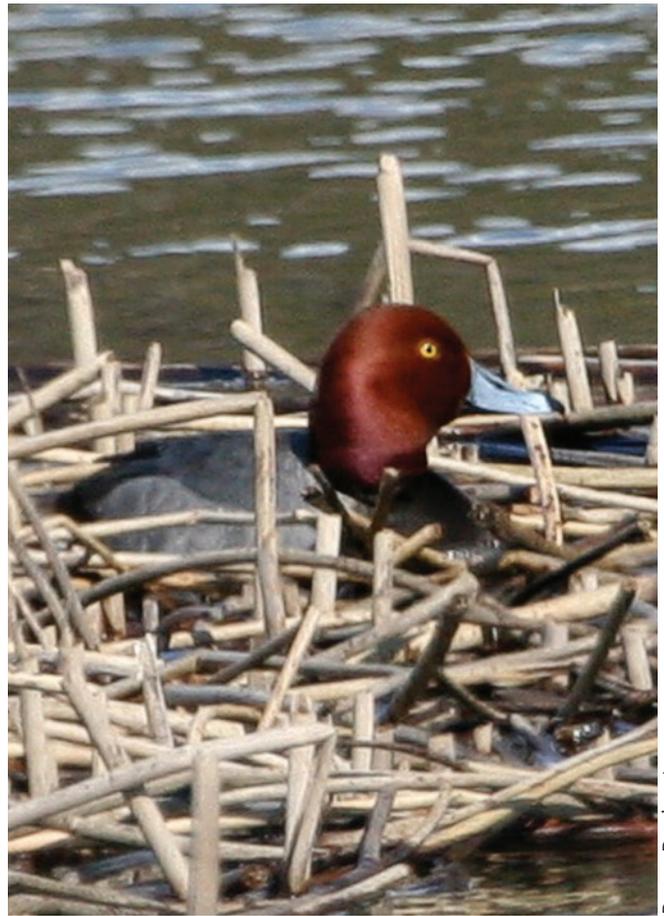
Control Nonnative Invasive Vegetation: when nonnative invasive aquatic vegetation begins to reduce habitat quality for redheads; this is most common when mats of nonnative species begin to form over the water surface and limit diving and foraging by redheads

Livestock Management: livestock should be excluded from wetlands managed for redheads during the nesting season to prevent deterioration of nesting cover

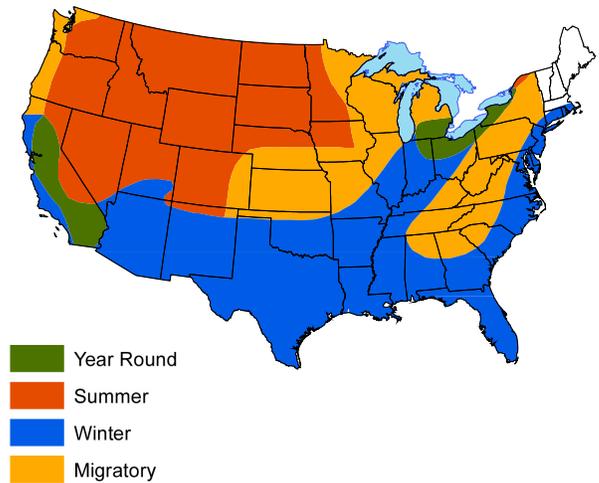
Repair Spillway/Levee: if not functioning properly

Set-back Succession: *Prescribed Fire* is recommended to rejuvenate vegetation when wetlands dry sufficiently to burn (most common in ephemeral wetlands or impoundments where water levels can be manipulated); *Chainsawing* may be used to clear trees where needed

Water Developments for Wildlife: shallow impoundments may be constructed to temporarily flood areas dominated by tall emergent aquatic vegetation during the nesting season; water control structures allow the water level to be manipulated and promote tall emergent aquatic vegetation adjacent to wetland with an abundance of floating and submerged aquatic vegetation (3 to 5 feet deep)



Donna Dewhurst



Wildlife or Fish Survey: observation surveys and aerial surveys are most often used to estimate population trends

Ring-necked pheasant

General information

Ring-necked pheasants are nonnative gamebirds introduced into North America from Asia. They are most prevalent across the northern Great Plains, but also occur across portions of the Intermountain West and northeastern U.S. They are most often found in relatively dense grasslands, cattail marshes, and shrub cover adjacent to agricultural fields, woodlands, wetlands, and along ditches with dense vegetation. They are especially numerous in areas with abundant grain agriculture adjacent to nesting and escape cover.

Habitat requirements

Diet: various seeds, grains, grasses, leaves, fruits, and nuts; grains are used heavily in agricultural areas; insects constitute an important food item for females during the breeding season and young pheasants during the first several weeks after hatching

Water: necessary water is obtained in the diet

Cover: dense residual grass and forb cover for nesting and escape; shrubs and trees may be used for roosting; dense cattails adjacent to and within wetlands

Wildlife management practices

Control Nonnative Invasive Vegetation: ring-necked pheasants are adapted to many plants that are not native to areas where they occur in the U.S. However, there are some, including tall fescue and bermudagrass, that do not provide cover or food value for ring-necked pheasant.

