

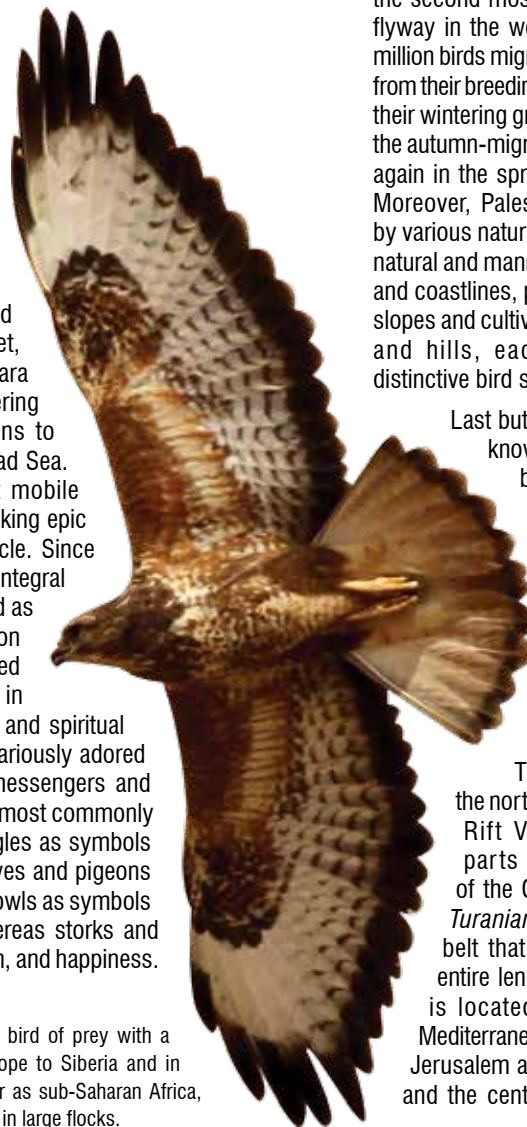
Avifauna of Palestine



By Anton Khalilieh

vian species (birds) are conspicuous and can be found everywhere on our planet, from the frigid Arctic Circle to the Sahara Desert where the sun is creating blistering heat, and from the Himalaya mountains to the lowest point on earth around the Dead Sea. These creatures are among the most mobile animals on earth, some of them undertaking epic journeys during an annual migration cycle. Since the earliest records, birds have been an integral part of human cultures. They have served as symbols of peace and war, were inspiration for objects of art and study, and have acted as companions and a source of pleasure in sport. Birds are present in the religions and spiritual practices of many cultures worldwide, variously adored as deities themselves or heralded as messengers and emissaries to the gods. Among the birds most commonly featured in religions and cultures are eagles as symbols of power, resurrection, and courage; doves and pigeons as symbols of peace and tranquility; and owls as symbols of death, misfortune, and wisdom; whereas storks and cranes are associated with long life, health, and happiness.

The Steppe Buzzard, a medium- to large-size bird of prey with a wingspan of up to 125 cm, breeds from Europe to Siberia and in autumn-migration season heads south to as far as sub-Saharan Africa, with thousands of individuals crossing Palestine in large flocks.



Since Palestine is located within the Palearctic zoogeographical region that covers all of Europe, Asia (except for its southeastern tropical zone), and Northern Africa, the majority of Palestinian birds belong to this region. However, one can also find other bird species that have either a Holarctic distribution, which covers the Palearctic and Nearctic zoogeographical regions (North America and Greenland), or an Ethiopian or Oriental distribution (south of the Sahara and tropical Asia). Furthermore, Palestine is situated at the second most important migratory flyway in the world where about 500 million birds migrate every year, moving from their breeding grounds in Eurasia to their wintering grounds in Africa during the autumn-migration season and back again in the spring-migration season. Moreover, Palestine is characterized by various natural habitats that include natural and manmade forests, a desert and coastlines, plains and cliffs, rocky slopes and cultivated fields, mountains and hills, each accommodating distinctive bird species.

Last but not least, Palestine is known for its four different bio-geographical enclaves that include the *Mediterranean region*, which contains the central mountains that stretch from Hebron to Nablus, the semi-coastal plain with Qalqilya, Tulkarem, and Jenin, the northern part of the Jordan Rift Valley, and northern parts of the coastal plain of the Gaza Strip. The *Irano-Turanian region* is a narrow belt that extends through the entire length of West Bank and is located to the east of the Mediterranean region, covering the Jerusalem and Hebron wilderness and the central Jordan Rift Valley

with adjacent steppes and rocky areas that face the southern part of the Jordan Rift Valley. The *Saharo-Arabian region* is characterized by low precipitation that rarely exceeds 200 mm per year. This region is a wide strip located to the east of the Irano-Turanian belt, extending from the Dead Sea area to the central part of the Jordan Valley. The *Sudanese region* is restricted to pockets along the Dead Sea and the Jordan Valley, such as Ein Gedi and the area around Ein Fashkha. With this variety, it is no wonder that we have great faunal biodiversity, which includes birds.

