

**Songbird
ReMix**

European Edition



Volume 2: Common Birds of Eurasia

Avian Models for 3D Applications
by Ken Gilliland

Songbird ReMix *European Edition v2*

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Songbird ReMix

European Edition v2

Introduction

European Edition 2 contains many of the most populous bird species on European continent. Included is a good variety of species including pigeons and doves, shorebirds, woodpeckers, warblers, flycatchers, thrushes, finches and sparrows. There are 16 species included (21 birds in all).

While many of these birds are common, their presence in your imagery will be anything but that. Adorn your Valentine or Christmas images with the European Turtle-dove or fill a plaza with Common Wood-pigeons. The Crested Lark is awaiting a field fence post and the Black Caps or as the Italians called them, "*La Capinera*" some ruins to forage in. From the detailed patterning of the Eurasian Wryneck to the bold and striking colors of the Hawfinch to the elegance and effervescent sheen of the Northern Lapwings, European Edition 2 will add realism and authenticity to your imagery.

Overview and Use

The set is located within the **Animals : Songbird ReMix** folder. Here is where you will find a number of folders, such as **Bird Library**, **Manuals** and **Resources** . Let's look at what is contained in these folders:

- **Bird Library:** This folder holds the actual species and poses for the "premade" birds. Birds are placed into a "type" folder (such as "Birds of Prey (Order Falconiformes)" which for example would hold falcons, hawks and eagles). The birds for this set can be found in the following folder(s):
 - **Gulls and Waders (Order Charadriiformes)**
 - **Gamebirds (Order Galliformes)**
 - **Perching Birds (Order Passerines)**
 - **Woodpeckers and Toucans (Order Piciformes)**
- **Manuals:** Contains a link to the online manual for the set.
- **Props:** Contains any props that might be included in the set
- **Resources:** Items in this folder are for creating and customizing your birds
 - **Bird Base Models:** This folder has the blank, untextured model(s) used in this set. These models are primarily for users who wish to experiment with poses or customize their own species of bird. SBRM Cool and Unusual birds has two. When using physical renderers such as Iray and Superfly, SubD should be turned to at least "3". For DAZ Studios 3Delight renders, the SubD must be turned from the "High Resolution" setting to the "Base" setting (otherwise some areas will render incorrectly transparent).

- ## Poser Use
- Select **Figures** in the **Runtime** Folder and go to the **Animals : Songbird ReMix** folder. Select the bird from the renderer *Firefly or Superfly*) folder you want and simply click it to load. Some birds in the Songbird ReMix series may load with attached parts (*Conformers*) such as tail or crest extensions. Some of these parts have specific morphs. You will need to click on the attached part to access those controls. Associated poses can be found in the same folder- **Bird Library : (Type) : Poses**.

stop on “manakin”. Looking across to the second column, you will now know that manakins can be found in the “Tyrant Flycatchers & their Allies” subfolder.

Physical-based Rendering

Iray and **Superfly** requires more CPU and memory horsepower than the legacy renderers because of ray-trace bounces and higher resolution meshes needed for displacement. Poser’s **Superfly** renderer will require that the “Min Transparent Bounces” be set to **at least 16** and that the “Max Transparent Bounces” be set to **at least 32** in render settings. Superfly renders may show artifacts in the head area. The higher the bounce settings, less chance those will be apparent. This is a known Poser issue and may be addressed in the future. Increasing the SubD may minimize this issue. A good work around solution for Superfly artifacts is to HIDE Fluff areas (Correction Controls).

Hiding Transparency Panes

In some camera angles and lighting situations, the area where a transparency pane connects to the main body may be obvious and undesirable. In the Correction Controls area of the model, you can hide individual sections on these transparency panes to avoid this issue.

Posing & Shaping Considerations

This volume has various species, so when using generic poses not every pose will work perfectly with every bird. You may find that some minor alteration on the stock poses may be warranted.

Here are some of the most common alterations you may need to make:

- Birds will not be flat on the zero plane due to leg size and overall scale.
- Because of the numerous beak shapes, closing the beak may range from 0.5 to 1. Usually 0.8 is about right.
- **Raise Upper Beak** (*in Action Controls*): This morph is a “one size fits all” control. Because of the variety of beak shapes. It may not work with all birds.
- **Tongue poke-through** (especially when the beak is open). This can be easily solved by using the **Throat-Fuller1 & 2** morphs (*found in Creation Control/Head Shapes*).

Some poses may go askew when IK is turned on. By default, Poser’s IK feature is turned off when loading a bird. To turn it on, select the “Figure” category from the main tool bar and “Use Inverse Kinematics” from the submenu.

By default, DAZ Studio’s IK feature is turned on when loading a bird. This will cause the thigh and shin rotations change when the character is moved. The **CTRL K** keypress will turn IK on and off in DAZ Studio. IK doesn’t work that well in Studio, so I suggest selecting the character in the **Scene tab** and simply deleting the two IK body parts to remove IK.

Where to find your birds

Type Folder	Bird Species
Gulls & Waders (Order Charadriiformes)	Northern Lapwing
Perching Birds (Order Passeriformes) Chickadees, Tits & their Allies	Black Cap Crested Lark Willow Tit
Perching Birds (Order Passeriformes) Finches, OW Sparrows & their Allies	Dunnock European Serin Hawfinch
Perching Birds (Order Passeriformes) Leaf-warblers and their Allies	Common Chiffchaff
Perching Birds (Order Passeriformes) Thrushes, Oxpeckers & their Allies	Collared Flycatcher Fieldfare Northern Wheatear
Pigeons and Doves (Order Columbiformes)	Common Wood-pigeon European Turtle-dove Eurasian Collared-dove
Woodpeckers & Toucans (Order Piciformes)	Black Woodpecker Eurasian Wryneck

Where to find your poses

Type Folder	For what species?
Pigeons and Doves (Order Columbiformes)	All Doves and Pigeons
Gulls & Waders (Order Charadriiformes)	All Shorebirds
Perching Birds (Order Passeriformes) Poses can be found in "Universal Poses" & "type" folders	All Songbirds
Woodpeckers & Toucans (Order Piciformes)	All Woodpeckers & Wood-creepers

Field Guide

Shorebirds

Northern Lapwing

Pigeons & Doves

Common Wood-pigeon

European Turtle-dove

Eurasian Collared-dove

Woodpeckers

Black Woodpecker

Eurasian Wryneck

Larks

Crested Lark

Warblers

Black Cap

Common Chiffchaff

Thrushes

Fieldfare

Flycatchers

Collared Flycatcher

Northern Wheatear

Tits & Nuthatches

Willow Tit

Sparrows

Duncock (Hedge sparrow)

Finches

European Serin

Hawfinch

Common Name: Northern Lapwing
Scientific Name: *Vanellus vanellus*

Size: 11-12.2 inches (28-31 cm); Wingspan: 32.3-34.3 inches (82–87 cm)

Habitat: Eurasia and Africa; Most populations of this species are fully migratory and travel on a broad front out of Europe although some breeding populations in more temperate regions are sedentary. **Breeding:** The species shows a preference for breeding on wet natural grasslands, meadows and hay meadows with short swards and patches of bare soil at low altitudes (less than 1,000 m). It will also breed on grassy moors, swampy heaths, bogs and arable fields. **Non-breeding:** During the winter the species utilizes large open pastures for roosting and forages on damp grassland, irrigated land, stubble and ploughed fields, riverbanks, lake shores, fresh and saline marshes, drainage ditches, estuaries and mudflats (Africa).



Status: Near Threatened. **Global Population:** 5,200,000 - 10,000,000 Mature individuals. The overall population trend is decreasing at a moderately rapid rate. In

Europe, trends since 1980 show that populations have undergone a moderate decline. This species suffered past declines as a result of land-use intensification, wetland drainage and egg collecting. Today it is threatened by reduced breeding productivity as a result of intensifying and changing agricultural practices, especially the improvement of grasslands (e.g. by drainage, inorganic fertilizing and reseeded). Important migratory stop-over habitats for this species on the Baltic Sea coastline are threatened by petroleum pollution, wetland drainage for irrigation, land abandonment and changing land management practices leading to scrub overgrowth. Clutch destruction may also occur during spring cultivation (using machinery) on arable fields. The species is susceptible to avian botulism so may be threatened by future outbreaks of the disease, and may suffer from nest predation by introduced mammals (e.g. European hedgehog *Erinaceus europeus*) on some islands.

Diet: Insects such as beetles, ants, diptera, crickets, grasshoppers, dragonflies, mayflies, cicadas, Lepidoptera, spiders, snails, earthworms, frogs and small fish. It may also eat seeds or other plant material.

Breeding: It has metallic glossy green upper parts with a blackish crest and bronze scapulars. It has very broad wings, especially in breeding males. The female has a less distinctive head pattern and white flecks on throat. Non-breeding adult has buff face, short crest, and white chin and throat. The upper wing-coverts and scapulars have buff fringes. Juveniles are similar to non-breeding adults, but has more extensive buff feather fringes, and narrower and browner breast band.

The nest is a shallow scrape in short grass vegetation. The species breeds from April to July in solitary pairs although pairs may also nest close together, even semi-colonally, in optimal habitat. The species may roost communally at night during both the breeding and non-breeding seasons and after breeding the species gathers in large flocks for migration and remains highly gregarious during the winter in flocks of several thousand.

Cool Facts: The name lapwing has been variously attributed to the "lapping" sound its wings make in flight, from the irregular progress in flight due to its large wings, or from its habit of drawing potential predators away from its nest by trailing a wing as if broken. *Peewit* describes the bird's shrill call. This is a vocal bird in the breeding season, with constant calling as the crazed tumbling display flight is performed by the male.

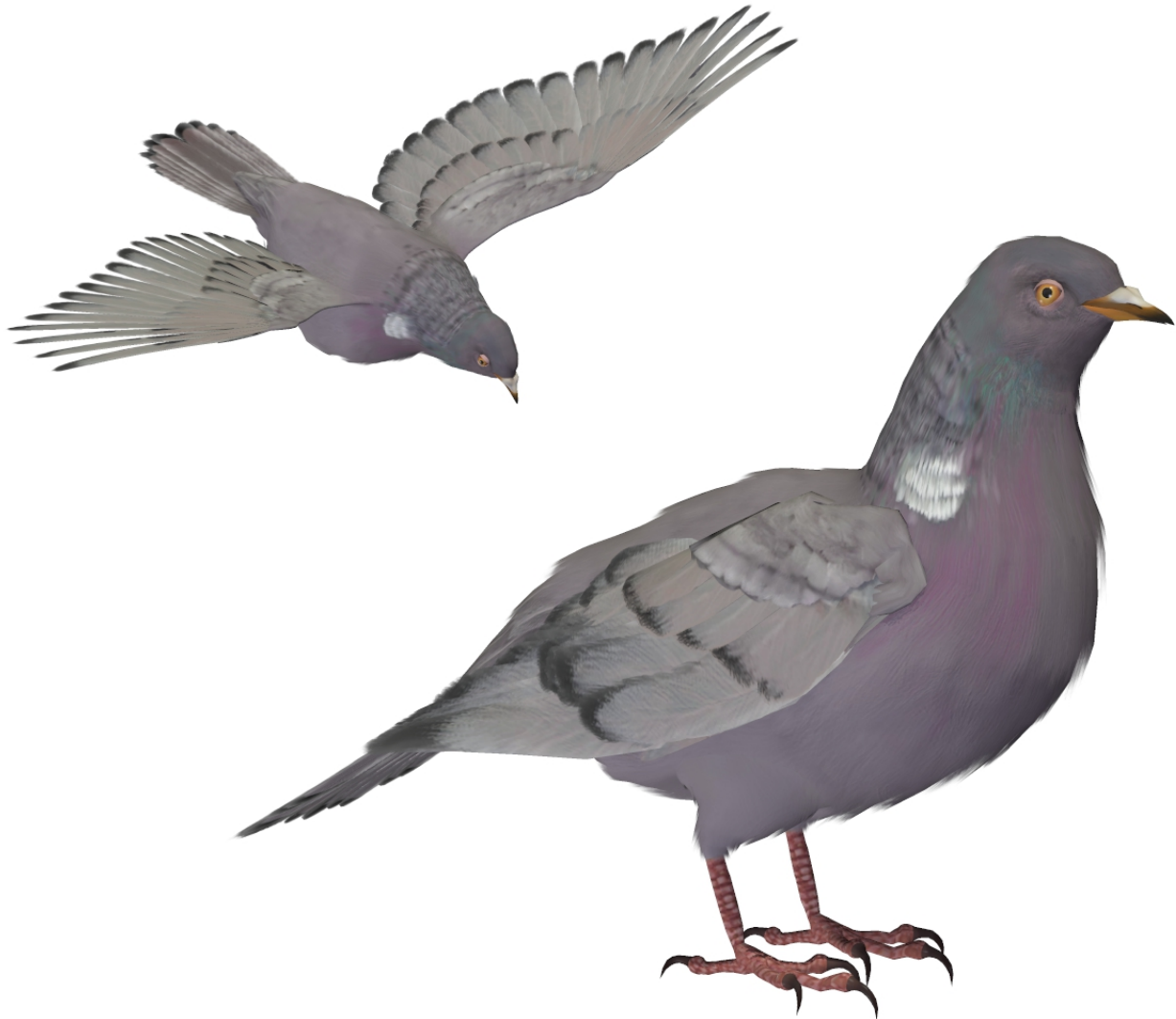
Common Name: Common Wood-pigeon

Scientific Name: *Columba palumbus*

Size: 15-17 inches (38-43 cm)

Habitat: Eurasia; In the colder northern and eastern parts of its Europe and western Asia range the Common Wood Pigeon is a migrant, but in southern and western Europe it is a well distributed and often abundant resident.

Typically a species of the ecotone in deciduous or coniferous woodland. It occurs at



1500–1600 m, and even up to the tree-line in the Alps. The original breeding habitat in central Europe was the edges of old mixed pine and oak forests. In the higher woods in Britain found in ash forests up to 370 m, and in beech, oak and ash woods in lowland. It also inhabits plantations of exotics notably Sitka spruce and Douglas fir. It frequents open country, especially fields of crops, when foraging.

Status: Least Concern. **Global Population:** 30,000,000 - 70,000,000 Mature individuals. The population is increasing in many parts of its range as it can exploit human-modified habitats; it has expanded its range northwards to Fenno-Scandia and Faeroe Islands. In Europe, trends since 1980 show that populations have undergone a moderate increase.

Diet: Most of diet made up of plant matter, including green leaves , buds, flowers, seeds , berries and root crops; grain taken includes wheat, barley, oats , maize and oilseed. The fruits and seeds consumed include those of oak, beech, elder, olive. The leaves eaten include those of clover, rapeseed and cabbage. Various invertebrates are also occasionally eaten, including earthworms, gall wasps, beetles, pupae of lepidoptera, spiders, slugs and snails.

It mostly feeds on the ground but will tree is trees. Foraging flocks on farmland may number many thousands, sufficient to cause significant crop damage (notably to oilseed rape plants).

Breeding: A large pigeon that is bluish gray in appearance; duller on the wings. The primary feathers are black with pale edges. the breast is mauve-pink merging to creamy on the belly The flanks are gray and the feathers along edge of wing are white, forming a band on open wing. There are iridescent purple-pink and green feathers beside a white patch on each side of the neck. The rectrices are gray with a broad black terminal band. There is a pale grayish white central band evident on underside of the tail, but less conspicuous on the top side. The iris is greenish white to pale golden. The orbital skin around the eye is gray and the bill is purplish pink basally, golden distally. The cere is white and the legs are reddish purple. Females are similar but tend to have smaller white neck patches and the breast less pink.

Juvenile birds do not have the white patches on either side of the neck. When they are about 6 months old (about 3 months out of the nest) they gain small white patches on both sides of the neck, which gradually enlarge until they are fully formed when the bird is about 6–8 months old (approx. ages only). Juvenile birds also have a grayer beak and an overall lighter gray appearance than adult birds.

