



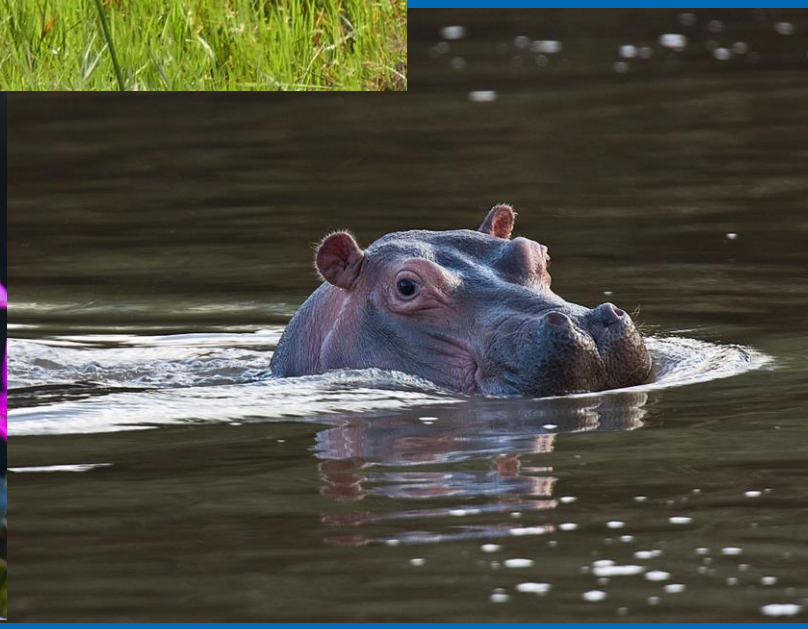

Dominant Fauna of the Lake Tana Biosphere Reserve, Ethiopia

Training Manual

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Impressum: Left: Greater blue-eared starling (Picture: Bruno D'Amicis), Middle: Grivet monkey (Picture: Ronja Krebs), Right: Red billed firefinch (Picture: Ronja Krebs)

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About this manual

The Lake Tana Biosphere Reserve (LTBR) is located in the Amhara National Regional State. The biosphere reserve comprises Lake Tana and its associated environments, internationally known as an Important Bird Area (Nega Tassie and Afework Bekele, 2008; Shimelis Aynalem and Afework Bekele, 2008). The LTBR is part of the Eastern Afromontane and Horn of Africa Biodiversity Hotspots. It is a stronghold for more than 250 bird species and resting site for many migratory species (Francis and Shimelis Aynalem 2007; Nega Tassie 2007; Nega Tassie and Afework Bekele 2008; Shimelis Aynalem and Bekele 2008). This fauna identification manual provides details on faunal species of LTBR with IUCN's Red list category/status, description, range map, habitat, food and feeding habit as well as breeding behavior of different species. Seasonal movements of bird species from their breeding to their wintering ground and vice versa are also described. IUCN's red list category of each species describes the global conservation status of the species, while the description of species explains the physical overview of each species. Distribution and habitat of species refer to the geographic range of each species with their preferred sites for both feeding and breeding.

This fauna identification manual is thus an important resource material for both amateurs and professionals. It describes herptofaunal species, birds and mammals of the LTBR. For biodiversity conservation, a focus must also be set on the shores of Lake Tana, as they are highly diverse (CEPF, 2012). The LTBR ecosystem is known for its local and international significance. As a result the Nature and Biodiversity Conservation Union (NABU) is supporting the protection of this unique ecosystem of the LTBR and promoting sustainable development in the region. Thefore, this training manual, which is funded by NABU, will help the experts in the field to identify different faunal species, their conservation status, distribution etc. so as to design sustainable conservation strategies of biological resources in the area.

Enjoy reading and using this manual and join us in conserving Lake Tana and the whole environment!

1. INTRODUCTION

Millions of species inhabit the Earth and the vast majority of species gain energy to support their metabolism either directly from the sun, in the case of plants, or from other organisms through feeding on plants, predation, parasitism or decomposition. In the pursuit of life and through their capacity to reproduce, organisms use energy, water and nutrients. Animals tend to derive their nutrients from other organisms. Organisms interact with one another in many ways including competitive, predatory, parasitic and facilitative ways, such as pollination, seed dispersal and the provision of habitat. These fundamental linkages among organisms and their physical and biological environment constitute an interacting and ever-changing system that is known as an ecosystem. Humans are a component of these ecosystems and in many regions they are the dominant organism. However, dominant or not, humans depend on ecosystem properties and on the network of interactions among organisms and within and among ecosystems for sustenance, just like all other species (Cleveland et al., 1996).