This beauty and diversity has fascinated scientists and bird enthusiasts for centuries. European explorers have recorded descriptions of animal species in historical Palestine, beginning in the 1540s with the Frenchman Pierre Belon; similar efforts were undertaken in several waves until the middle of the twentieth century. Among the most prolific of these explorers was Henry Baker Tristram who between 1858 and 1897 visited Palestine six times. His work is considered the first primary (i.e., on-site) documented research about birds of Palestine. He summarized his findings in *The Fauna and Flora of Palestine* (1884) and in a series of articles published between 1865 and 1868 in *Ibis*, the journal of the British Ornithologists' Union. In addition to his publications, Tristram was an avid collector of specimens, most of which are now stored at the Liverpool Museum. The modern ornithological work, done between 1900 and 1945, has been documented in three books: *The Handbook of Palestine and Trans-Jordan* by Luke and Keith Roach, published in 1934; *A Handbook of the Birds of Palestine* by Captain Eric Hardy, written in 1946; and *Birds of Arabia* by Colonel Richard Meinertzhagen, published in 1954, the most comprehensive work of that time about the birds of the region, including Palestine.

Based on the above-mentioned and more recent studies, the number of bird species recorded in Historical Palestine amounts to about 540 species. Taking into consideration the small geographical area of our country, this is a very large number if compared with other countries of the same latitude. Moreover, ornithologists and researchers expect a further increase in this number, year by year, as this field attracts more birders, birdwatchers, and bird enthusiasts.

As of today, the avifauna of the occupied Palestinian territories (oPt) has not been studied, based on a scientific approach, at the national level by any organization or institute. The extant lack of comprehensive scientific information about the birds of Palestine (number of species, species richness and diversity, status, conservation, and threats) is a consequence of many factors, including the shortage of specialized Palestinian ornithologists, birdwatchers, and birders,* the lack of dedicated institutes or organizations that focus on the avifauna of Palestine, and the unbearable restrictions on the movement of Palestinian researchers posed by the Israeli occupation authorities.

There are about 370 species of birds in the occupied Palestinian territories, and they represent 23 orders, 69 families, 21 subfamilies, and 173 genera. The largest numbers of species are from three orders: the Passeriformes with 146 species are the order that includes the majority of all known species with birds that characteristically have three toes facing forward and one backward, allowing them to perch on branches, which is why they are also called perching birds, at times also mistakenly called song birds; furthermore the Charadriiformes, with 65 species, an order that includes mostly strong-flying birds of coastal regions that feed on animal matter in and near water and nest on ground; and the Accipitriformes, with 31 species, an

order that includes most of the diurnal (active during the day) birds of prey such as buzzards, eagles, vultures, and many others. The families with the largest number of species are Sylviidae (alternatively called Old World Warblers and from the order Passeriformes) with 34 species, Turdidae (alternatively called thrushes and also from the order Passeriformes) with 32 species, and Accipitridae (one of the four families within the Accipitriformes, featuring large birds that have strong legs and feet, with raptorial claws and an opposable hind claw, as well as strongly hooked beaks) with 31 species. Some of the species were recorded almost two centuries ago and never recorded again in Palestine (but have been recorded recently in nearby areas) such as the Whooper Swan that was recorded at Solomon's pools on December 23, 1863.



The Griffon Vulture is among the largest flying birds in the world, with a wingspan of up to 3 meters. Some birds are migratory, others resident or nomadic. It can soar up to 10,000 meters high while migrating or foraging. This bird has been tagged by ornithologists for observation in efforts towards the conservation of the species that is endangered in the region.

Birds of the oPt can be divided into two main categories of breeding species, the first of which includes resident breeders and summer-visitor breeders, whereas the second comprises non-breeding species that include winter visitors, passage migrants, and vagrants (accidental visitors). The total number of breeding bird species is 133, of which 49 are considered as exclusively resident breeders (which includes three introduced species). These species



Palestine Sunbird is the Palestinian national bird. It is a small Nectariniidae bird that feeds mainly on flower nectar. The plumage of breeding males is mostly black but appears a glossy mixture of blue and green in the light.

spend their entire lives within the vicinity of Palestine, mainly within their breeding territories, and do not migrate. This group includes large species, such as the Eurasian Griffon Vulture that has a wingspan of about 3 meters, the Golden Eagle, and Bonelli's Eagle, as well as smaller species such as the Palestine Sunbird (the Palestinian national bird) or the Graceful Prinia that weighs about 7 grams.