It perches well, and in its nuptial display walks along a horizontal branch with swelled neck, lowered wings, and fanned tail. During the display flight the bird climbs, the wings are smartly cracked like a whiplash, and the bird glides down on stiff wings. The noise in climbing flight is caused by the whipcracks on the downstroke rather than the wings striking together. The Common Wood Pigeon is gregarious, often forming very large flocks outside the breeding season.

It breeds in trees in woods, parks and gardens, laying two white eggs in a simple stick nest which hatch after 17 to 19 days. Wood pigeons seem to have a preference for trees near roadways and rivers. The nests are vulnerable to attack, particularly by crows, the more so early in the year when the leaf cover is not fully formed. The young usually

fly at 33 to 34 days; however if the nest is disturbed some young may be able to survive having left the nest as early as 20 days from hatching.

Cool Facts: The Common Wood Pigeon is the most common pigeon in the United Kingdom, with numbers having doubled from 2008 to 2009. Although they are often seen as a pest, and their urine can cause damage to buildings, the health risks carried by these birds are minute.

The three Western European Columba pigeons, Common Wood Pigeon, Stock Pigeon, and Rock Pigeon, though superficially alike, have very distinctive characteristics; the Common Wood Pigeon may be identified at once by its larger size at 38–43 cm, and the white on its neck and wing. It is otherwise a basically gray bird, with a pinkish breast.

There are six subspecies:

The White-necked Group

- *C. p. azorica*. It is found in the eastern and central Azores.
- *C. p. maderensis*. It is found in the montane forests of Madeira.
- *C. p. excelsa*. It is found in Morocco, Algeria and Tunisia
- *C. p. palumbus*. The nominate subspecies is found in Europe to western Siberia, eastern Turkey and Iraq; winters to northern Africa
- *C. p. iranica*. It is found in southern Transcaspia, northern and western Iran.

The Cinnamon-necked Group

- *C. p. casiotis*. It is found in Kazakhstan and Uzbekistan to northern Afghanistan, northern Oman, southeastern Iran, northern Pakistan and Kashmir; winters eastward to Nepal.

Common Name: European Turtle-dove
Scientific Name: *Streptopelia turtur*

Size: 10.6-11.4 inches (27-29 cm)

Habitat: Europe, Asia and Africa; a migratory species with a southern Palearctic range, including Turkey and north Africa, though it is rare in northern Scandinavia and Russia; it winters in southern Africa.

It is found in a wide variety of woodland areas , as well as steppe and semi-desert. It does not inhabit unbroken forests, preferring forest borders, open woodland and heath with tree clumps. It avoids windy, cloudy and wet regions preferring sunny, dry and sheltered areas. It also avoids mountains and in continental Europe and thrives below 350 m elevations.



Status: Vulnerable. **Global Population:** 12,800,000-47,600,000 mature individuals with a decreasing population trend. According to the State of Europe's Common Birds 2007 report, the Turtle Dove population in Europe has drastically fallen by 62% in recent years. This is partly because changed farming practices mean that the weed seeds and shoots on which it feeds, especially Fumitory, are scarcer. The population drop is also partly due to shooting of birds during migration in Mediterranean countries. This dove was not considered of global conservation concern until 2015, when global declines triggered uplisting to Vulnerable.

Diet: Seeds and fruits of weeds and cereals comprise most of diet. The seeds taken include those of Brassica, Chenopodium, Fumaria, Helianthus, Medicago, Triticum and

Setaria seeds. Berries and fungi are occasionally eaten, as well as also earthworms, some insects, pupae and small snails.

Although it is mostly an arboreal dove, it finds most of its food on the ground.

Breeding: The males forehead pale bluish gray darkening on crown, nape and hindneck. The throat is grayish-white, the sides of face pinkish gray and the lower throat and breast are mauve-pink merging into grayish-white on belly and under tail-coverts. The flanks are pale gray and the black, silver-tipped feathers, form patch on side of neck giving impression of diagonal black and silver lines. The mantle is dark brown, often gray tinted, the center of each feather darker forming a scaled pattern. The inner wing-coverts and scapulars consist of black feathers with broad orange-buff fringes creating a spotted effect. The outer wing-coverts and under wing are bluish gray. The primaries, outer secondaries and primary-coverts are blackish gray. The lower back and rump are a drab tinged blue-gray. The upper tail-coverts and central rectrices are grayish drab. The outer rectrices are dark gray with broad white terminal bar and the outermost pair with white outer webs. the under side of tail is black and white. The iris varies from golden-yellow to light orange with the orbital skin a dark purplish blue. The bill is blackish often with a purple tinge, paler toward tip. The legs purplish red. Female sometimes indistinguishable, occasionally slightly paler and duller in coloration, a gray head and pink breast suffused with drab. The edges of the wing-coverts can be reddish and less clear. Juveniles tends to be browner and duller overall than the adult, with buffish or reddish-buff tips to the feathers. The markings of the wing-coverts obscure and neck patch absent or represented by a slight gray area. The juvenile male tends to be redder than the female.

The nuptial flight, high and circling, is rather like that of the Common Wood Pigeon, but the undulations are less decided; it is accompanied by the whip-crack of the downward flicked wings. They built nests of twigs and sticks in the canopy and lay 2 to 3 eggs.

Cool Facts: The arrival in spring is heralded by its purring song, a rather deep, vibrating "turr, turr", from which the bird's name is derived. Despite the identical spelling, the "turtle" of the name, derived from Latin turtur, has no connection with the reptile, "turtle" in that case coming originally from Late Latin tortuca.

The Turtle Dove, one of the latest migrants, rarely appears in Northern Europe before the end of April, returning south again in September, but is often seen in April.

Biblical references (especially the well-known verse from the Song of Songs), along with its mournful voice, and the fact that it forms strong pair bonds, Turtle Doves have become emblems of devoted love. In the New Testament, a two turtle doves are mentioned to have been sacrificed for the Birth of Jesus. In Renaissance Europe the Turtle Dove was envisaged as the devoted partner of the phoenix. Robert Chester's poem Love's Martyr is a sustained exploration of this symbolism. It was published along with other poems on the subject, including William Shakespeare's poem "The Phoenix and the Turtle" (where "turtle" refers to the turtle dove).

Turtle Doves also feature in the song "The Twelve Days of Christmas", as the gift "my true love gives to me" on the second day of Christmas; by the end of the song, she ends up with 22 of them.

There are four subspecies of European Turtle-dove:

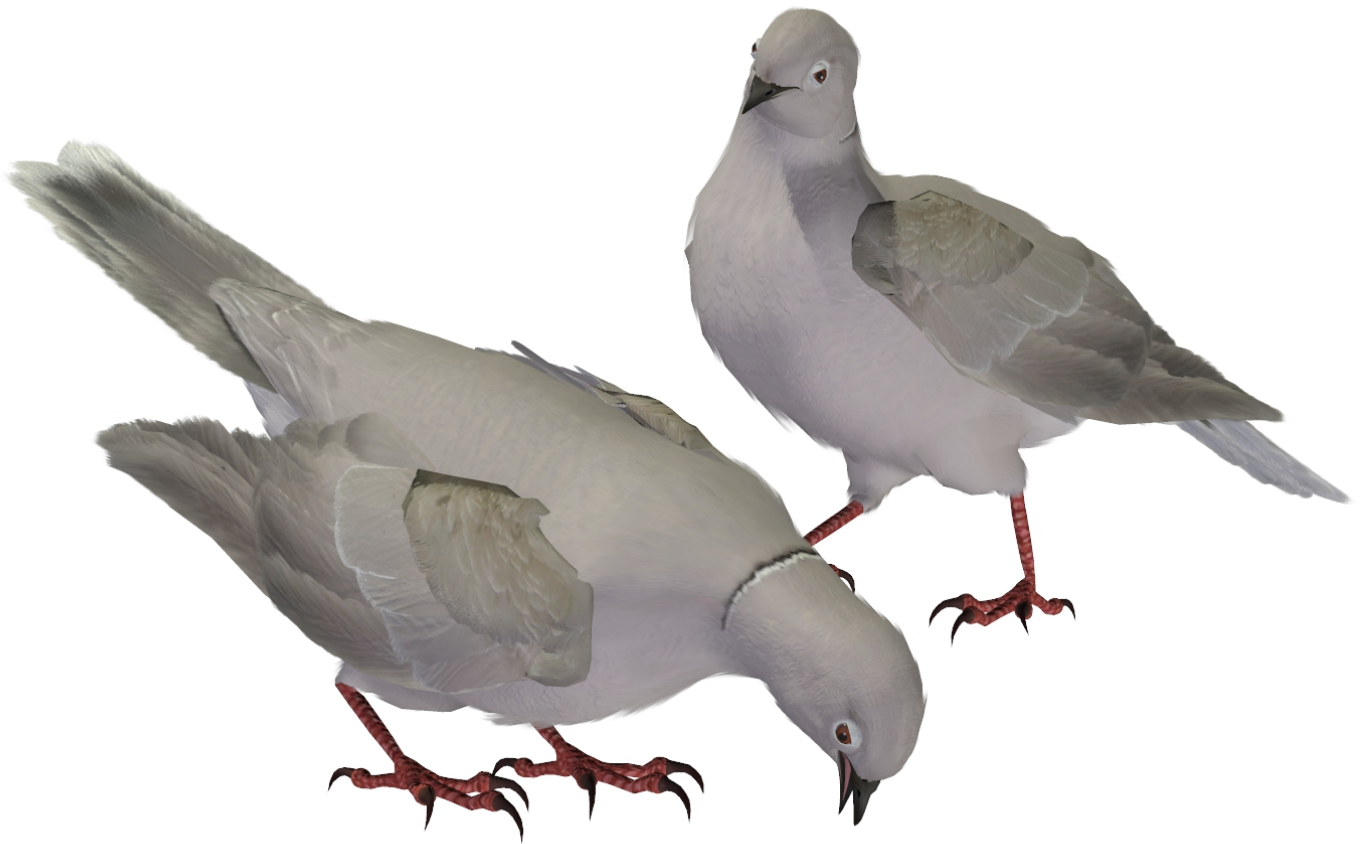
- *S. t. turtur*. The nominate subspecies is found in central and southern Britain eastward to Poland and northern Russia, southward to the northern Mediterranean coast, and on through Asia Minor and Syria to Kazakhstan and western Siberia. It is also found in the Canary Islands.
- *S. t. arenicola*. It is found in Morocco eastward to Tripoli, and from Iraq and Iran eastward through Afghanistan, Turkestan and Kyrghyz Steppe to northwestern China. Race *arenicola* is slightly smaller and paler.
- *S. t. hoggara*. It is found at Ahaggar, Aïr, Tibesti and Ennedi Massifs in the southern Sahara. Race *hoggara* richly coloured with broad, deep orange-buff fringes to wing-coverts, head and rump feathers with sandy tips.
- *S. t. rufescens*. It is found at the Kufra Oasis in Libya, Dakhla and Kharga Oases in Egypt, as well as Faiyûm, and parts of Nile Valley. With *rufescens*, the male is mainly rich dark sandy orange on crown and the upper parts with breast deep pink, whereas the female is paler with lighter pink breast often suffused with buff.

Common Name: Eurasian Collared-dove
Scientific Name: *Streptopelia decaocto*

Size: 11.4-11.8 inches (29-30 cm)

Habitat: Worldwide; The Eurasian Collared-Dove has exploded across the globe. It is thought that the species occurred historically only in and around India, and that a massive expansion in the 1600s brought it into Turkey and the Balkans. It spread across Europe in the 1900s. It was introduced in the Bahamas in the late 1970's and has spread rapidly across much of North America with 2001 sightings on the California coast and 2009 sightings in Alaska.

It prefers urban, suburban, and agricultural areas where grain or seed is available.



Status: Least Concern. **Global Population:** 20,000,000 - 50,000,000 Mature individuals. The population is suspected to be increasing as ongoing habitat degradation is creating new areas of suitable habitat. In Europe, trends since 1980 show that populations have undergone a moderate increase.

Diet: Mostly seed, cereal grain, some green parts of plants, berries and small amounts of invertebrates.

Most of the foraging is on the ground below bird feeders, waste and stored grain, and animal feed from agriculture. It also takes seeds from elevated bird feeders. Grit often taken from ground on roads and parking lots for digestion.

Breeding: A medium-sized dove, most easily recognized by black collar on back of neck and squared tail. Sexes alike and plumages similar throughout year. The adult is a sandy gray, with pinkish hue on head and breast when observed in good light. There is a narrow black collar on the hind neck is edged with white. The gray feathers in “wrist” of wing visible in flight and the primaries are dark brown. The under tail-coverts gray, under surface of tail with contrasting black-and-white pattern. There are a broad white terminal edge to under surface of tail, most conspicuous during display flight. The bill is black, the iris a deep red, and the legs and feet are mauve-red.

Juveniles are similar to adults, but they have reddish edges to body feathers, brown eyes, and brownish red legs.

Eurasian Collared-Doves are monogamous and may have 3-6 broods per year, They create a simple saucer-shaped nest of twigs and plant fibers in trees and on buildings. 1-2 smooth, glossy, oval; white eggs are laid.

Cool Facts: The Eurasian Collared-Dove is often kept as a pet. It is one of many successful species introduced to the North American fauna in recent history, the Eurasian Collared-Dove was first released in the New World on New Providence, Bahamas, in the mid-1970s as an escaped pet. Since its introduction, this dove has spread quickly across the North American continent reaching Alaska by 2000. Reports of this bird continue at a rapid pace.

The domesticated Ringed Turtle-Dove is similar to the Eurasian Collared-Dove, and it frequently escapes or is released from captivity. The occurrence of the first Eurasian Collared-Doves in the United States went unnoticed for quite a while because of confusion with feral Ringed Turtle-Doves. The two species occasionally hybridize in wild populations.

- *S. d. decaocto*. First reported by Frivaldszky in 1838. the nominate subspecies is a resident across Europe and northeastern Africa eastward through Asia Minor and Middle East to India, Sri Lanka, Nepal, and western China. It has been introduced into North America and elsewhere. The plumage is relatively pale overall; orbital skin whitish.
- *S. d. xanthocyclus* (Newman in 1906. A resident in Myanmar (Burma) eastward to southeastern China. The plumage is darker overall and the orbital skin is yellow. It averages smaller than the nominate.

Common Name: Black Woodpecker
Scientific Name: *Dryocopus martius*

Size: 16.5–21.7 inches (45-55 cm)

Habitat: Eurasia; It is the sole representative of its genus in that region. It does not migrate.



It is found in all types of mature forest, so long as they are not extremely dense and damp. It can also be found at forest edges. Spruce and pine forests with larch, birch, aspen and alder are preferred in Scandinavia and Siberia while all habitat types in primeval Polish forests are attractive. In central Europe, it occurs in all types of not over-dense deciduous, mixed or coniferous forest, from riparian woodland to subalpine forests. In Japan, it occurs in open boreal mixed or coniferous forests, but rarely in lowlands. It requires decaying trees and stumps for foraging, and tall timber for nests and roosts. Outside breeding season also in open areas such as forest clear-cuts, even on outskirts of cities.

Status: Least Concern. **Global Population:** 6,000,000 - 10,500,000 Mature individuals. Its range is expanding in Eurasia.

Diet: Mainly carpenter ants and their brood. It may switch from *Camponotus* in winter to *Lasius* in spring. Wood-boring beetles and bark beetles and their larvae are also taken, as well as various other arthropods, and occasionally, snails. It has been reported to break into beehives. Fruits and berries eaten only rarely.