Edge Feathering: to increase usable space around crop fields bordered by woods

Field Borders: to increase usable space around crop fields

Forest Management: where forests are adjacent to open areas used by pheasants, Forest Regeneration (Clearcut) will create brushy cover for 5 to 10 years; Forest Stand Improvement (heavy thinning) also can stimulate brushy understory cover in woodlots that may be used by pheasants

Leave Crop Unharvested: to provide additional food through winter

Livestock Management: grazing management should prevent overgrazing to maintain nesting and escape cover

Plant Food Plots: to provide additional food source where food is limiting

Plant Native Grasses and Forbs: where nesting and escape cover are limiting and planting is necessary

Plant Shrubs: where roosting and escape cover is limiting in open and agricultural areas

Plant Trees: where roosting cover is limiting in open and agricultural areas



Dave Menke



Set-back Succession: *Prescribed Fire* to rejuvenate dense, grassland and wetland (especially dense cattails) cover and reduce woody encroachment where needed; *Herbicide Applications* and *Chainsawing* can be used to reduce trees and shrub cover

Soil Conservation Agriculture: to provide cover and waste grain through fall and winter

Decrease Harvest: may be necessary if populations are declining in areas where habitat quality is good and data suggest mortality from hunting is additive or limiting population growth

Increase Harvest: where populations can sustain additional harvest pressure for hunting recreation and/or where populations need to be lowered, such as where pheasants (a non-native species) compete with native grassland species for habitat resources

Wildlife or Fish Survey: call counts, observation surveys, autonomous recording units (ARUs), and point counts are used to estimate population trends

Rock pigeon

General information

Rock pigeons (commonly called pigeons) are an introduced species found year-round throughout urban and agricultural areas in the U.S. They are considered pests because they are generally protected in urban areas where they develop dense populations and damage buildings and other structures with accumulations of droppings. They also cause severe problems in agricultural areas by contaminating feed. Pigeons also can carry and spread diseases, including salmonella, encephalitis, Newcastle disease, and others, to people and livestock through their droppings. Droppings of rock pigeons may also contain histoplasmosis, a fungal disease that can cause respiratory problems in humans. Wildlife damage management practices are often required to control overabundant rock pigeon populations. Rock pigeons are regularly found around large buildings, parks, and open areas. They create a shallow nest of sticks, leaves, and other vegetation, and nest aboveground and on or around buildings. Rock pigeons primarily feed on the ground and eat small grains, seeds, crumbs, and garbage.



James W. Arterburn

Habitat requirements

Diet: waste grain and weed seeds; in urban areas, rock pigeons commonly eat human handouts

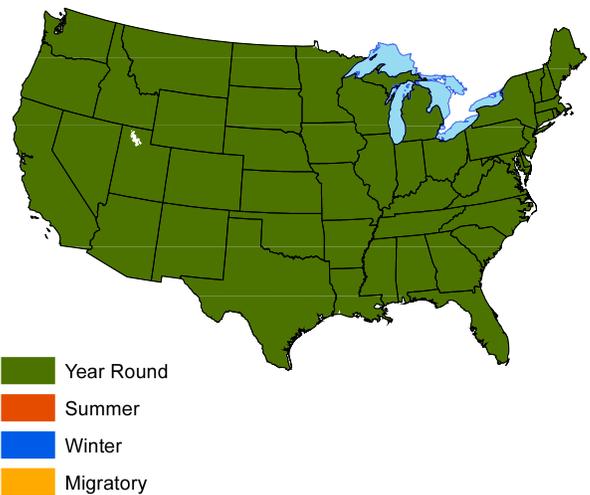
Water: free-standing water is required frequently during warm seasons

Cover: barn lofts, window ledges, rooftops, bridges, and a variety of other structures

Wildlife management practices

Wildlife Damage Management: shooting (including pellet guns in urban areas), toxicants, and trapping are recommended direct control techniques; exclusion practices prevent access to livestock feed; food, water, and desirable cover should be removed when possible and when it does not impact desirable wildlife species; harassment practices may be effective; habitat management to attract rock pigeons should never occur

Wildlife or Fish Survey: observation counts and questionnaires related to wildlife damage management are used to estimate trends in populations



Ruby-throated hummingbird

General information

There are 18 species of hummingbirds found in North America. The ruby-throated hummingbird is the most widespread species. Other than a couple of exceptions, hummingbirds migrate into Central and South America during winter. Hummingbirds use areas with flowering plants from which they can feed on the nectar. In urban settings, they prefer areas with large trees and nearby flowering plants. A hummingbird's nest is constructed in the shape of a small cup and is built of lichens and other vegetation. Hummingbirds require high-energy foods. Nectar is high in sugars that supply needed energy. Insects are an important source of protein.

Habitat requirements

Diet: nectar from flowers and insects found on flowers

Water: necessary water obtained from diet

Cover: trees and shrubs for nesting; flowers for feeding

Wildlife management practices

Control Nonnative Invasive Vegetation: when nonnative invasive vegetation begins to compete with native vegetation and reduce habitat quality for ruby-throated hummingbirds

Plant Shrubs: flowering shrubs and vines that provide nectar may be planted where nesting sites and food resources are limited; favorites include hibiscus, trumpet vine, and lilac

Plant Trees: where potential nesting sites are limited; flowering dogwood and various fruit trees are favorites

Wildlife or Fish Survey: observation counts, especially visitation at feeders, are used to estimate trends in populations

Artificial Feeders: artificial feeders filled with sugar-water (1 part sugar to 4 parts boiled water) may be used where flowers are limited; multiple feeders may reduce problems with territoriality; never give honey-water to hummingbirds because honey ferments faster than sugar and quickly develops a mold that can kill hummingbirds

Plant Flowers: preferred flowers include petunias, gladiolus, nasturtiums, begonias, morningglory, evening primrose, columbine, and cardinal flower

Rooftop/Balcony Gardens: can provide source of nectar if appropriate flowers are planted

NOTE: *Plant Flowers* should not be recommended to establish *Rooftop/Balcony Gardens*



Greg Lavaty