1.1 The need for healthy ecosystems and the role of faunal species

An ecosystem is a dynamic complex of plant, animal and microorganism communities and the abiotic environment interacting as a functional unit. Ecosystems provide a variety of benefits to people including provisioning, regulating, cultural and supporting services. **Provisioning services** are the products people obtain from ecosystems such as food, fuel, fiber, fresh water and genetic resources. **Regulating services** are the benefits people obtain from the regulation of ecosystem processes including air quality maintenance, climate regulation, erosion control, regulation of human diseases as well as water purification. **Cultural services** are the nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experiences. **Supporting services** are those that are necessary for the production of all other ecosystem services such as primary production, production of oxygen and soil formation (de Groot et al., 2012). Ecosystems and biodiversity are closely related concepts. Biodiversity is the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. It includes diversity within and between species and diversity of ecosystems. Diversity is a structural feature of ecosystems and the variability among ecosystems is an element of biodiversity. Products of biodiversity include many of the services produced by ecosystems such as food and genetic resources and changes in biodiversity can influence all the other services they provide. In addition to the important role of biodiversity in providing ecosystem services, the diversity of living species has intrinsic value independent of any human concern.

1.1.1 Ecosystem services

Ecosystem services are the benefits people obtain from ecosystems. This definition is derived from two other commonly referenced and representative definitions:

i. **Ecosystem services** are the conditions and processes through which natural ecosystems and the species that

make them up sustain and fulfill human life. They maintain biodiversity and the production of ecosystem goods such as seafood, forage timber, biomass fuels, natural fiber and many pharmaceuticals, industrial products as well as their precursors.

ii. **Ecosystem goods** (such as food) and **services** (such as waste assimilation) represent the benefits human populations derive, directly or indirectly, from ecosystem functions (Costanza *et al.,* 1997).

Ecosystem services have been categorized in a number of different ways, including: functional groupings such as regulation, carrier, habitat, production and information services; organizational groupings such as services that are associated with certain species that regulate some exogenous input or that are related to the organization of biotic entities; and descriptive groupings such as renewable resources, nonrenewable resources, physical structure services, biotic services, biogeochemical services, information services and social and cultural services (Boyd and Banzhaf, 2006).

1.1.2 The role of faunal species

The history of using animals for different purposes dates back to the origin of the human race. Animals served as source of food, medicine and clothing for humans together with a number of other goods and services. The traditional medicinal knowledge of indigenous people has played a significant role in identifying living organisms which are endowed with medicinal values important for treating human and livestock health problems. Animals and their products have been used in the preparation of traditional remedies in various cultures. Wild as well as domestic animals and their by-products serve important ingredients in the preparation of curative, protective and preventive medicine (Kioko *et al.,* 2015). Currently, traditional medicines have been found to be an invaluable guide in screening modern drugs.

2. FAUNAL DIVERSITY AND ESSENCES OF FAUNAL DIVERSITY LOSSES

The main cause of the loss of biodiversity can be attributed to the influence of human beings on the world's ecosystem. In fact, human beings have deeply altered the environment and have modified the territory, exploiting the species directly i.e. by fishing and hunting, changing the biogeochemical cycles and transferring species from one area to another. The threats to biodiversity can be summarized in the following main points:

- **Alteration and loss of the habitats**: The transformation of the natural areas determines not only the loss of the plant species, but also a decrease in the animal species associated to them.

- **Introduction of exotic species and genetically modified organisms**: Species originating from a particular area and being introduced into new natural environments can lead to different forms of imbalance in the ecological equilibrium.

- **Pollution**: Human activity influences the natural environment producing negative, direct or indirect effects that alter the flow of energy, the chemical and physical constitution of the environment and abundance of the species.

- **Climate change**: Heating of the Earth's surface affects biodiversity because it endangers all the species that adapted to the cold due to the latitude or the altitude.

- **Overexploitation of resources**: When the activities connected with capturing and harvesting (hunting, fishing, farming) a renewable natural resource in a particular area is excessively intense, the resource itself may become exhausted, as for example is the case of sardines, herrings, tuna and many other species that men capture without leaving enough time for the organisms to reproduce.