Breeding: A very large woodpecker. The male has a red central forehead to hindcrown, a few gray feather bases (sometimes showing through) but the rest of plumage black, head and upper parts (especially wing-coverts) are glossed dark blue-black. The primaries are tinged dark brown, the under parts are slightly duller and often tinged gray. In worn plumage the black is duller and distinctly gray-tinged below, and red on head is mixed with dark gray. The long bill is chisel-tipped, has a very broad-based, culmen slightly curved, and is pale ivory-white to pale horn. The culmen and tip are bluish to blackish. The iris whitish or yellowish-white, sometimes pale cream-gray. The legs are dark gray to blue-gray. The female has its forehead and fore-crown glossy black, with red only on the hind crown, the bill is shorter than male's. The juvenile is duller, more sooty-black, often with paler (dark gray) throat, the red on the head duller or paler with larger dark feather bases. The young male with less red than the adult male.

The male woodpecker digs a nest hole, usually in a live poplar or pine tree. The female finishes the nest with softer plant materials where it lays four or more eggs.

Cool Facts: Unlike other woodpecker species, the Black Woodpecker does not have a dipping, bounding flight.

- *D. m. martius*. The nominate species is found in Europe from Spain, France and Scandinavia (northward to the Arctic Circle) southward to the Balkans and northern Turkey, and eastward in broad belt across Asian taiga (south to the Altai Mountains in northern Mongolia) to Kamchatka, Sakhalin and Japan (Hokkaido, extreme northern Honshu), northeastern China and Korea; also Caucasus and northern Iran.
- *D. m. khamensis*. It is found in south-central China (Qinghai and eastern Tibet to northwestern Yunnan). Race *khamensis* differs from the nominate in being blacker and having more glossy plumage.

Common Name: Eurasian Wryneck

Scientific Name: *Jynx torquilla*

Size: 6.26 inches (16-17 cm)

Habitat: Eurasia and Africa; the breeding range of Wryneck lies entirely within the Palearctic region, from France and Iberia eastwards to Japan, between latitudes 35 and 64 degrees. In continental Europe it breeds regularly from sub-arctic Fenno-Scandia (Lapland) to the Mediterranean and Black Sea. In the British Isles most Wrynecks are seen at coastal observatories. As a breeding species it is more common away from the European coastline, in particular the Atlantic and North Sea coasts of France and the Low Countries, seemingly preferring a drier inland, continental climate. However,



wrynecks do breed on the Atlantic coasts of Norway and northern Spain, so perhaps other factors besides climate, such as habitat land use, are involved. It is unclear which race breeds in Greece, though it is possible that both races *torquilla* and *tschusii* do. The latter race is also thought to winter there. Some Wrynecks also winter in southern Spain and southern Italy. The bulk of the population however winters in Africa.

They are seen in open forests, clearings, woodlands with low undergrowth, wooded pastures, and unimproved meadowlands with scattered trees, so long as they are dry and sunlit. They avoid damp vegetation and higher mountain areas. In non-breeding season, they are found in open dry woodlands, bushy grasslands and gardens. In southern Asia, they are typically found in scrub, thickets, in the canopy of forests and in cultivated areas. Over-winterers in southern Europe prefer coastal wetlands and maquis. Migrants can also be found in treeless open habitats, including the desert.

Status: Least Concern. **Global Population:** 5,000,000 - 15,000,000 mature individuals. The population has suffered a long term reduction in numbers and range since the mid 19th century in west and central Europe owing to increased rain during the breeding season caused by climatic changes, agricultural improvement, loss of orchards and unimproved meadows, replacement of hardwoods with conifer plantations and widespread over-use of pesticides and herbicides. In Europe, trends since 1980 show that populations are still undergoing a moderate decline. The Eurasian Wryneck is red-listed (Endangered) in Britain by RSPB.

Diet: Mostly ants, along with larvae and pupae. Other insects include small beetles, aphids, Lepidoptera, dipteran flies, bugs, spiders, woodlice and occasionally mollusks, frog tadpoles and bird eggs. Plant matter (such as berries) is rarely eaten.

They forage mainly on the ground and occasionally in trees. It procures prey from crevices or from the surface using its bill to open anthills. It hops on ground and along horizontal or sloping branches.

Breeding: The sexes are almost identical in plumage and visually rarely separable in the field. Adult males are warmer and richer in color than females with more rufous and yellowish tones on the under-parts. Both sexes have their foreheads to hind necks pale gray, speckled darker, finely barred with black and rufous, with tiny white feather tips (white spots and black bars usually more distinct on crown). There is a narrow creamy stripe from nostril to below eye, a thin creamy supercilium, a broad rufous-mottled black band from the eye through the upper ear-coverts and irregularly down the neck side. There is a buff to cinnamon-buff stripe from the bill base to the lower ear-coverts and neck side, which is usually a finely barred dark. The upper parts are pale gray, finely dark-speckled and with narrow dark shaft streaks. The feathers are sometimes with black, rufous and whitish marks at tips. The central mantle is black, edged rufous, this pattern is often continuing as irregular band up to the crown center. The outer scapulars are black, large pale buffish spot at the tip. The wing-coverts and tertials are brownish-buff, speckled gray and rufous-buff, with thin black shaft streaks, black subterminal bars and creamy tips. The primaries and secondaries are dark brown with rufous-buff spot-bars. The tail with usually 4–5 (variable) irregular, thin black bars often bordered by gray and buff bands. The chin is whitish, the throat and upper breast buff or cinnamon-buff, all narrowly vermiculated black, often with an incomplete dark malar stripe. The rest of under parts are whitish with a variable cream or buff, narrow dark bars on the breast, arrowhead marks on the lower under parts (extent of markings variable, belly often plain). The under wing is barred gray and white and the coverts buff with black bars.

The bill is dark horn-brown, often tinged green. The iris is brown to red-brown and the legs brownish to gray-green, occasionally tinged yellow or pink. The juvenile is like the adult, but duller, darker, more barred (less streaked) above, more clearly barred below, fewer but more pronounced tail bars and the outer primary is much longer.

Breeding occurs in May and June. They are territorial with the home range large and starting at the start of breeding season, but shrinking considerably after pairing. The male sings on exposed perch or from prospective nest-hole. On meeting, partners display by head-swinging with ruffled head feathers. Courtship feeding may extend into the incubation period. Nest-site are selected by both sexes, in natural cavity, in old hole of another woodpecker, or in artificial nestbox, at height of 1–15 m.

A clutch 7–12 eggs is laid and incubation is performed by both adults for about 11–12 days. The nestlings are fed by both parents and they respond to intruders with characteristically with snake-like head movements and hissing. The young fledge after 20–22 days and are independent 1–2 weeks later.

Cool Facts: Wynecks (*Jynx torquilla*) are in woodpecker family though they do not have the characteristically long bills like woodpeckers do. These birds get their common name from their ability to turn their heads almost 180 degrees. When disturbed at the nest, they use this snake-like head twisting and hissing as a threat display. This odd behavior led to their association with witchcraft, hence to put a "jinx" on someone.

This species is a long distance migrant, and can cover a distance of 600 km (360 miles) in 8 days.

There are four subspecies:

- *J. t. torquilla*. The nominate species is found throughout most of Eurasia except parts of the south. It winters on the Iberian Peninsula, Balearic Island, Africa and southern Asia.
- *J. t. tschusii*. It is found in Corsica, Sardinia, Italy and the eastern Adriatic coast. It winters in southern Italy and Africa. Race *tschusii* is darker than the nominate, the dark patch on the upper parts is more prominent and the markings below are heavier. Its shorter wings are more rounded.
- *J. t. mauretanica*. It is found in northwestern Africa. This subspecies is similar but slightly smaller and paler below.
- *J. t. himalayana*. It is found in the northwestern Himalayas (northern Pakistan eastward to Himachal Pradesh). It winters to the south at lower altitudes. Race *himalayana* is much more strongly barred below, including the belly.

Common Name: Crested Lark
Scientific Name: *Galerida cristata*

Size: 6.7 inches (17–19 cm)

Habitat: Eurasia and Africa; it is found in open territories, steppes and meadows in southern and central Europe, as well as North Africa and the Middle East. Populations living more to the north, migrate to warmer areas when the winter comes, while those Larks living in half-deserts, such as in Saudi Arabia, stay at the same place all year round.



In most of range, typical species of dry plains with sparse vegetation cover and dry cultivations; perhaps originally inhabited warm semi-desert and steppe, secondarily human-modified landscapes. Habitats include open farmed countryside in the northern Mediterranean Basin, alpha steppe and deserts in northern Africa

and Middle East, and sandy semi-desert and dry cultivation in India. It found also in forest clearings and the savanna in the Afro-tropics.

Status: Least Concern. **Global Population:** 20,000,000 - 100,000,000 mature individuals. The population is estimated to be in decline following regional declines in recent decades; probably owing to habitat loss and degradation (intensive farming and usage of pesticides destroy the Crested Larks' nests).

Diet: Mostly seeds; insects during breeding season.

Larks look for food on the ground, searching the top layer of the soil and catching bugs, crickets, larvae, spiders and ants with the strong beak.

Breeding: Male and female look alike. It is a medium-sized, rather bulky lark with prominent long, spiky crest, rather long bill, relatively short and broad wings rounded at tip, very short primary projection, narrow and pointed at tip outer primary reduced, a rather short tail, hind claw is long and straight. The nominate race has a buff-white supercilium and eyering, a dark eyestripe and moustachial and malar stripes. The crown and upper parts are buffish gray-brown, heavily streaked dark brown, the hindneck and rump are less streaked. The flight-feathers are olive-brown, narrowly edged buffish to light cinnamon and the tail is with olive-brown central feathers, the remainder darker, except of the distinctive buff-brown outer feathers. It is whitish below, more buff on breast side and flanks with broad blackish spot-like streaks on the breast, narrow and more diffuse streaks on the flanks. The axillaries and under wing-coverts are rusty (noticeable in flight). The bill is dark horn above, pale yellow-flesh below. The legs are pale flesh.

Juveniles have a shorter crest, the upper parts are spotted white, the chest is spotted rather than streaked, the outer primary is broader and longer.

Races differ mainly in the base color of plumage (rather constant over large areas in northern populations, often marked changes from very dark to very pale in south), intensity of streaking, also in bill size and shape (bill rather short, about half of head length, in Europe, Middle East and northeastern Africa, to very long, almost equal to head length, in northwestern Africa), and wing length (longer in Asiatic races).

In spring, Crested Lark males start looking for a partner – running around, singing, flapping the wings and stretching the neck are all parts of the mating ritual. After a partner has been found, the female builds a nest on the ground and lays 2-4 eggs, which are then incubated for 12-14 days.

Chicks leave the nest 9 days after hatching, but the parents keep feeding them for 20 more days – until they have learned to fly.

Cool Facts: The Crested Lark can easily be recognized by the prominent crest on the head. If aroused, the bird raises the crest. The male keeps the territory safe of predators and rivals. If another Crested Lark enters the territory, the male tries to daze them with a loud song.

There are 35 subspecies:

- *G. c. cristata*. The nominate subspecies is found in central Europe from Denmark E to Belarus, S to France, N Italy, N Croatia, N Hungary and N Ukraine.

- *G. c. pallida*. It is found on the Iberian Peninsula. Race *pallida* is slightly paler than nominate, less clearly streaked, in the south it is also smaller and more reddish-tinged.
- *G. c. neumanni*. It is found in western Italy (Toscana southward to the Rome area). It is more rufous-brown above, deeper buff below, streaking more distinct, wings shorter.
- *G. c. apuliae*. It is found on southern peninsular Italy and Sicily. Race *apuliae* is generally paler and grayer above, the broad streaks poorly defined, the breast is tinged pinkish with heavy sharp streaks.
- *G. c. tenuirostris*. It is found in eastern Hungary, east Croatia and Romania eastward to southern Russia (south to the northern Caucasus region) and western Kazakhstan. Race *tenuirostris* has its upper parts a cold brownish-gray with slight buff tinge, the streaks are well defined, the wings are slightly longer and the bill is longer and usually thinner.
- *G. c. meridionalis*. It is found in western Croatia south to southern Bulgaria, Greece (including Ionian Island and Crete) and western Turkey. It is slightly darker than nominate.
- *G. c. caucasica*. It is found on the eastern Aegean Islands (Samothece southward to Samos), northern Turkey, southern Caucasus and western Transcaucasia. It resembles Race *tenuirostris*, but its bill is usually shorter and heavier.
- *G. c. subtaurica*. It is endemic to central Turkey eastward to southern Transcaucasia, northwestern Iran and western Turkmenistan, south to northern and eastern Iraq. It is pale grayish with olive to parchment tinge above, it has narrow brown streaks and the breast with fairly heavy with black spots.
- *G. c. cypriaca*. It is found on Rhodes, Karpathos and Cyprus. Race *cypriaca* is smaller and darker than the previous, the streaking heavier and sharper and the bill shorter and thinner in the east (Cyprus)
- *G. c. zion*. It is found in southern Turkey, Syria, eastern Lebanon and eastern Israel (south to Jerusalem). It is tinged cinnamon above, the streaks quite broad and dark (paler and fainter in the east), the breast spotting is thin.
- *G. c. cinnamomina*. It is found in western Lebanon (south from Beirut) and northwestern Israel (Mt. Carmel and Haifa). Race *cinnamomina* is darker than *zion*, a sandy cinnamon with narrow brown streaks above with heavier blackish streaks on breast.
- *G. c. magna*. It is found in southern Kazakhstan eastward to southern Mongolia and northern China (Xinjiang east to northern Gansu and Inner Mongolia). It is pale and relatively plain, buffish with little streaking above, paler with few narrow streaks below.
- *G. c. leautungensis*. It is found in Heilongjiang and northeastern China. It is generally grayer and well streaked in the east.
- *G. c. coreensis*. It is endemic to Korea. It is similar to *leautungensis*.
- *G. c. iwanowi*. It is found in central Turkmenistan and central and southern Iran eastward to southern Tajikistan, Afghanistan and northwestern Pakistan. It differs from *magna* in its gray-tinged upper parts with more streaks, more streaks below as well.

- *G. c. lynesii*. It is endemic to northern Kashmir (Gilgit Valley). It is a colder gray-brown.
- *G. c. kleinschmidt*. It is endemic to northwestern Morocco (east to the Rif Mountains, southward to Middle Atlas). It is very like nominate, but darker with more distinct black streaks above, breast tinged light cinnamon with heavier black streaks, shorter wing.
- *G. c. riggenbachi*. It is endemic to western Morocco (Casablanca south to Sous Valley). Race *riggenbachi* has cinnamon-brown upper parts well streaked, heavily streaked cinnamon-buff breast and a short bill.
- *G. c. carthaginiis*. It is found in the coastal region from northeastern Morocco east to northern Tunisia (east to Sousse). It is more buff with narrower streaks, paler below, longer wings.
- *G. c. balsaci*. It is endemic to coastal Mauritania. Race *balsaci* resembles *senegallensis*, but is paler below.
- *G. c. arenicola*. It is found in northeastern Algerian Sahara (eastward from Biskra and Ouargla), southern Tunisia (south of Gafsa and Sfax) and northwestern Libya (Tripolitania). Race *arenicola* is like *macrorhyncha* but still paler and sandier, also it is smaller and the bill is shorter.
- *G. c. helenae*. It is found in southeastern Algeria and probably neighboring southwestern Libya. Race *helenae* is plain reddish-brown above, rufous-buff below, with large brown breast spots.
- *G. c. festae*. It is found in coastal northeastern Libya (Benghazi east to Tubruq). It is cinnamon-rufous with well-defined narrow dark streaks above, cinnamon-buff below, breast heavily streaked.
- *G. c. brachyura*. It is found in northeastern Libya (inland Cyrenaica), coastal northern Egypt (east to Alexandria), and from the northern Sinai Peninsula and southern Israel (Negev and Dead Sea region) east to southern Iraq and northern Saudi Arabia. It is grayish sandy above.
- *G. c. nigricans*. It is endemic to northern Egypt (Nile Delta). Race *nigricans* is darkest race, dark olive-gray and heavily streaked above, light cinnamon below, broad black breast streaks extending to the flanks.
- *G. c. maculata*. It is endemic to the Nile Valley from Cairo southward to Aswan (Egypt). It is somewhat paler than *nigricans*, streaks narrower and less dark.
- *G. c. halfae*. It is endemic to the Nile Valley from Aswan southward to extreme northern Sudan (Wadi Halfa). Race *halfae* resembles *maculata*, but is paler and grayer.
- *G. c. senegallensis*. It is found in southern Mauritania and Senegambia east to Niger; also in northern Ghana. It has pale grayish-brown upper parts with variable dusky streaking, off-white below, breast with buff wash and obvious dark streaks.
- *G. c. jordansi*. It is endemic to northern Niger (Air Mountains). It is rather plain rufous-brown above, rufous-buff below, with small, narrow spots or streaks on breast.
- *G. c. alexanderi*. It is found in northern Nigeria east to western Sudan, and northeastern Central African Republic. Race *alexanderi* is brownish with cinnamon tinge above, lightly streaked, buffish-white below, breast dark-streaked.