Another 25 species are considered as exclusively summer-visitor breeders, which means that they are never recorded during winter. Most of these birds return to Palestine by early March in order to breed and return to Africa by July-September, such as the Black-eared Wheatear, Cretzchmar's Bunting, and Lesser Kestrel. The remaining 59 species are considered to be complex breeders: species that belong to various breeding populations with different seasonal behaviors, such as the Barn Swallow, Little Egret, and Black-winged Stilt.



The Arabian Babbler is a social bird that lives in groups of three to twenty-two individuals with a distinctive social hierarchy among both males and females. In a breeding group, parents, brothers, and sisters share in caring for, feeding, and protecting the newly fledged.



The Cretzschmar's Bunting breeding population is restricted to the eastern Mediterranean basin and migrates to spend its winters in Sudan, Eritrea, and Arabia.



The Lesser Kestrel, a small and slender-body falcon, feeds mainly on large insects (e.g., grasshoppers) that are caught either on the ground or in flight. It can be found from the Mediterranean and across Asia to as far as China.



The Black-winged Stilt is a widely distributed wader with very long bright-pink legs. It gives a repeated high-pitched barking call.

There is an abundance of migratory birds that can be observed in the skies above Palestine each year. This richness of both the species and numbers, unusual for this small area, can be partially explained by

the fact that Palestine is situated on the second most important flyway in the world for migratory birds. A total of 275 species migrate through or over Palestine during the spring and autumn migration seasons. The spring-migration season starts around the last week of February, with the bulk of migration taking place around March and April, and continues until mid-May. The autumn-migration season starts around the end of July for some birds, with the bulk of migration occurring during September and October, and continues, in low numbers and for only a few species, until the first half of November. Seventy-three species are exclusively passage migrant, which means that they are recorded mainly or exclusively during migration seasons, among them the European Honey Buzzard and the Garden Warbler. This group includes the soaring birds that are characterized by large and broad wings (among them vultures, eagles, buzzards, storks, and pelicans); they make use of rising columns of warm

air "thermals" that are created over land and allow them to gain uplift to increase their flying height. When soaring birds have reached the top of the thermal, they start to glide down at a slow pace until they catch the next thermal. This technique helps to cover distances of up to 300 km almost without any wing-flapping, thus saving energy. Because these thermals only occur over land, many species of soaring birds from east-central Europe and west Asia must pass through our region, particularly Palestine, during their migration to and from Africa.

There are 189 species that are considered to be winter visitors, of which only 10 species are exclusively winter visitors, such as the Common Crossbill and the Rock Bunting. The other wintering species have either resident populations within Palestine or exhibit diverse seasonal behaviors, e.g., summer-visitor breeders, passage migrants, or accidental visitors (vagrants).



The Yellow-vented Bulbul, also called White-spectacled Bulbul, lives in fruit plantations, gardens, and cities. When it feeds on small fruits, it swallows them whole, ejecting the seeds in its dropping, which helps to spread the seeds.

Eighteen species are considered as accidental visitors to our region: they find their way here from outside their normal migration range or wintering regions. Some of them are recorded rarely and unexpectedly, others are seen rarely but at predicted times. Consequently, the number and type of bird species observed in this group are likely to increase with intensive field work, monitoring, and survey. Examples are the Dark Chanting, Goshawk, and Oriental Skylark.

Five species have become extinct from our habitat as breeders: the Lappet-faced Vulture, Lammergeier, Cinereous Vulture, Verreaux's Eagle, Brown Fish Owl, and the Ostrich. These species used to reside and breed in Palestine but are now breeding in other areas of their natural distribution range. However, some of these species might be observed occasionally in Palestine during the winter or migration seasons, such as the Cinereous Vulture.

Birds of Palestine include four invasive species that have spread, that currently breed successfully, and that compete with native species for food, territories, and nesting sites, sometimes even preying on their chicks. This aggressive and territorial behavior of invasive species will eventually affect indigenous species dramatically and decrease their numbers in our habitat. Examples from this group of birds are the Rose-ringed Parakeet, Common Myna, and Indian Silverbill.

The Mediterranean mountain region stretches from Hebron to Nablus and features habitats characterized either by hills covered with batha, garrigue, or maquis vegetation, or exposed rocky slopes and cliffs. These habitats hold several bird species that are typical of the Mediterranean climatic region and include, in well vegetated areas, the Blackbird, Sardinian Warbler, Syrian Woodpecker, Great Tit, Masked Shrike, Tawny Owl, and Wren. Birds of rocky habitat with sparse and low vegetation include the Long-legged Buzzard,



The Myna is native to southern Asia, especially India, and considered a pest when outside its natural range. It is gregarious and feeds on insects and fruits. Some types of them are considered to be talking birds as they are able to reproduce human sounds and speech.