3. HEALTHY ECOSYSTEMS AND SUSTAINABLE DEVELOPMENT

3.1 Introduced species are not good guests

The greatest impact on the environmnet is caused by introduced species that change an entire habitat, because many native species thrive only in a particular habitat. Many birds and mammals adapted to the native plant community decline in abundance. Invasive species endanger single indigenous species or even entire groups of them in various ways: For example, the predatory brown tree snake, introduced in cargo from the Admiralty Islands, has eliminated ten of the eleven native bird species from the forests of Guam (Gordon, 1992). The Nile perch, a voracious predator introduced to Lake Victoria as a food fish, has already extinguished over one hundred species of native cichlid fish there (Achieng, 2006). A parasite can be similarly devastating. The sea lamprey reached the Great Lakes through a series of canals and, in combination with overfishing, led to the extinction of three endemic fishes. Some impacts of invaders are subtle but nonetheless destructive to native species: Some alien species eliminate native species by breeding with them and hence altering the gene pool. North American gray squirrels, for example, are driving native red squirrels to extinction in Great Britain and Italy by foraging for nuts more efficiently than the native species (Sandro, 2008). Such competition for resources is not easy to observe, but the end result is the loss of a native species. Hybridization or cross-breeding of introduced species with natives is an even subtler impact, but it is dangerous because it leads gradually to the extinction of many native species, as their gene pools inevitably evolve to become those of the invader. Introduced mallards, for instance, are driving the native Hawaiian duck to a sort of genetic extinction by breeding with them (Fowle et al., 2009). Of 26 animal species that have gone extinct since being listed under the Endangered Species Act, at least three were wholly or partly lost because of hybridization with invaders. One was a fish native to Texas, eliminated by hybridization with introduced mosquito fish (Clavero and García-Berthou 2005). Non-native species cause changes in the ecosystems into which they are introduced.These changes are usually termed impacts. They can be manifold and potentially damaging to ecosystems and biodiversity. Biological diversity faces many threats throughout the world. One of the major threats to native biological diversity is

now acknowledged by scientists and governments to be biological invasions caused by alien invasive species. The impacts of alien invasive species are immense, insidious and usually irreversible. They may be as damaging to native species and ecosystems on a global scale as the loss and degradation of habitats (MA, 2005). For millennia, the natural barriers of oceans, mountains, rivers and deserts provided the isolation essential for unique species and ecosystems to evolve. In just a few hundred years these barriers have been rendered ineffective by major global forces that combined to help alien species travel vast distances to new habitats and become alien invasive species. The globalisation and growth in the volume of trade and tourism, coupled with the emphasis on free trade, provide more opportunities than ever for species to be spread accidentally or deliberately.

4. DOMINANT LTBR FAUNA SPECIES DESCRIBED IN DETAIL

4.1. Herpetofaunal species in LTBR



Figure 1: African rock python (Picture: Dessalegn Ejigu)

Common name: African rock python
Latin name: *Python sebae*

Description of species: The body of Africa's largest snake species is thick and covered with colored blotches, often joining up in a broad, irregular stripe. Body markings vary between brown, olive, chestnut and yellow, but fade to white on the underside. The head is triangular and is marked on top with a dark brown "spear-head", outlined in buffy yellow. Its teeth are plenty, sharp and backwardly curved. Under the eyes it has a distinctive triangular marking, the subocular mark. Like all pythons, the scales of the African rock python are small and smooth. Those around the lips possess heat-sensitive pits, used to detect warm-blooded prey, even in the dark. Pythons also possess two functioning lungs, unlike more advanced snakes which have only one and also have small, visible pelvic spurs, believed to be the vestiges of hind limbs.
Species status according to IUCN: Vulnerable (VU)
Life span: Individuals may live over 12 years in captivity.
Feeding habits: The African rock python feeds on a variety of large rodents, monkeys, warthogs, antelopes, fruit bats, monitor lizards and even crocodiles in forest areas as well as on rats, poultry, dogs and goats in suburban areas. Like all pythons, the African rock python is nonvenomous and kills its prey by constriction. After gripping the prey, the snake coils around it, tightening its coils every time the victim breathes out.
Mating/breeding habits: African rock pythons are oviparious, laying between 20 and 100 hard-shelled, elongated eggs in an old animal burrow, termite mound or cave. The female shows a surprising level of maternal care, coiling around the eggs, protecting them from predators and possibly helping to incubate them until they hatch around 90 days later. The female guards the hatchlings for up to two weeks after they hatch from their eggs to protect them from predators.
Habitat: The snake is found in a variety of habitats, from forests to near deserts, although usually near sources of water.
Main threats to the species: People are often fearful of large pythons and may kill them on sight. It may also be threatened by hunting for leather in some areas, by pet trade and habitat degradation.