- *G. c. isabellina*. It is endemic to central Sudan (Kordofan east to the Nile). It has light gray-brown upper parts strongly tinged cinnamon, only faintly streaked, very pale and almost unmarked below.
- *G. c. altirostris*. It is endemic to eastern Sudan (east from the Nile Valley) and Eritrea. It is rather pale sandy brown above.
- *G. c. somaliensis*. It is found in northern Somalia, southern Ethiopia and northern Kenya. It is duller and grayer than *tardinata*.
- *G. c. tardinata*. It is endemic to southern (perhaps also western) Arabia. It is extremely similar to *altirostris*, perhaps marginally darker
- *G. c. chendoola*. It is endemic to the southern Kashmir foothills south to eastern Pakistan, western and northern India (east to Bihar) and southern Nepal. It is sandy brown and well streaked in the south of its range.

Common Name: Black Cap
Scientific Name: *Sylvia atricapilla*

Size: 5.3-5.9 inches (13.5-15 cm)

Habitat: Europe; It breeds in northern and central European and winters in southern Europe and North Africa where the local populations are resident. In recent years, substantial numbers of central European birds have taken to wintering in gardens in southern England. Presumably the ready availability of food, particularly from bird feeders, and the avoidance of migration over the Alps compensate for the sub-optimal climate.



Breeding habitats are in almost any kind of forested area although it favors broadleaf deciduous forest and mixed woodland (either mature or more open and with a denser understory). It can also be found in riparian forests, parks and gardens with trees, fruit-tree plantations, orchards, and evergreen woodlands. In the eastern Atlantic islands, it is found in laurel forests.

Status: Least Concern. **Global Population:** 140,000,000 mature individuals. The population is suspected to be increasing owing to afforestation and land use changes leading to increased shrubby growth in parts of its range. In Europe, trends since 1980 show that populations have undergone a moderate increase.

Diet: Mostly insectivorous during breeding season and largely frugivorous the rest of year. The invertebrate diet includes adults and larvae of most insects and a large number of other arthropods (mayflies, damselflies and dragonflies, stoneflies, grasshoppers, earwigs, cockroaches, adult and larval bugs (Hemiptera), thrips,

booklice, lacewings, scorpion flies, caddis flies, and adults and larvae of moths and butterflies, flies, hymenopterans, and beetles. Fruits taken include *Sambucus*, *Lonicera*, *Prunus*, *Viscum*, *Hedera*, *Cornus*, *Rhamnus*, *Taxus* and *Hippophae* in central Europe, of *Olea*, *Rhamnus*, *Ficus*, *Pistacea*, *Rubus* and *Hedera* in the Mediterranean region, and of *Balanites*, *Ziziphus* and *Salvadora* in western Africa. In Mediterranean regions, olives are a significant winter food supply.

It swallows small fruits whole, but only pecks at pulp of larger ones (e.g. *Ficus* and cultivated olives). Fruit is taken mostly in late summer, autumn and winter, but sometimes during peak breeding season and in early spring. The non-fruit proportion of diet outside breeding season has not been well researched, but aphids (as also fruit consumption) have important role in autumn pre-migratory fattening. It forages largely at medium and high levels, by gleaning items from leaves and twigs and sometimes flycatches. It is rarely seen on the ground feeding on fallen fruit. In winter, it frequents bird feeders, especially during cold spells.

Breeding: It is a medium-sized warbler with a moderately long square-ended tail and long, pointed wings. As with most species in the Sylviid family, the male and female sexually dimorphic. The male of the nominate race has a distinctive black cap, contrasting with pale grayish rest of the head and nape. The upper parts are olive-tinged brownish-gray. The remiges and upper wing-coverts are blackish-gray to dark gray-brown with pale olive-gray fringes, the alula is olive-tinged blackish-gray with, at most, very narrow and diffuse buffish-olive fringes. The tail is dark brownish-gray, feathers with narrow and ill-defined olive-gray fringes. The throat, belly and vent is a pale whitish-gray, merging with the dusky breast and warm grayish-buff body sides. The under tail-coverts are olive-grayish with broad whitish fringes. The iris is dark sepia-brown to dark brown with the orbital ring a dark grayish. The eyering is white on lower half and black to white above. The bill is a with blackish culmen and tip, slate-gray three-quarters of basal lower mandible and cutting edges of the upper mandible. The legs are grayish. The female is similar to the male but with the cap being a rufous-brown and the upper parts are more profusely tinged brownish-olive (less pure gray), warmer below, especially on sides. The eyering is rufous-brown to white on upper half and white on lower half.

A partially melanistic morph occurs in Atlantic islands, exceptionally in continental Europe. The male usually has a blackish head, throat and chest, dark olive-brown upper parts and rusty-brown under parts. The adult female like non-melanistic female but darker olive-brown. The juvenile resembles female but with buffier upper parts, less contrasting rufous-brown cap and warmer underparts, remiges and wing-coverts browner overall and with more rufous-brown fringes. The iris is dark gray with the eyering being mostly whitish. First-winter birds are similar to the respective adult, but with mostly juvenile-like bare parts and unmoulted flight-feathers.

Breeding occurs mid-April to August in most of its range. There are two main seasons, late August to late November and mid-January to late March in the Cape Verde Islands. They are mostly monogamous, with rare reports of bigamy and of single helpers at

nest. The male builds very rudimentary “cock nests” in 1–2 days. One of these or a completely new one subsequently used for breeding with both sexes completing building in 2–5 days. The nest is a finely structured cup with thin walls and bottom, made of grasses and herbs and some twigs and rootlets, lined with finer grass, hair and roots. It is placed low in broadleaf deciduous vegetation. 3–6 eggs are laid.

Cool Facts: The Blackcap is a common and widespread sylviid warbler which breeds throughout northern and temperate Europe. Its color pattern is unique in the genus *Sylvia*; the Blackcap's closest living relative is the Garden Warbler which looks different but has very similar vocalizations. These two, whose ranges extend farther northeastwards than other *Sylvia*, seem to form sister species well distinct from the other typical warblers

The presence and sounds of this bird have since long inspired Italian writers. "*La Capinera*" (Italian for Blackcap) is the title of one of the most famous poems by Giovanni Pascoli. "*Storia di una capinera*" is a 1993 movie directed by Franco Zeffirelli and distributed with the international title "Sparrow".

The Blackcap is considered a delicacy in some Mediterranean countries where many of these birds are illegally trapped and killed every year.

The Blackcap's call symbolizes St Francis in Messiaen's opera, Saint-François d'Assise.

- *S. a. gularis*. It is found in the Azores and Cape Verde Islands. It is similar to *heineken* but with grayer upper parts, shorter and more rounded wings.
- *S. a. heineken*. It is found on the western and southern Iberian Peninsula, Madeira and Canary Islands, and northwestern Africa in Morocco eastward probably to northwestern Algeria. It is darker overall than nominate, the female with slight rufous tinge above.
- *S. a. atricapilla*. The nominate subspecies is found in western Europe (south to Pyrenees and northern Italy) east to southwestern Siberia, south to central Turkey, Levant (rare) and southwestern Russia. It winters in southern and western Europe, and northwestern, western and eastern Africa.
- *S. a. pauluccii*. It is found in eastern Spain, Balearic Is, Corsica, Sardinia, central and southern Italy (including Sicily), and probably northeastern Algeria and Tunisia. It is also paler and grayer than nominate, but darker gray below.
- *S. a. dammholzi*. It is found in northeastern Turkey, Caucasus and southern Caspian Sea region; non-breeding E sub-Saharan Africa. Race *dammholzi* is slightly paler and grayer than nominate

Common Name: Common Chiffchaff
Scientific Name: *Phylloscopus collybita*

Size: 4-4.7 inches (10-12 cm)

Habitat: Eurasia and Africa; From the British Islands and northern Iberia, through southern Scandinavia, across Europe eastward to the Urals, Caucasus, Transcaucasia, north and northwestern Turkey to north and northwestern Iran and Middle East. It winters mainly in southern Europe, western, northern and eastern Africa, Arabia, and the Middle East. The Siberian Chiffchaff is found in Russia, from the Kanin Peninsula eastward to the Kolyma River, south to the southern Urals, northern Kazakhstan, northwestern China, northwestern Mongolia and Lake Baikal. It winters in southern Iraq, southern Iran and Arabia eastward to India and Bangladesh.

It prefers lowland deciduous forest and woodland with low undergrowth. It can also be found in parks, hedgerows, shelter belts, overgrown cemeteries, large gardens and reedbeds. It is seen frequently in damp alder and willow woodlands and river valleys, especially in its southern range. In the Alps, Carpathians, Caucasus and Urals, it breeds in mixed oak and conifer forests at up to 2000 m. In non-breeding season, it occurs in variety of woodland habitats, from small clumps of coastal scrub to willow thickets and

in more open habitats such as parks, gardens, cultivation and hedgerows. In western Africa, it prefers damper areas of Acacia over the dry-country Acacias.



The Siberian Chiffchaff breeds in spruce and pine forests of Siberian taiga; in central Altai in mixed oak and conifer forests at up to 2000 m. In non-breeding season, it occurs in various wooded habitats, and often in

reedbeds, also in more open habitats such as gardens and cultivations.

Status: Least Concern. **Global Population:** 200,000,000 - 700,000,000 Mature individuals. In Europe, trends since 1980 show that populations have undergone a moderate increase.

Diet: Mostly insects, their eggs and larvae. Arthropods include stoneflies, damselflies, grasshoppers, earwigs, bugs (*Hemiptera*), lacewings, small butterflies and moths, dipteran flies (including mosquitoes), small bees, beetles, spiders and mites. Seeds and berries taken include those of Pistacea, Phillyrea, olive, persimmon, Lycium, bilberry, elderberries, currant, plum and birch).

It forages alone or, in winter and on passage, in parties of up to 50 individuals and will join mixed-species flocks. It forages at all levels, from the ground up to tree canopy. It chiefly feeds by taking insects from among foliage in trees, bushes and low vegetation, and sometimes from the ground. It also hovers, and makes short dashing sallies or picks prey from surface of water. It frequently dips tail when foraging or when nervous.

Breeding: A medium-sized, rather plain leaf-warbler. Sexes are alike. The adult is gray-brown above, with greenish tones restricted to edges of remiges and rectrices (in fresh plumage, may have olive tinge on lower back, scapulars and rump), a narrow supercilium and eyering that is buffish-white (lacking yellow) and a thin blackish eyestripe. The ear-coverts and neck-sides are buffish. The chin and upper throat is white, while the lower throat and under parts are buffish white (most strongly buff on the throat and breast, with the flanks sometimes buffish-tinged). There is yellow on the under wing-coverts (frequently show as bright yellow feathers at bend of wing). This is variable, some individuals are grayish brown with olive tinge above and yellowish or yellow-streaked on under parts. The iris is dark brown and the bill is mostly blackish. The legs are black. The juvenile is somewhat browner overall than adult.

Females build a domed nest on or near the ground, and assumes most of the responsibility for brooding and feeding the chicks, whilst the male has little involvement in nesting, but defends his territory against rivals, and attacks potential predators.

Cool Facts: The British naturalist Gilbert White was one of the first people to separate the similar-looking Chiffchaff, Willow Warbler and Wood Warbler by their songs, as detailed in 1789 in *The Natural History and Antiquities of Selborne*, but the Chiffchaff was first formally described as *Sylvia collybita* by French ornithologist Louis Vieillot in 1817 in his *Nouvelle Dictionnaire d'Histoire Naturelle*. The chiffchaff more recently has been to its own family *Phylloscopidae*. The Chiffchaff's closest relatives, other than former subspecies, are a group of leaf warblers which similarly lack crown stripes, a yellow rump or obvious wing bars; they include the Willow, Bonelli's, Wood and Plain Leaf Warblers.

The Chiffchaff has three still commonly accepted subspecies, together with some from the Iberian Peninsula, the Canary Islands, and the Caucasus which are now more often treated as full species.

- *P. c. collybita*, the nominate form, breeds in Europe east to Poland and Bulgaria, and is described below. It mainly winters in the south of its breeding range around the Mediterranean and in North Africa. It has been expanding its range

northwards into Scandinavia since 1970 and close to the southern edge of the range of *abietinus*.

- *P. c. abietinus* occurs in Scandinavia and northern Russia, and winters from southeastern Europe and northeastern Africa east to Iraq and western Iran. It is intermediate in appearance between *tristis* and *collybita*, being grey-washed olive-green above with a pale yellow supercilium, and underparts whiter than in *collybita*, but it has very similar vocalisations to the nominate subspecies. Due to individual variation, it can be difficult to reliably separate *abietinus* and *collybita* outside their main breeding and wintering ranges. Some Chiffchaffs in the Middle East are browner and have a more disyllabic *swee-hu* call than *abietinus*, and may belong to a poorly known taxon "*brevirostris*"; further research is needed to clarify the affinities of this form.
- *P. c. brevirostris* occurs in the highlands of northwestern and northern Turkey. It is more olive-brown than *collybita*, stronger supercilium, brownish wash on flanks. It is similar in appearance to other west Asian subspecies.
- *P. c. caucasicus* occurs in Caucasus and Transcaucasus southward to northwestern and northern Iran. It is more olive-brown than *collybita*, with a stronger supercilium, and brownish wash on flanks. It is similar in appearance to other west Asian subspecies.
- *P. c. menzbieri* occurs in northeastern Iran (east Elburz Mountains and Khorasan Mountains) and southwestern Turkmenistan. It is more olive-brown than *collybita*, has a stronger supercilium, and brownish wash on flanks. It is similar in appearance to other west Asian subspecies.
- *P. c. tristis*, the Siberian Chiffchaff, breeds in Siberia east of the Pechora River and winters in the lower Himalayas. It is also regularly recorded in western Europe in winter, and it is likely that the numbers involved have been underestimated due to uncertainties over identification criteria, lack of good data and recording policies (Sweden and Finland only accept trapped birds). It is a dull subspecies, grey or brownish above and whitish below, with little yellow in the plumage, and the buff-white supercilium is often longer than in the western subspecies. It has a higher pitched *suitsistsuisit* song and a short high-pitched *cheet* call. It is sometimes considered to be a full species due to its distinctive plumage and vocalizations, being similar to *sindianus* in these respects. Nominate *collybita* and *tristis* do not recognize each other's songs.

Common Name: Fieldfare
Scientific Name: *Turdus pilaris*

Size: 9-11.2 inches (24-28 cm)

Habitat: Eurasia; Northern and central Europe eastward through central Siberia, northern Kazakhstan, the Altai and Sayan Mountains to Aldan Basin and Transbaikalia. It winters in western and southern Europe, north Africa and southwestern Asia. It is strongly migratory, with many northern birds moving south during the winter. It is a very rare breeder in Great Britain and Ireland, but winters in large numbers in these countries.

Typically, it is found in mixed habitat, mainly part-wooded and part-open country, commonly using trees for breeding and roosting, hedges and open ground for foraging.



In particular, it favors areas of permanent grass cover over temporary grass crops, winter cereals, stubble or bare ground. It breeds in boreal forests of mixed pine and birch, also will in scrub, clearings, parks and gardens.