The Eagle Owl, one of the largest living owls in the world, with a wingspan of up to 190 cm, strong legs, talons, and sharp claws, is a formidable and silent hunter and at the top of its food chain.



The Sand Partridge is a typical desert species with sandy-brown plumage to camouflage easily in arid areas. It is a remarkably noisy and vocal bird, often heard before it is seen, and prefers to run rather than fly when disturbed.

Eagle Owl, Lesser Kestrel, Little Owl, Long-billed Pipit, Blue-rock Thrush, Woodchat Shrike, Raven, Linnet, and Cretzschmar's Bunting.

Many species flourish in the desert habitat that reaches from the Dead Sea depression to the Jerusalem Wilderness (the eastern areas between Hebron and Jerusalem). This region contains a variety of habitats, including deep wadis, ravines, and cliffs as well as permanent springs and small oases. Several raptors breed in the area, among them the Griffon Vulture, Egyptian Vulture, Bonelli's Eagle, and Golden Eagle. Most of the desert species breed in this area, for example, the Sand Partridge, Hume's Tawny Owl, and Desert Lark, Blackstart, White-crowned Black Wheatear, Trumpeter Finch, House Bunting, Tristram's Starling, and Fan-tailed Raven and Dead Sea Sparrow.



With its glossy black plumage, striking orange beak, and yellow ring around the eye, the male Blackbird is strikingly beautiful. The females are sooty-brown for camouflage.

Jericho, the Jordan River Valley, and the lowland areas from Tubas to Qalqilya are distinctive habitats for many species of birds, such as the Dead Sea Sparrow, Scops Owl, Calandra and Crested Lark, Rufous Bush Robin, Spanish Sparrows, Goldfinch, Little Egret, Moorhen, Black-winged Stilt, Spur-wing Lapwing, European Bee-eater, and Blue-cheeked Bee-eater.



The Tristram's Starling, also called Tristram's Grackle, nests mainly on rocky cliff faces in arid areas. Jericho is its northernmost distribution range.



The sociable Goldfinch often breeds in colonies and has a most delightful, liquid twittering song and call (song is the name for sounds birds use mainly during mating season to attract females, calls are used for other communication).

Even though the Palestinian avifauna is characterized by richness, the population of several species is declining at an alarming rate; some of these species are being threatened globally and included on the Red List of Threatened Species published by the International Union for the

Conservation of Nature, such as the Egyptian Vulture. Other species are threatened at the national or the regional level, such as the Golden Eagle, Bonelli's Eagle, Spectacled Warbler, and Long-billed Pipit. The decline of many bird populations in Palestine can be attributed to several factors that include



The Calandra lark breeds around the Mediterranean, nesting on the ground. It has a beautiful song that sounds like a slow version of the song of the skylark.

people, various companies, and even the country's economy.

Bird-watching can be done via the naked eye or with visual-enhancement devices such as binoculars and telescopes. A good field guide and a notebook to write down the observations are useful but not essential. A digital camera with a telephoto lens lets you capture the fascinating behavior of birds during their daily activities of feeding, hunting, courtship display, singing, perching, diving, swimming, preening, defending their territories, or flying from one tree to another. There is plenty of opportunity for relaxation while you spend your day walking and sitting in nature, at times waiting quietly in order not to scare away these often-elusive beauties. Children will learn to exercise patience and attentiveness, and the whole family may enjoy showing off and sharing the trophies of their visual (!) hunts at the end of an exciting day.

the modification and destruction of natural habitats, intensive use of pesticides, illegal hunting, nest robbing of eggs and chicks by humans and feral dogs, diversion of natural springs into pipes at their source, and electrocution and collision with power lines.

Birds are not only studied in various scientific approaches by ornithologists and researchers, millions of people around the world enjoy going outside to watch birds as a recreational activity. This form of wildlife observation is called bird-watching; however, those who take this activity seriously and spend a lot of their time and money on watching birds prefer to be called birders. According to a study carried out in 2006 by the U.S. Fish and Wildlife Service, one fifth of all American citizens were classified as bird watchers and they contributed US\$ 36 billion to the country's economy. Hence, many countries consider bird-watching to be a major part of ecotourism activities that generate good income to local

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Article photos by Anton Khalilieh.

* For a differentiation of the two, read the article "Bird-watching or Birding: It's all about intensity," on *AboutHome*, available at <http://birding.about.com/od/birdingbasics/a/Birdwatching-Or-Birding.htm>.