Figure 2: Nile crocodile (Picture: Mathias Putze)

Common name: Nile crocodile
Latin name: *Crocodylus niloticus*

Description of species: The Nile crocodile is an African crocodile, the largest freshwater predator in Africa and may be considered the second largest extant reptile in the world, after the saltwater crocodile (*Crocodylus porosus*). It is quite widespread throughout Sub-Saharan Africa, occurring mostly in the central, eastern and southern regions of the continent, living in different types of aquatic environments such as lakes, rivers and marshlands.
Species status according to IUCN: Least Concern (LC)
Life span: 70 – 100 years
Feeding habits: The Nile crocodile is an opportunistic top
predator and a very aggressive species of crocodile that is capable of taking almost any animal prey within its range. They are generalists, taking a variety of prey species
including invertebrates, fish, reptiles, birds and mammals. The Nile crocodile is one of the most dangerous species of crocodile and is responsible for hundreds of human deaths every year.
Mating/breeding habits: On average, sexual maturity is obtained from 12 to 16 years of age. Breeding usually takes place during the dry season. Like most other reptiles, Nile crocodiles lay eggs; these are guarded by the female. The hatchlings are also protected for a period of time but hunt by themselves and are not fed by the parents.
Habitat: In East Africa, Nile crocodiles are found mostly in
rivers, lakes, marshes and dams, favoring open, broad bodies of water over smaller ones.
Main threats to the species: Over-hunting, commercial exploitation etc..

4.2. Bird species in LTBR



Figure 3: African jacana (Picture: Ronja Krebs)

English common name: African jacana
Latin name: *Actophilornis africanus*

Description of species: African jacanas are conspicuous and about 30 cm long, with females being larger than males. They have chestnut upperparts with black wingtips, rear neck and eyestripe. The adults' underparts are also chestnut, only juveniles are white with a chestnut belly patch. The blue bill extends up as a coot-like head shield, the legs and long toes are grey.
Species status according to IUCN: Least Concern (LC)
Behaviour: resident
Life span: not available
Feeding habits: feed on insects and other invertebrates
Mating/breeding habits: unusually polyandrous
Nich, preferences: floating vegetation in shallow lakes
Main threats to the species: predators (nile monitor)



Figure 4: Malachite kingfisher (Picture: Bruno D'Amicis)

English common name: Malachite kingfisher
Latin name: *Alcedo cristata*

Description of species: The Malachite kingfisher is a small kingfisher with 13 cm in length. The general color of the upper parts of the adult bird is bright metallic blue. The head has a short crest of black and blue feathers, which gives rise to the scientific name. The face, cheeks and underparts are rufous and there are white patches on the throat and rear neck sides. Young birds have a black bill while adults are reddish-orange; the legs are bright red. Sexes are similar, but juveniles are a duller version of the adult.
Species status according to IUCN: Least Concern (LC)
Behaviour: resident
Life span: 3 to 4 years
Feeding habits: feed on fish and insects
Mating/breeding habits: monogamous
Nich, preferences: near water, perched on reeds or branches
Main threats to the species: no major threat



Figure 5: Black crake (Picture: Bruno D'Amicis)

English common name: Black crake
Latin name: *Amaurornis flavirostra*

Description of species: The adult black crake is 19–23 cm long with a short tail and long toes. As its name implies, the adult has mainly black plumage, with a brown olive tone on the wings and upperparts which is rarely detectable in the field. The sexes are similar, but the male is slightly larger. The immature bird has brown upperparts and a dark grey head and underparts.
Species status according to IUCN: Least Concern(LC)
Behaviour: resident
Life span: not available
Feeding habits: wide range of invertebrates, small fish, frogs, seeds and aquatic plants
Mating/breeding habits: monogamous
Nich, preferences: freshwater marshes
Main threats to the species: not threatened significantly