It winters mostly in the lowlands, in often more open habitats, including grassy and cultivated fields, especially

rough pasture and arable land within easy reach of tall trees and thick hedgerows. It is also found in moorland edges, woodland edges and orchards. It roosts communally in conifers, deciduous woods, shrubs, reeds and hedgerows (often with other *Turdus* species), sometimes on ground in open. Outside breeding season, it favors watersheds with large, low-lying floodplains which provide good winter resources of soil invertebrates and fruit.

Status: Least Concern. **Global Population:** 45,000,000 - 100,000,000 Mature individuals. In Europe, trends since 1980 show that populations have undergone a moderate increase. Europe forms 75-94% of the global range.

Diet: Invertebrates, and fruits found mainly in bushes and hedgerows. Invertebrates found mainly in and on soil in open fields, include earthworms, snails, slugs, leeches, millipedes, centipedes, harvestmen, spiders, beetles, bugs (*Hemiptera*), crickets, caterpillars, flies, ants and dragonflies, very rarely (e.g. in near-freezing weather) small fish. Fruits, berries and seeds eaten in winter, also shoots and buds in spring. Vegetable material extensive, variable with geography and season, includes fruits and/or seeds of apple, barberry, bilberry, cowberry and cranberry, bird cherry and other cherries and plums including blackthorn and gean, black bryony, bramble, cloudberry, dewberry and raspberry, buckthorn, cotoneaster, crowberry, currant, elderberry, Viburnum, hawthorn, holly, honeysuckle, ivy, juniper, lime, mezereon, mistletoe, oleaster, olive, pear, pinks, privet, rose, rowan, sea-buckthorn, shadbush, snowberry, spindletree, strawberry, sycamore, whitebeam, Virginia creeper, grapevine, yew, sedges and grasses.

The male has a simple chattering song, and a chattering flight and alarm call. Migrating birds and wintering birds often form large flocks, often with Redwings.

Breeding: The sexes are similar. It has gray head and rump, brownish-chestnut mantle, back and upper wing-coverts. It has a blackish tail, blackish lores, cheeks, malar and neck patch. It is white below, the breast with orange-buff wash and black streaks, the flanks with buff wash and black spots. The under wing-coverts are whitish. The bill yellowish with a dark tip and the legs are blackish. The juvenile is a more uniform brownish-gray above with buff scapular streaks and much stronger spotting below.

Breeding season starts in early April to late August throughout range, varying with latitude, in northern areas timing linked to disappearance of snow cover. Fieldfares are monogamous, pairing rapid and courtship without ceremony. Sometimes it is a solitary breeder, especially in the south of its range, but more commonly, it is a colony nester with nests 5–30 m apart. The largest known colonies (in Norway) containing hundreds of pairs, but most much smaller. Fluctuations in colony size result from different causes of mortality, nest predation selecting for larger colonies (mobbing of predators more effective), but chick starvation (caused by over-exploitation of local resources) and adult predation selecting for smaller colony size; fluctuations in position of colony site presumably relate to local conditions. Territory size variable, usually very small, especially for pairs in middle of colony; solitary nesters may defend c. 1 ha, whereas colony-nesters usually defend only the nest tree (rarely ever two nests in same tree).

The nest is a bulky, untidy cup, deeper at higher latitudes than at lower ones, made of twigs, roots, moss, lichen, grass and leaves, lined with animal hair, rootlets and fine grass, and cemented with mud. It is placed in fork of tree or against trunk or on branch,

usually towards upper levels of tree and normally at least 2 m off ground, occasionally on ground. 5–6 eggs are laid with the incubation time lasting 12–15 days.

Cool Facts: The English common name “fieldfare” dates back to at least the eleventh century. The Anglo-Saxon word “feldefare” which meant traveler through the fields. Fieldfares nest in colonies which offers good defense against predators.

In the BBC series “Life of the Birds (with David Attenborough)”, fieldfares are shown mobbing a raven. After driving the raven to the ground, the fieldfares bombard the raven with their droppings. This practice water-logs the predators’ feathers turning it into prey as well.

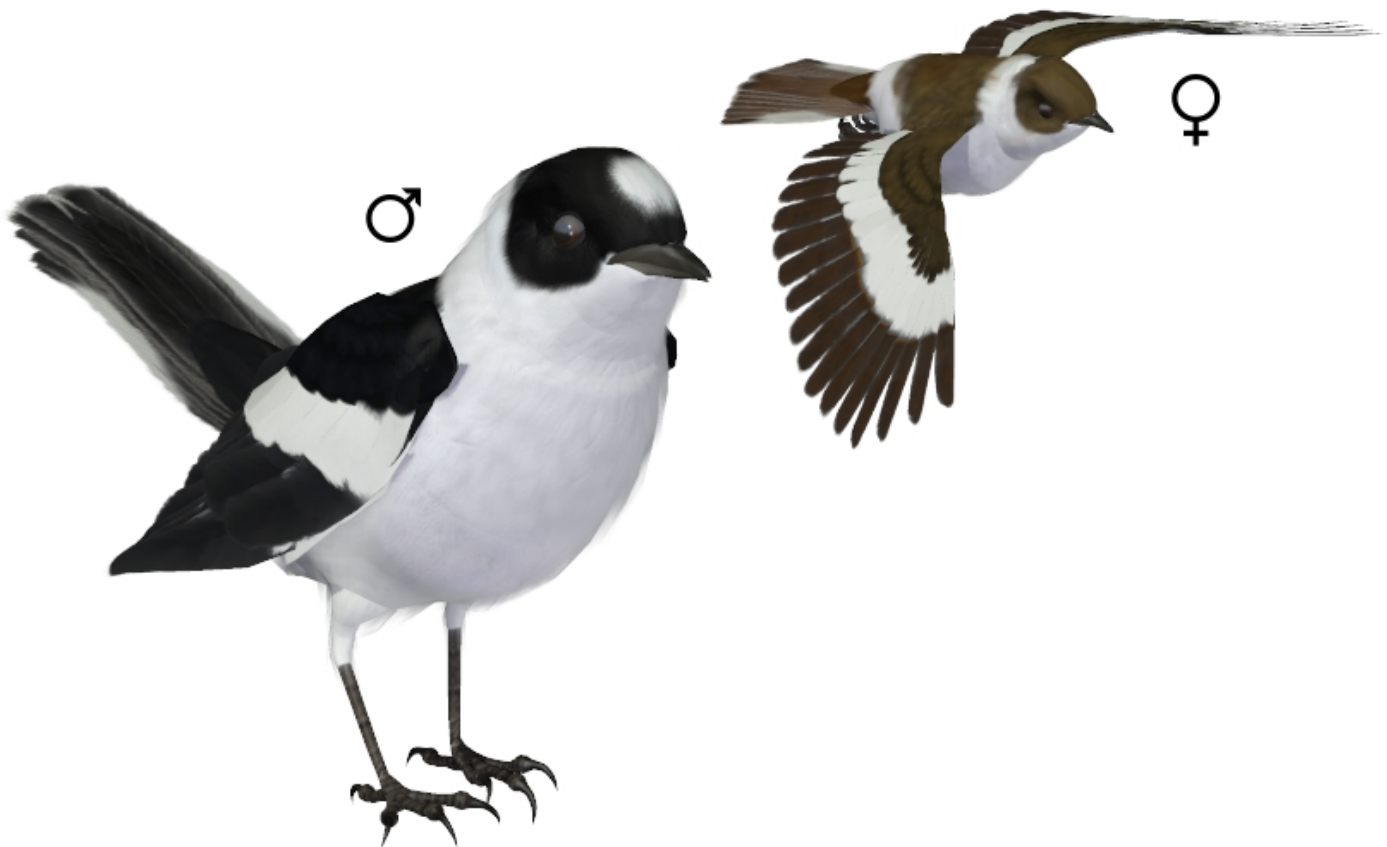
Common Name: Collared Flycatcher

Scientific Name: *Ficedula albicollis*

Size: 4.9-5.1 inches (12.5-13 cm)

Habitat: Eurasia and Africa; It breeds in southeast Europe (isolated populations in the islands of Gotland and Oland in the Baltic Sea, Sweden) and southwest Asia and is migratory, wintering in sub Sahara Africa. It is a rare vagrant in Western Europe.

It is found in open forest, forest edges, moist woodland, open country with scattered trees, and well-timbered parks and avenues. It will frequent gardens and orchards, which it vacates to return to woods immediately after breeding. It requires old growth trees offering nest-holes high enough above ground and prefers deciduous woodland such as oak, beech, lime, chestnut and birch. Also, in the north of its range, it is found in oak and ash with dense understory of hazel and hawthorn. In Russia, also hornbeam, and sometimes pine. It occupies warmer, more continental regions than those inhabited by the European pied flycatcher (*F. hypoleuca*); in areas of overlap, it excludes latter



from prime deciduous-forest habitats. In the southern African non-breeding quarters, it found usually at the edges and interior of brachystegia woodland at 800–1600 m and sometimes in acacia woodland.

Status: Least Concern. **Global Population:** 640,000 - 1,540,000 mature individuals. In Europe, trends since 1982 show that populations have undergone a moderate increase.

Diet: Flying insects and other arthropods, including adult and larval lepidopterans, hymenopterans, beetles, mayflies, dragonflies, stoneflies, grasshoppers, earwigs, bugs (*Hemiptera*), lacewings, caddis flies, flies, spiders, harvestmen (daddy longlegs), woodlice, millipedes and snails. It may also takes some seeds, and fruits of currant, rowan and elder.

It is more typically found in crowns of trees than in lower branches. It perches inconspicuously among foliage of upper and lower canopy, usually in enclosed, shady areas and darts out to take flying insects, returning to different perch. It also gleans items from leaves and twigs. Sometimes, it will feed on ground, but less frequently than does *F. hypoleuca*. Ground-feeding increases in bad weather and, in Hungary, also later in breeding season (perhaps owing to increased abundance of larval lepidopterans, a major food of nestlings). It commonly joins mixed-species foraging flocks in non-breeding quarters in Zambia and Zimbabwe.

Breeding: The breeding male breeding has lores, ear-coverts and top of head glossy with black. The forehead and broad collar around the hind neck white. The upper parts and upper wing are glossy black. There is white on the lower back and rump. The flight-feathers are blackish-brown with the bases of the primaries (P1-P8) being white. The bases of the secondaries are white (extending beyond greater upper-wing-coverts), inner-most tertial are blackish-brown with a white outer web, other tertials are white with a black near tip of inner web. The greater coverts are tipped white (white on tertials, greater coverts and secondary bases forms large patch on closed wing, white primary bases form additional, smaller patch). The tail is black, sometimes with white subdistal mark on outer web of outermost feather pair (occasionally also on outer webs of next two pairs). The throat and underparts are white, the axillaries are white with blackish bases and the under wing-coverts are brown to gray-brown. The iris is dark brown and the bill and legs are black. Male non-breeding has black of upper parts replaced by grayish-brown (except on upper tail-coverts), the white areas less distinct, more grayish, and the tail feathers are dark brown with the outer two rectrices (T5-T6) white at base, tapering to white distal margin (T4 often with white on the outer edge, tertials dark brown with narrow white margin and tip, also white base on outer web of outer two tertials). The dark brown greater coverts (darker on outermost feathers) are edged buffish-white, brown on inner median and lesser coverts, a blackish alula (white tertial patch and wingbar less prominent than in breeding plumage, also black on outer coverts, primary coverts and alula forming a black patch on closed wing). The under parts are tinged creamy buff.

Female breeding is gray-brown above, with a creamy forehead, a pale collar usually visible, a pale rump, and blackish-brown upper tail-coverts, dark brown flight-feathers with white bases on outer webs of primaries (P1-P8) extending 2–5 mm beyond primary coverts (small mark at base of closed primaries). The primary coverts and alula are dark

brown, tertials as non-breeding male, greater coverts are dark brown with narrow whitish tips (forming narrow white wingbar in combination with the white secondary bases), median and lesser coverts are dark brown, fringed paler. The tail is dark brown with outer three feather pairs (T4-T6) as non-breeding male. The under parts are whitish (tinged more buffy in non-breeding plumage).

The juvenile is dark brown above, spotted pale buff, under parts buffish-white with blackish feather tips below. The first-winter male and female are like the adult female but usually browner, with broader white margins on outer webs of tertials. The first-summer male as breeding adult, but the upper parts are often less black, with some brown or gray feathers, the collar is more gray-white and the white markings on the primary bases small.

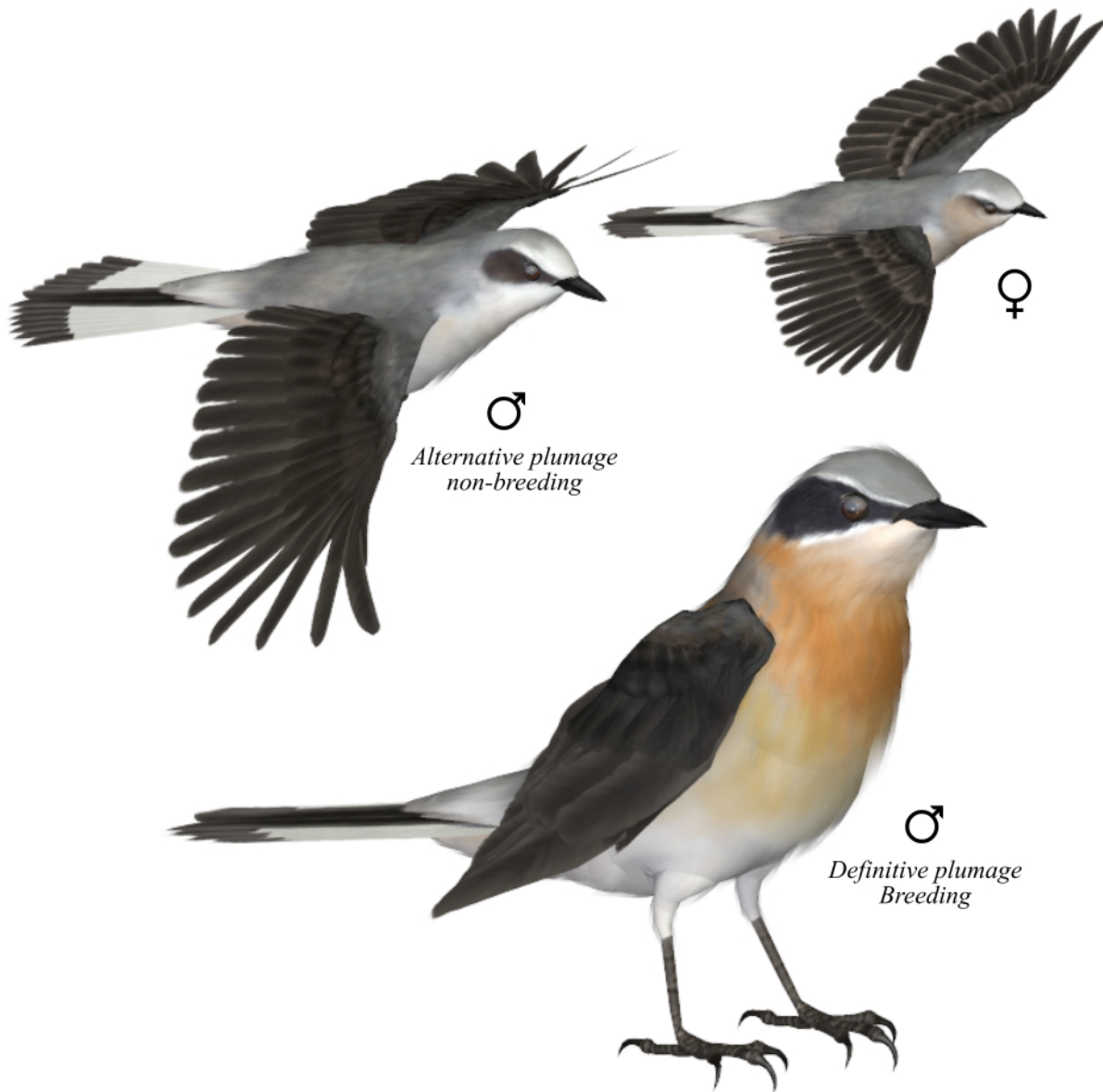
Breeding season occurs mid-April to early July in central Europe and from late April in Ukraine. It is usually single-brooded. This flycatcher is essentially monogamous, but successive polygyny (typically bigamy) can be frequent. It is a solitary nester and their territory exists only during pair formation and courtship, shrinking thereafter to small area around male's preferred nest-hole. The nest built by female which is a cup of dry grass, leaves and stalks, lined with fine grass, placed 3–32 m (usually 10–15 m) above ground in hole in tree, wall or building. There is a clutch of usually 5–7 eggs laid at daily intervals. The incubation is performed by the female, and last about 12–14 days. Chicks tended and cared for by both parents with the nestling period lasting for 15–18 days. The young become independent 6–8 days after fledging.

Cool Facts: The song is slow strained whistles, quite unlike the Pied Flycatcher. Pied flycatchers can mimic the song of the Collared Flycatcher in sympatric populations.

Common Name: Northern Wheatear
Scientific Name: *Oenanthe oenanthe*

Size: 5.7-6.3 inches (14.5-16 cm)

Habitat: Africa, Eurasia and North America; **Winters:** Sub-Saharan Africa. **Summers:** Northern Eurasia, Greenland, Canada and Alaska. Found in rocky tundra, barren slopes, hill pastures and sand dunes.



Status: Least Concern. **Global Population:** 20,000,000 - 100,000,000 mature individuals. In Europe, trends since 1980 show that populations have undergone a moderate decline.

Diet: Insects and some berries.

Breeding: Sexes are dimorphic and colors change during breeding season.

In the definitive alternate plumage (March-August): The adult male is pale blue-gray above and whitish below. The face mask is blackish and the wings black while the rump is white. Distal portion of tail is black; proximal portion white laterally, black centrally. The black area forms inverted T-shape on tail. Distinctive tail pattern is easily seen as bird fans and bobs tail. The adult female is similar to male but duller overall; face mask is largely lacking. The wings are paler and browner. The upper parts are browner. The first alternate plumage in each sex resemble those of adults but averages duller, with browner and more worn juvenile remiges and tail feathers.

In definitive basic plumage (September-February): The Forehead and supercilium white, contrasting indistinctly with olive-brown crown; forecrown through back feathers silvery gray basally but broadly tipped with olive or rusty brown, largely concealing the gray appearance. The rump and upper tail coverts are white. The tail is distinctly patterned, the central rectrices are extensively black and the remaining rectrices (r2–r6) with distal portions black and proximal portions white, forming inverted-T appearance. The feathers are thinly fringed and tipped with off-white when fresh. The amount of black on the rectrices varies individually. The lores and widening patch in front of eye is a deep black. The auriculars are black with variable brownish fringing when fresh, which becomes more extensive distally, concealing the black mask. The upper wing feathers are blackish, the lesser and median coverts sometimes have traces of pale gray, the greater coverts are broadly fringed olive-brown and tipped paler brown, and the primary coverts, primaries, secondaries, and tertials are black with narrow pale olive-brown to rufous-gray fringes when fresh. The chin and subauricular area is a pale cinnamon to white with the throat, chest, and sides of the breast turning deep buffy cinnamon. The remainder of the under parts are pale cinnamon to creamy buff, becoming paler on central belly. The under tail coverts are white washed cream or cinnamon. The under wing coverts and axillaries are white with large black feather centers. In December–March, the crown and back may become increasingly grayish and auriculars increasingly black through feather wear. The adult female is similar to the male but averages duller, less grayish; wings not as black. The crown and back are a uniform pale brown to olive-brown, often with slight but variable grayish tinge. The sides of head are with an indistinct narrow supercilium, buff proximally, becoming cream white distally and wider above auriculars. The rump and upper tail coverts are white and the tail as in Definitive Basic male. The lores are dull black with variably extensive buff mottling. There are often some buff specks in front of and below eye, forming a faint eye ring. The auriculars are darker brown, finely streaked pale buff. The upper wing feathers as in Definitive Basic male, but browner basally and fringing to remiges paler cinnamon to whitish. The lower auriculars and sides of the neck are a buffy cinnamon or pale rufous-brown, merging into slightly paler cinnamon-buff chin and deeper cinnamon sides of the throat, lower throat, and sides of the breast. The flanks and lower under parts are pink-buff to cream-buff, becoming whiter on central belly. The under wing coverts as in

Definitive Basic male but duller and less contrasting. In December–March, the crown and back can become slightly grayer and the auriculars are slightly blacker through feather wear.

Nest is on ground on dry tundra, usually in hole in a wall, under stones, or in old rodent burrow. The nest construction is a cup of grass, twigs, weeds, lined with finer material such as moss, lichens and rootlets. The clutch is usually 5-6 pale blue eggs; unmarked, or with fine reddish brown dots, which are incubated by the female for 13-14 days.

Cool Facts: The Wheatear was formerly classed as a member of the thrush family *Turdidae*, but is now more generally considered to be an Old World flycatcher, *Muscicapidae*.

The Northern Wheatear makes one of the longest journeys of any small bird, crossing ocean, ice, and desert. It migrates from Sub-Saharan Africa in Spring, over a vast area of the northern hemisphere that includes northern and central Asia, Europe, Greenland, Alaska, and parts of Canada. In autumn, all return to Africa, where their ancestors had wintered. Arguably, some of the birds that breed in north Asia could take a shorter route and winter in south Asia; however, their inherited inclination to migrate takes them back to Africa.

- *O. o. leucorhoa*. First reported by Salomonsen in 1927. The “Greenland” Wheatear breeds in arctic and northeastern Canada east through Greenland and Iceland to Jan Mayen and the Faroe Islands. It overwinters in west-central Africa. Its ventrum (including the throat) is rusty buff; the under wing coverts are buff; the dorsum is brownish gray. The black tail band is wide. It is overall larger than other subspecies.
- *O. o. oenanthe*. First reported by Hemprich and Ehrenberg in 1823. The “Eurasian” Wheatear (nominate) breeds from northern and central Europe east across northern Eurasia to eastern Siberia, extending east to Alaska and northwestern Canada (Yukon). It overwinters in Central and East Africa. It is like *leucorhoa* but the ventrum is creamy buff and the dorsum is grayer (less brown). It averages smaller.
- *O. o. libanotica*. First reported by Hemprich and Ehrenberg in 1833. It breeds from Iberia east through the Middle East and southern Asia from Kazakhstan (where there may be some mixing with the nominate, south to northern Iran and east to southern Transbaikalia, Mongolia, and northern China. Reaches Siberia where it mixes with the nominate. It overwinters in sub-Saharan Africa. It is similar to the nominate but is overall paler and more silvery gray, with a narrower black tail band.
- *O. o. seebohmi*. The “Black-throated” Wheatear breeds in the Atlas Mountains of northwestern Africa. It overwinters in northwestern and western Africa. It is broadly similar to *libanotica*, but the black tail band is narrow, and the throat and under wing coverts are black (under wing coverts and axillaries are also blackish in females).

Common Name: Willow Tit
Scientific Name: *Poecile montanus*

Size: 4.3-4.6 inches (11-12 cm)

Habitat: Eurasia; widespread and common resident breeder throughout temperate and subarctic Europe and northern Asia.

It is a conifer specialist, which explains it breeding much further north. It is resident, and most birds do not migrate.



Status: Least Concern. **Global Population:** 150,000,000 - 500,000,000 Mature individuals. Both increases and decreases in regional populations have been noted in the second half of the 20th century, but in Europe, trends since 1980 show that populations have undergone a moderate decline.

Diet: Mostly invertebrates and larvae, also vegetable matter. In breeding season includes flies, lacewings, mayflies,

caddis flies, bees and wasps, ants, beetles, bugs (Hemiptera), moths, scale insects, centipedes, spiders, harvestmen, mites, snails and earthworms. In non-breeding season they prefer grain (principally wheat, oats, maize and barley), also seeds of burdock, cowberry, cranberry and bilberry, bramble and raspberry, snowberry, honeysuckle, poppy, rose, buckthorn, fruits of oak, rowan, ash, birch, alder (also buds), juniper, lime, maple, spindle, beech and conifer seeds (extracted from cones).

They store food behind loose bark, under branches, in bud capsules or in lichen. In northwestern Russia, it has been recorded storing up to 200 items per day in winter and over 4700 items per day in spring, providing estimated annual total of 460,000 items (sufficient for 2–3 times the energy requirement to survive the winter).

It is usually in pairs, sometimes solitary. It will form into small groups of up to six, which form in late summer and disperse in spring; within groups, social structure complex, with dominance hierarchy of males over females and adults over juveniles, social rank affecting access to food and foraging areas (lower-ranking individuals forced to feed in less optimal sites). The group frequently becomes basis for mixed-species flocks with addition of conspecifics, nuthatches, Eurasian Treecreepers and Goldcrests, but usually only where these coincide within territory. It actively forages in middle to lower levels of trees and shrub layer; investigates branches (including undersides), thin twigs and conifer and larch needles, hangs from vegetation and climbs vertical trunks by fluttering, occasionally hovers or pursues insects in flight. It rarely descends to ground. Most food items collected from vegetation. It will Infrequently visit bird feeders.

Breeding: It is a medium-sized, broad-headed tit with pale panel on the closed wing. Sexes are alike. The nominate race has its forehead to the sides of crown (down to lower edge of the eye), the nape and the upper most mantle black. The rest of upper parts, including lesser and median upper wing-coverts, are pale gray-brown. The greater coverts are similar but with darker brown centers. The alula and flight-feathers are dark gray while the primaries are finely fringed pale. The secondaries are broadly fringed pale or whitish-buff (forming a prominent panel on the closed wing), the tertials are as the secondaries but the centers are darker. The tail is a gray-black, the outer webs with broad pale buff fringes. The lores, cheek and ear-coverts are white with a creamy buff on the sides of nape. The chin and throat are black, forming ill-defined bib (with whitish tips on the side of throat and along the lower border). The under parts are off-white or dull whitish-gray, in fresh plumage with pinkish-buff on the breast side and flanks. In worn plumage, the upper parts are paler and the wing panel is less prominent. The bib is slightly larger, and the under parts are whiter except for warm buffish flanks and under tail-coverts. The iris is dark brown and the bill is black with paler edges of both mandibles. The legs are dark greyish-blue. The juvenile is similar to adult, but crown duller brown-black, upperparts colder grey-brown, cheeks and ear-coverts pale creamy white or tinged buff, the bib is slightly a paler brown and with white flecks at the sides. The whiter under parts with a buff wash on the flanks and the under tail-coverts. The bill is browner than in the adult, with yellowish cutting edges.

Breeding season goes from April to July with one brood. Willow Tits are monogamous, making a lifelong pair-bond. They are territorial with partners remaining together within or close to their territory throughout the year. Breeding displays includes singing and chasing by male, and bowing and wing-shivering by both sexes. The male courtship-feeds female both at the nest and away from it, and this usually accompanied by begging calls by female and rapid trilling by male. The nest built by the female, mostly of bark or wood strips, grass, plant fibers, animal hair and feathers placed in hole or crevice up to 3 m high. This is usually in a rotten stump or in a tree, more or less

decayed. Most nests examined are cups of felted material, such as fur, hair and wood chips, but feathers are sometimes used. The number of eggs varies from six to nine, with reddish spots or blotches.

Cool Facts: The Willow Tit is distinguished from the Marsh Tit by a sooty brown instead of a glossy blue black cap; the general color is otherwise similar, though the under parts are more buff and the flanks distinctly more rufous; the pale buff edgings to the secondaries form a light patch on the closed wing. The feathers of the crown and the black bib under the bill are longer, but this is not an easily noticed character. However, the more graduated tail (not square) shows distinctly when spread.

The most common call is a nasal 'zee, zee, zee', but the notes of the bird evidently vary considerably. Occasionally a double note, 'ipsee, ipsee', is repeated four or five times.

Races differ mainly in size, tail length and color of upper parts and under parts:

Montanus Group:

- *P. m. kleinschmidtii*. It is endemic to Britain. It is smallest and darkest race, with browner upper parts, creamy-buff cheek to the neck sides, extensive buff-brown on under parts, the flanks are olive-brown and the bib appears fairly large.
- *P. m. rhenanus*. It is found in western Europe from northwestern France east to western Germany and southward to extreme northern Italy. It is similar to *kleinschmidtii*, but the upper parts are paler, more drab brown, the center of the breast and belly are white with pale grayish-buff wash. The breast sides, flanks and under tail-coverts are tinged with a cinnamon-buff color.
- *P. m. salicarius*. It is found in Germany and western Poland southward to northeastern Switzerland and Austria. It is very similar to *rhenanus*, but with slightly duller brown upper parts, a creamy-white cheek to neck sides, and the under parts with buff or grayish-buff wash only on the flanks.
- *P. m. montanus*. The nominate race is found in southeastern France (Jura) east to Slovakia, Romania, Bulgaria and north and central Greece. Also, there is a disjunct population in central Italy (Central Apennines).
- *P. m. borealis*. It is endemic to Fennoscandia, Baltic Republics and European Russia south to western Ukraine. It has blackest crown and nape (may be slightly glossy) of all the races, gray upper parts, white cheeks to neck sides, whitish or pale buff edges of the greater coverts (as edges of the secondaries and tertials), a slightly smaller black bib, a white or creamy-white breast center to vent, with pinkish-buff on the flanks and the under tail-coverts.
- *P. m. uralensis*. It is found in southeastern European Russia, western Siberia and northern Kazakhstan. It is similar to *borealis*, poorly defined, has paler or grayer upper parts, white edges on the secondaries and tertials, mostly whitish under parts, and a pale pinkish-gray tinge on the flanks.
- *P. m. baicalensis*. It is found in eastern Russia (Yenisey Basin and Altai east to western coast of Sea of Okhotsk), Northern Mongolia, northwestern and northeastern China (northwestern Xinjiang; northern Inner Mongolia, Heilongjiang,

Jilin and eastern Liaoning) and North Korea. It is very similar to *uralensis*., but has buffish wash on the underparts and a slightly longer tail.

- *P. m. anadyrensis*. It is found in extreme northeastern Siberia southward to northern Okhotsk coast. It is poorly differentiated, intermediate between *kamtschatkensis* and *baicalensis*.
- *P. m. kamtschatkensis*. It is endemic to Kamchatka. It has very pale grayish-white upper parts, broad white edges of the greater coverts, secondaries and tertials, the outer rectrices broadly edged white, the blackish bib slightly larger and the under parts mostly white or faintly washed creamy.
- *P. m. sachalinensis*. It is endemic to Sakhalin. It is similar to *restrictus* but paler or grayer, most noticeably on the under parts
- *P. m. restrictus*. It is endemic to Japan. Race *restrictus* is darker than *kamtschatkensis*, with the crown duller and browner, the mantle and back gray-brown with a sandy tinge, the under parts with a slightly heavier buffish wash.