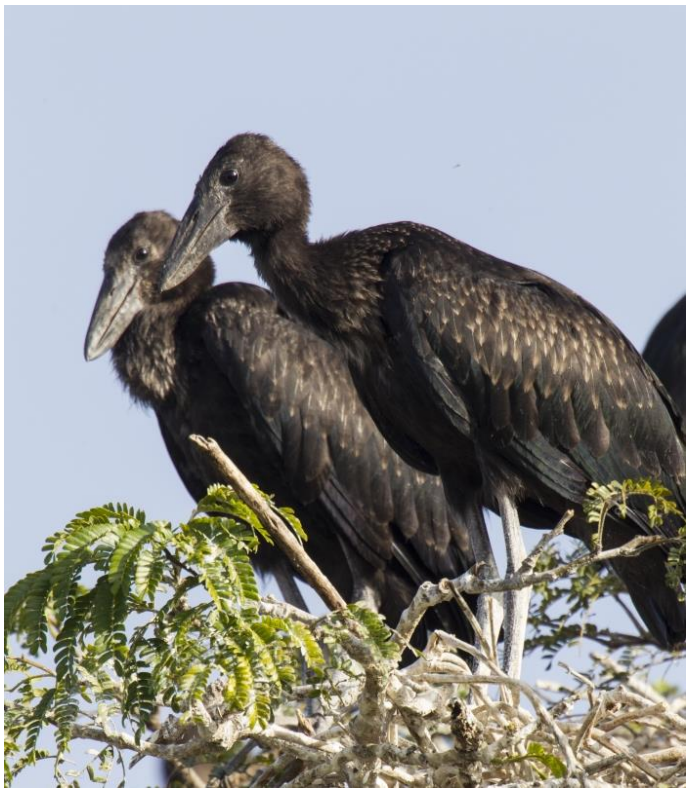


Figure 6: African openbill (Picture: Bruno D'Amicis)

English common name: African openbill
Latin name: *Anastomus lamelligerus*

Description of species: The African openbill is an 80–94 cm long stork with a weight of 1–1.3 kg. Its adult plumage is generally dark overall, with glossy green, brown and purple on the mantle and breast. The bill is brownish and notably large. The legs are black and the eyes are grey. The juvenile plumage is more dull and brown, with areas of pale feather tips.
Species status according to IUCN: Least Concern (LC)
Behaviour: resident
Life span: more than 7 years in captivity
Feeding habits: feeds on aquatic snails and freshwater mussels, terrestrial snail, frogs, crabs, fish, worms and large insects
Nich, preferences: shallow wetlands, flood plains, swamps,
marshes, ponds, streams, river shallows, dams, rice paddies,
lagoons, lake margins and intertidal mud flats
Main threats to the species: The species is threatened by habitat loss, entanglement in fishing lines and environmental pollution (such as pesticides applied to water for mosquito control). It also suffers from hunting, poaching and the destruction of breeding colonies. The species is hunted and traded at traditional medicine markets in Nigeria.



Figure 7: African darter (Picture: Bruno D'Amicis)

English common name: African darter
Latin name: *Anhinga rufa*

Description of species: The male African darter is mainly glossy black with white streaking, while females and immature birds are browner. The African darter differs in appearance from the American darter most recognisably by its thin white lateral neck stripe against a rufous background colour. The pointed bill should prevent confusion with cormorants.
Species status according to IUCN: Least Concern (LC)
Behaviour: resident
Life span: up to 16 years
Feeding habits: mainly fish, also amphibians, reptiles and invertebrates
Mating/breeding habits: They are seasonally monogamous birds (sticking to one mate for one breeding season).
Nich, preferences: They can be found around fresh and brackish waters that are surrounded by (or close to) fresh vegetation. Shallow lakes and slow-flowing rivers that are flanked by trees, mangroves and reeds are ideal. They will also be found around swamps, lagoons and reservoirs, but will avoid marine habitats. They need trees or bushes for their roosting.
Main threats to the species: The birds and their eggs may be the prey of choice for crocodiles, birds of prey and crows. Pollution, urbanisation and nest disturbance are also threatening factors in some countries.