Songar Group:

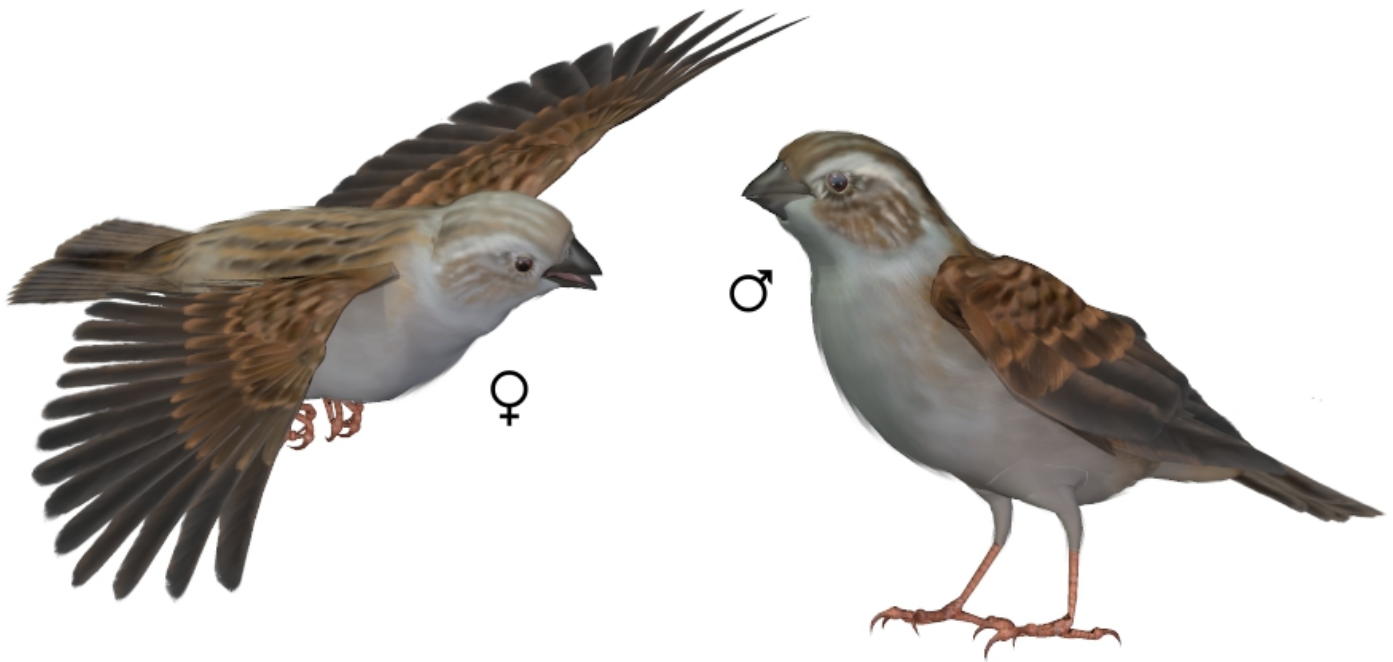
- *P. m. songarus*. It is found in Tien Shan in southeastern Kazakhstan and Kyrgyzstan (central and eastern Tien Shan) eastward to northwestern China (West Xinjiang). It is slightly larger, with a longer bill, a slightly rounded tail (outermost feather up to 6 mm shorter than others), a dark chocolate-brown crown, warmer and more ochre-brown upper parts. The wing panel is indistinct, the rear ear-coverts and the sides of neck are washed buffish-brown with some brownish on bib and pinkish-cinnamon wash on the flanks;
- *P. m. affinis*. It is found in north-central China (northeastern Qinghai, southern Gansu, northern Sichuan, Ningxia and southwestern Shaanxi). It is slightly darker than *stoetzneri*, the wing panel is indistinct.
- *P. m. stoetzneri*. It is found in northeastern China (southeastern Inner Mongolia and Shanxi east to Hebei and northern Henan). It is similar to *songarus* but smaller, somewhat more longer-tailed, with the crown to nape browner, the bib darker, the upper parts slightly paler, and the cinnamon wash on the flanks less pinkish.

Common Name: Dunnock or Hedge Sparrow
Scientific Name: *Prunella modularis*

Size: 5.3-5.8 inches (13.5-14 cm)

Habitat: Eurasia; widespread and common resident breeder throughout temperate Europe and Asia. It is a resident in the milder west and south of its range, but as an insectivore, must migrate south from the colder parts of its range.

It is highly variable across its range. It occupies scrub and stunted woodland in alpine, subarctic and tundra habitats in the north and east. It is found in montane habitat to just above tree-line in parts of range, including spruce and larch forests up to 2200 m in



Switzerland, birch, maple and juniper scrub to 2600 m in Caucasus, and juniper and rhododendron scrub to 2000 m in the Pyrenees. In the north of its range, it is found mostly in coniferous, broadleaf and mixed forests, particularly alongside water. In the Bialowieza Forest (Poland-Belarus) it is also found in mixed forest, particularly with alder, ash and spruce. In the west of its range, from Britain, Belgium and western Germany south to Iberia, mainly in lowlands, exploits managed woodland with thick understory, hedges and farm woodland, suburban and urban gardens, parks and any other habitat with scrubby vegetation. It shifts to the lowlands from likely ancestral habitat in alpine and subarctic regions unique within family.

Status: Least Concern. **Global Population:** 36,000,000 - 78,000,000 Mature individuals. The population is suspected to be stable in the absence of evidence for any declines or substantial threats.

Diet: Largely arthropods, supplemented by seeds in winter. Proportions of different invertebrates in diet vary across range and with season; beetles (especially of families *Carabidae*, *Curculionidae*, *Scarabaeidae*, *Chrysomelidae* and *Staphylinidae*) and spiders generally dominate, but springtails, stoneflies, orthopterans, earwigs, lepidopterans, scorpion flies, flies, hymenopterans, harvestmen, pseudoscorpions, small snails and earthworms also taken. Plant food eaten is equally diverse, includes seeds of, among others, docks, legumes, pines, birch, nettles, poppies, primrose (*Primula*), grasses, sedges, willowherb and thistles (especially *Cirsium*); also berries of heaths, bramble, holly and elder.

They forages chiefly on ground under the cover of bushes and other vegetation, by gleaning or sorting through leaf litter. Occasionally, they will probe the soil. In winter, often forages beneath feeders, but rarely seen on the raised platforms. They usually feeds alone but in winter, they may gather in small groups at rich food sources.

Breeding: The male of the nominate race has smoky-gray head, neck, throat and breast with gray-brown cheeks with fine pale streaks. The mantle and back are warm brown with blackish-brown streaks, rump and tail duller brown and unstreaked. The wings are blackish-brown with warm brown margins of secondaries and wing-coverts. There is a faint wing bar formed by pale tips of the greater coverts. Below, the gray of the chest blends to the grayish-white breast to white on the center of belly. The breast sides and flanks are a pale brown, streaked blackish-brown with the under tail-coverts being a grayish-buff. The iris is reddish-brown, the bill blackish and the legs a light reddish-brown. The female is very like male but less richly colored, with, the head and neck being paler with a brown wash and the mantle less heavily streaked. The juvenile is generally less gray than the adult, with general plumage tone buffier, the head and under parts are heavily streaked.

This species makes up for its drab appearance with its randy breeding behavior. Females are often polyandrous, breeding with two males at once, and thus giving rise to sperm competition. Males compete for mating access to the female, but DNA fingerprinting has shown that chicks within broods often have different fathers, depending on their success at monopolizing access to the fertile female. Males try to ensure their paternity during courtship by pecking at the cloaca of the female to stimulate her to eject the sperm of other males with whom the female has recently mated. Males provide parental care in proportion to their mating success, so it is not uncommon to see two males and female provisioning nestlings at one nest. Polyandry is rare in birds, with only about 2% of species showing such a mating system; the majority are monogamous, where one male and one female breed together.

It breeds March through July over much of its range; May–August in Russia. There are two broods, occasionally three, per season. The nest is built by the female alone and is a cup of twigs, stems, roots, grass and moss, lined with hair, wool, sometimes feathers, placed about 2-3 m above ground in bush, hedge or tree. She lays 3-5 unspotted blue eggs.

Cool Facts: Dunnocks are also known as Hedge Accentor or Hedge Sparrows. Dunnocks are a host of the Common Cuckoo. It is likely that this association is recent, since other Cuckoo hosts have learned to discriminate between eggs, and the Cuckoo has consequently evolved eggs that match those of its host. In the case of the Dunnock, there is no resemblance, yet the Cuckoo eggs are accepted.

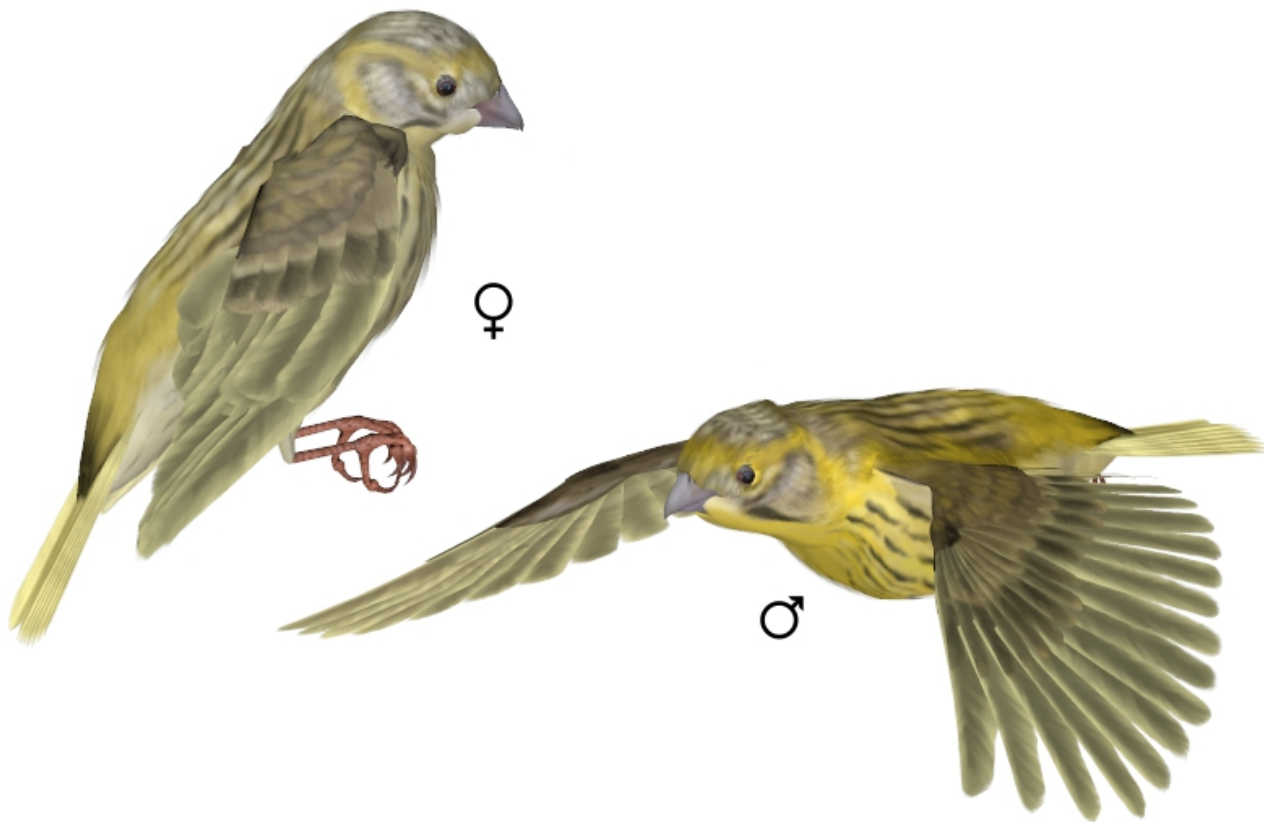
Eight subspecies currently recognized. Races differ mainly in coloration:

- *P. m. hebridium*. Hebridean Island (western Scotland) and Ireland. It is much darker than nominate, with a darker gray head and breast, the belly less is white, there is more rufous tone on upper-parts and more extensive streaking.
- *P. m. occidentalis*. Britain (except Hebrides) and western France. Introduced to New Zealand. It is intermediate between *hebridium* and the nominate, with more extensive brown on the hindneck and crown, no white on the belly, and has darker brown flanks than nominate.
- *P. m. modularis*. The nominate race is found in northern and central Europe east to the Urals Mountains, south to the Alps and Romania. It winters to southern Europe, northern Africa and Turkey.
- *P. m. mabbotti*. It is found in south-central France, the Iberian Peninsula, Italy and Greece. It is close to nominate in appearance but darker and grayer, like *occidentalis* except for paler under parts.
- *P. m. meinertzhageni*. It is found in the central and western Balkans and Bulgaria. It differs from *mabbotti* mainly in heavier streaking on mantle, grayer under parts.
- *P. m. fuscata*. It is endemic to the mountains of southern Crimea. It is similar to *euxina* but darker, with better-defined mantle streaks, although still grayer than the nominate, the gray of under parts more extensive with just a little white on the vent
- *P. m. euxina*. It is found in northwestern and northern Turkey. It is relatively pale above, with a lighter gray crown streaked with pale brown, brown (rather than black) streaks on mantle, also under parts more extensively gray, flanks less streaked.
- *P. m. obscura*. It is found in the Caucasus region, northeastern Turkey and northern Iran. It winters to Middle East. Race *obscura* relatively distinctive owing to slight whitish mottling or scaling on breast, becoming more obvious at transition to white belly, broad brown streaks on head, making it browner rather than grayer, reduced brown streaking on the flanks but no clear vocal differences.

Common Name: European Serin
Scientific Name: *Serinus serinus*

Size: 4.5-4.7 inches (11-12 cm)

Habitat: Europe (except the British Isles and almost entire Fennoscandia) east to the eastern Baltic Sea, western Russia and Belarus, southward to the Mediterranean islands, northern, western and central-south Turkey, Canary Islands (Tenerife, Gran Canaria), northern Africa (northern and central Morocco east to northern Tunisia and northwestern & northeastern Libya), western Syria, Israel and western Jordan. It winters in southwestern and southern Europe and northern Africa eastward to northern Egypt and Levant, also Iraq.



It prefers lowland to lower montane mosaic of wooded hills with conifers and open country, maquis slopes with pinewoods (including Monterey pine, small stands of cedars, junipers, cypress, European silver fir and thuja. It is widespread in olive and citrus groves, open agricultural areas, tall hedges and windbreaks, orchards, vineyards, plantations, suburban parks, avenues and gardens. In semi-desert areas, it occurs in

palms and around villages. In the Pyrenees, it breeds at low densities in black pine forests, co-existing with the Citril finch (*Carduelis citrinella*).

Status: Least Concern. **Global Population:** 45,000,000 - 75,000,000 mature individuals with a decreasing population trend. Its range in Europe expanded north during 20th century, possibly still moving northwards into southern Scandinavia and eastwards into western Russia (in St Petersburg region), Belarus and Ukraine, but rate of expansion erratic and often followed by decline. Breeding population in Belgium was 2500 pairs in 1970s, but declined to 650–1200 pairs by 1991. Similarly, the Netherlands population in late 1970s was about 550 pairs, but fewer than 150 pairs by mid-1980s, and declined also in Denmark after peak in late 1970s and probably no longer an annual breeder.

Diet: Mainly seeds, buds, shoots, flowers and small invertebrates. Seeds, buds and flowers include those of alder, birch, spruce, thuja, pine, larch, elm, mulberry, also nettle hemp, docks, knotgrass, shepherd's-purse hedge mustard, pennycress, alison, wall-rocket, hairy rocket, charlock, buckwheat, common mugwort, orache, amaranth, chickweed, poppy, lettuce, rose and other Asteraceae, also willowherb, evening-primrose, pimpernel, forget-me-not, lavender, plantain, dandelion, grasses and millet. Insects include aphids and moth larvae; other invertebrates spiders. Nestlings fed mostly with seeds.

It forages actively and energetically on ground, at seeding heads of plants (mostly *Asteraceae*) and in bushes and small trees. On the ground, it walks with slight shuffling gait or makes short hops, and uses its feet to hold plants while extracting seeds. In flowering shrubs, it plucks petals and bracts before extracting seeds from flower heads, and in trees, it pecks at buds and catkins, frequently destroying the latter. It forages alone and in pairs. In non-breeding season in small flocks, also in larger gatherings of over 100 individuals, and often with other finches. Autumn passage flocks in northwestern Spain and wintering flocks in Israel often number several thousands at communal feeding or drinking sites.

Breeding: It is a small and compact streaky finch with short stubby bill, short rounded wings, slightly forked tail and bright yellow rump. The male has its forehead and forecrown bright lemon-yellow, this colour extending along the supercilium and down behind the ear-coverts to the sides of neck. The cheek and ear-coverts are grayish-olive and there is a small yellow subocular crescent (sometimes similar patch on the lower cheek). The is dark greenish moustachial stripe, with variably developed yellow sub-moustachial area. the crown and nape are green or yellowish-green with finely streaked darker, upper parts streaked dull yellowish-green and dull dark brown. The rump is bright yellow or greenish-yellow, the upper tail-coverts and the tail are dark brown, the latter with fine yellow edges (edges yellowish-green in winter). The upper wing-coverts are yellowish with darker or browner centers, yellowish-buff tips on medians and greateres (forming two wing bars). The flight-feathers are dark grayish-brown, finely edged pale greenish-yellow, the tertials are similar but edged buffish. The chin to lower breast is a bright yellow, paler or whitish on the lower breast, belly and

under tail-coverts. The sides of the lower breast to flanks are streaked blackish. The iris is dark brown and the bill is brown or dark horn, usually paler horn on lower mandible. The legs are also brown. The female is similar to the male but duller, more greenish-yellow, with heavier streaking above and below, the supercilium is narrower and the rump is often much paler. The juvenile is like the female but browner with the upper parts broadly streaked brownish and edged greenish-buff. The rump is light olive or pale brown with darker streaks, the wings and tail are dark brown with light buffish-brown tips on median and greater coverts. There is also warm buff-brown edges on tertials and outer tail feathers, the chin is pale yellow or whitish, the under parts are pale yellowish-buff and generally only lightly streaked brown or buffish-brown.

Breeding season occurs from February to early August with usually a single-brooded, (but two broods frequent in parts of central Europe). Serins are monogamous and nest alone or in loose semi-colonial groups. The displaying male, with upright stance, wings drooped and quivered, tail raised and head up, sings loudly next to female while turning head from side to side. His throat feathers ruffle and his body slightly trembles. After several bursts of song from perch, he flies up to perform a twisting or rolling song flight with slow wing beats, covering wide arc of his territory, before descending in slow parachute-drop to perch next to female, where he'll resume singing. This repeated display singing and song flight will lead to aerial pursuit of the female and copulation. The nest is built entirely by female; the male may assist with collection of material. A small and compact platform of small twigs, plant stems and down, bark strips, roots, grasses, moss, animal hair and feathers, placed up at 3–6 m above ground among outermost branches, in crown or on branch against trunk in bush or tree, usually conifer or fruit tree. 3-5 eggs are laid and the incubation is done by the female alone for 12–13 days. The hatched chicks fed by both parents, in early days male brings food and regurgitates it to female. The nestling period lasts for 15–18 days and the young become independent 9 days after leaving nest.

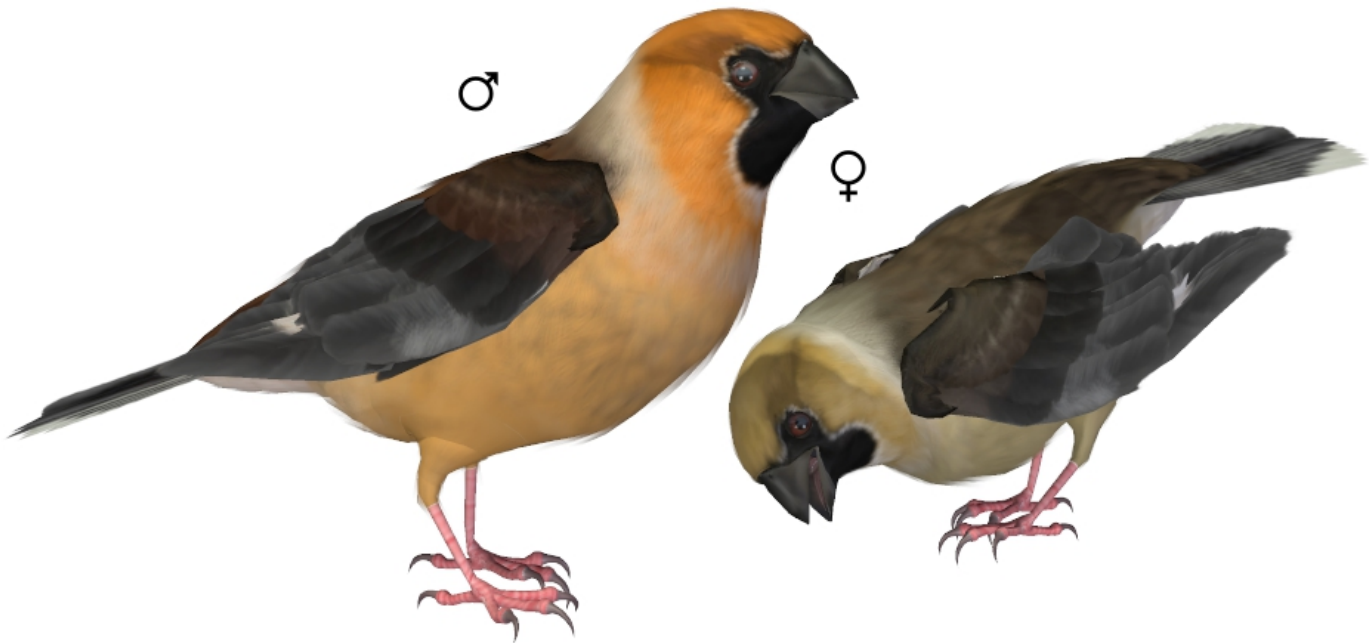
Cool Facts: The European Serin is the smallest in European species of the family of finches (*Fringillidae*) and is closely related to the Canary.

Common Name: Hawfinch

Scientific Name: *Coccothraustes coccothraustes*

Size: 6.5-7 inches (16.5-18cm)

Habitat: Eurasia; breeds across Europe and temperate Asia. It is mainly resident in Europe, but many Asian birds migrate further south in the winter. It is a rare vagrant to the western islands of Alaska.



Old deciduous woodland and (except in the west of its range) mixed broadleaf and conifer woodlands where broadleaf predominant. It is most numerous in oak-hornbeam forests, also beech, ash, elm, maple and sycamores within forests. It is often found also in riverine forest strips or woods near streams and ponds, also in coppices, hedgerows, edges of cultivation, especially orchards, parks, gardens and tree-lined avenues of towns and cities. In the center and eastern portion of its range it is found in conifers, mostly pine, and junipers. In southern Europe and the eastern Mediterranean, it prefers small woodlands and olive groves in more open landscape. In northern Africa, race *buvryi* breeds in forests of Aleppo pine with cork oak and alders.

Status: Least Concern. **Global Population:** 15,000,000 - 50,000,000 Mature individuals. The population is suspected to be stable in the absence of evidence for any declines or substantial threats.

Diet: Wide variety of hard seeds, buds and shoots of trees and shrubs. It also eats some fruit as well as some invertebrates and larvae. Seeds and buds include those of yew,

juniper, larch, spruce, pine, fir, willow, aspen, walnut, birch, alder, hazel, hornbeam, hop-hornbeam, beech, oak, elm, mulberry, laurel, maple, lime, ash, olive, privet, lilac, mistletoe, hemp, dock, chickweed, traveller's-joy, barberry, hackberry, radish, apple, pear, cherry), hawthorn, rowan, raspberry, currant, bean, pea, broom, laburnum, holly, spindle, dogwood, buckthorn, alder, grape, ivy), cotoneaster, nightshade, plantain, elderberry, honeysuckle, guelder-rose, dandelion, burdock, sunflower, grasses and cereals, including maize and wheat. Invertebrates taken include locusts and grasshoppers, moths, beetles, spiders, earthworms and snails. Nestlings fed principally with insects and larvae.

It forages at all levels in trees (frequently in the crown of the tree in the summer) and in shrubs. Occasionally, it is seen on the ground, where it takes fallen seeds (mostly in winter). It is usually a shy bird, quiet and unobtrusive, perching high in the trees or on ground beneath trees. It walks, waddles or hops with its head held upright. Occasionally, it will pursue insects in flight, and may hover briefly to pluck fruit from outer foliage. It uses its massive bill to split large hard seeds in equal halves, and mandibles able to exert force of up to 50 kg. It bites through shoots and buds from the stalk. It will collect small berries in bunch and pick out seeds individually, then extracts seeds from fleshy fruits by turning them in bill and stripping fleshy parts against lower mandible, before cracking seeds. Worms either eaten whole or cut into smaller sections.

Flocks often return over several days to same fruiting tree until latter stripped of all seeds and buds. It also feeds on infestations of defoliating moth caterpillars, mainly green oak roller (*Tortrix viridana*) and winter moth (*Operophtera brumata*), from rolled-up leaves, often flying several kilometres to do so. It forages singly, in pairs and in loose flocks. In non-breeding season, it is often in larger flocks of up to 300 individuals, at times much larger, and gatherings of up to 1200 recorded.

Breeding: The breeding male in the nominate race has line at base of upper mandible, lores, line at the side of the lower mandible to the chin and throat which is black. The forehead to crown is a light warm brown, darker or chestnut on the upper nape. The face is a bright tawny or orange-cinnamon, sometimes there is a narrow whitish subocular line. the lower nape and side of the neck is pale gray. The upper parts are rich dark brown, the lower back, rump and upper tail-coverts are warm orange-brown. The tail is cinnamon-brown, broadly tipped white with the outer feathers blackish. The median upper wing-coverts are dark gray, broadly tipped white or buffish-white, the alula and primary coverts are black. The outer greater coverts are black with buffish-white at base, the central ones are buffish-white with concealed blackish inner webs, inner ones cinnamon-brown, the rest of wing black, glossed metallic purplish-blue on secondaries and inner primaries. There is a small square white patch on outer primaries at mid-point of the inner webs (broad white wingbar in flight), other primaries have white towards base of the inner web. The sides of throat are gray or gray-brown, the breast to belly pale is brown, tinged pink or pinkish-buff, vent and the under tail-coverts are white, the under wing-coverts are also whitish. The iris can be variable, a pale brown to dark reddish-brown, paler at base. The bill is slate-blue or lead-gray, paler base of lower

mandible. The legs pale are pinkish-brown. Non-breeding male is slightly duller than breeding male and the bill is yellowish-horn.

The female is similar to male, but slightly paler or less warm brown. The forehead and face are a paler brown, the crown to the nape and the upper parts are a dull brown, while the rump and upper tail-coverts are a paler brown. The secondaries are broadly pale bluish-gray and the under parts pale brown. The juvenile male is similar to adult, but duller or browner. The head and nape are yellowish-buff to orange-brown, the feathers are tinged yellowish and finely tipped brownish. The lores are duller, the eyering buffish, the chin and upper throat are dusky gray, narrow black line at base of lower mandible/upper chin. The upper parts are duller and more mottled brown and gray, the wing and tail are as they are on the adult, but the tips of the greater coverts are tinged gray (tips of medians whiter), the modified tips of inner primaries are blunter, the underparts are a paler brown or buff-brown, spotted or streaked darker. The bill is a pale brown to yellowish-horn. The juvenile female is like the same-age male, but lacks black line at base of bill, the lores gray-brown, the rest of face is dull grey, sometimes with yellowish lower cheek/side of neck and a mottled blackish malar. The flight-feathers edged grayer, paler below.

Breeding season goes March to mid-August and has one brood. It is monogamous and the pair-bond apparently endures for more than one breeding season. It is a solitary nester but occasionally will nest in small groups. The solitary pairs defend area of up to 2000 m² around nest. Those in groups defend only the area immediately around nest. Pair formation takes place before the break-up of wintering flocks. In display the male holding its body upright, points its bill downwards and the neck feathers are ruffled. It bows to the female, sometimes ending with head almost facing between its legs. In the upright posture, the wings drooped and held slightly forward (showing white shoulder patches), he waddles stiff-legged, with his body slightly swayed from side to side, in front of female. She also drags drooped wingtips on ground. During early stages of courtship female may fend off male with forward lunges and bill-snapping, but as pair-forming advances she accepts display and the two partners perform bill-touching display. The male begins courtship-feeding of female when partners perch close together, face each other and alternately bob their heads, this followed in time by begging of female in crouched posture with head down, body feathers ruffled and wings quivering.

The nest built by both partners, a large or bulky but shallow cup of twigs, bark strips, grass, plant fibers, moss and lichen on a platform of thicker twigs, placed up to 14 m above ground, and often in ivy or honeysuckle, against trunk, in shallow fork or on horizontal branch in mature shrubby tree, frequently fruit tree (including apple and pear). The clutch is 3–5 eggs (larger clutches in years with high abundance of defoliating moth larvae). The incubation is performed by female lasting 11–13 days. The chicks are fed and cared for both parentswith the nestling period lasting 12–13 days. The young are independent at about 30 days.

Cool Facts: Hawfinches do not form large flocks outside the breeding season, and is usually seen in a pair or small group. Their song is quiet and mumbled.

Hawfinches closest living relatives are the Evening Grosbeak (*C. vespertinus*) from North America and the Hooded Grosbeak (*C. abeillei*) from Central America.

Races differ mainly in size, bill size, and some details of plumage:

- *C. c. coccothraustes*. The nominate race is found in southern Fennoscandia and central and southern Britain south to Spain, Corsica, Sardinia, central Italy, Slovenia, Bulgaria, north Greece, northwestern and northern Turkey and north and central Caucasus, east through Russia and central Siberia to Transbaikalia, south to northeastern Kazakhstan and northern Mongolia. It winters in Europe (except in the north) southward to northern Africa, Cyprus, central Asia, and central, southern and southeastern China (Gansu east to Jiangsu, south to Fujian, also Guizhou).
- *C. c. buvryi*. It is found in northern and northern-central Morocco, northern Algeria and northern Tunisia. It is slightly smaller than nominate, with the bill a little smaller or less heavy, the head and body paler, the crown, rump and upper tail-coverts grayer and less white in the wing and at tip of the tail.
- *C. c. nigricans*. It is found in Crimea, central and southern Caucasus, northeastern Turkey, northern Iran, possibly also southwestern Turkmenistan. It is poorly differentiated from the nominate. In fresh plumage, it is slightly darker on the mantle and back, the under parts are lightly tinged vinous-pink, and the female under parts paler or whitish.
- *C. c. humii*. It is found in eastern Uzbekistan east to Kyrgyzstan and southern Kazakhstan (western Tien Shan), southern to western Tajikistan and west-central Afghanistan. It winters also south to northern and western Pakistan and western Kashmir. It has the mantle and back paler and more yellowish-brown, the scapulars also slightly paler brown, the under parts is pale tawny or warm buffish-brown, the female head is pale grey, tinged olive.
- *C. c. japonicus*. It is found in eastern Russia (central and southern Kamchatka), Sakhalin, Kuril Island and northern Japan. It winters in southern Japan, southern It is like the nominate, but has a slightly smaller bill, paler and whiter on the belly, and less white at tip of the tail.

Special Thanks my Beta Testing Teams...

2011 Original Release (Ali, Bea, Jan, Kelvin, and Sandra)

- **2021 Re-release:** FlintHawk, Alisa, Tparo, & Tana

Species Accuracy and Reference Materials

The author has tried to make these species as accurate to their real life counterparts as possible. Many birds of the same species do vary considerably in color. This package tries to emulate the colors and markings in the most commonly found variants.

With the use of one generic model to create dozens of unique bird species, some give and take is bound to occur.

The model was created in Modo. The model rigs in Poser and DAZ Studio. The texture maps were created in Painter.

Field Guide Sources:

- **Handbook of the Birds of the World Alive** <https://www.hbw.com/>
- **Wikipedia** https://en.wikipedia.org/wiki/Main_Page
- **BirdLife International** <https://www.birdlife.org/>

Other Resources:

- [Songbird ReMix.com](https://songbirdremix.com)
- [Songbird ReMix on Facebook](https://www.facebook.com/songbirdremix)

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