Figure 8: Plain-backed pipit (Picture: Mathias Putze)

English common name: Plain-backed pipit
Latin name: *Anthus leucophrys*

Description of species: The plain-backed pipit is a medium-sized passerine bird, which is a resident breeder in Africa south of the Sahara Desert. It is found in open habitats, especially short grassland and cultivation. It builds its cup-shaped nest on the ground and usually lays three eggs. It is faintly streaked grey-brown above and pale below with light breast streaking. It has long legs and tail and a long dark bill. Sexes are similar, but juveniles have warmer brown upperparts. Some care must be taken to distinguish this species from wintering tawny pipits, *Anthus campestris*. Perhaps the best distinction is the characteristic "ssissik" call, quite different from the tawny pipit's "tchilip".
Species status according to IUCN: Least Concern (LC)
Behaviour: resident
Feeding habits: This species is insectivorous and mainly eats insects and their larvae.
Nich, preferences: Generally prefers moist short grassland with scattered trees, rocks and termite mounds. **Main threats to the species**: No major threat.



Figure 9: Grey heron (Picture: Bruno D'Amicis)

English common name: Grey heron
Latin name: *Ardea cinerea*

Description of species: The grey heron is a large bird, standing up to 100 cm tall and measuring 84–102 cm long with a 155–195 cm wingspan. The body weight can range from 1.02–2.08 kg. The plumage is largely ashy-grey above and greyish-white below with some black on the flanks. Adults have the head and neck white with a broad black supercilium that terminates in the slender, dangling crest
and bluish-black streaks on the front of the neck. The scapular feathers are elongated and the feathers at the base of the neck are also somewhat elongated. Immature birds lack the dark stripe on the head and are generally duller in appearance than adults, with a grey head and neck and a small, dark grey crest.
Species status according to IUCN: Least Concern (LC)
Behaviour: resident
Life span: about 5 years
Feeding habits: feeds mainly on fish
Mating/breeding habits: It breeds in mixed colonies of hundreds or thousands of pairs.
Nich, preferences: It is a generalist in its habitat use. It is found inland on broad rivers, narrow streams, lake shores, ornamental ponds, fish-ponds, marshes, flood-plains, reeds swamps, rice-fields and other irrigated areas.
Main threats to the species: habitat alteration



Figure 10: Goliath heron (Picture: Mathias Putze)

English common name: Goliath heron
Latin name: *Ardea goliath*

Description of species: Goliath heron is the world's largest heron. The height is 120–152 cm, the wingspan is 185–230 cm and the weight is 4–5 kg. In flight it has a slow and rather ponderous look and, unlike some other herons, its legs are not held horizontally. Male and female look similar, with an overall covering of slate gray and chestnut feathers. The head and its bushy crest, face, back and sides of the neck are chestnut. The chin, throat, foreneck and upper breast are white, with black streaks across the foreneck and upper breast. The back and upper wings are slate-grey, with a chestnut shoulder patch at the bend of the wings when they are closed. The under-wing is pale chestnut. The only heron with somewhat similarly-colorful plumage characteristics, the widespread purple heron, is much smaller than the Goliath. Despite the shared plumage characteristics with the purple species, the closest extant relatives of the Goliath are considered to be the great-billed and the white-bellied herons of Southern Asia. Due to their large size, this species is sometimes referred to as the "giant herons".
Species status according to IUCN: Least Concern (LC)
Behaviour: Goliath herons are resident. They are solitary foragers and are highly territorial towards other Goliaths entering their feeding territories.
Life span: 15 years in the wild, reaching 22 years in captivity
Feeding habits: It feeds on fishes, crustaceans, amphibians and snakes.
Mating/breeding habits: Its breeding season coincides generally with the start of the rainy season, which is around November to March. In some areas breeding is year round, with no discernable peak season. Breeding may not occur every year. Fairly adaptable in their nesting site selection, Goliath herons generally prefer to nest on islands or islands of vegetation.
Nich preferences: It is very aquatic, even by heron standards, rarely venturing far from a water source and preferring to fly along waterways rather than move over land. Important habitats can include lakes, swamps, mangrove wetlands, reefs with few cool water, sometimes river deltas. They tend to prefer pristine wetlands and generally avoid areas where human disturbances are a regular occurrence.



Figure 11: Black-headed heron (Picture: Bruno D'Amicis)

English common name: Black-headed heron
Latin name: *Ardea melanocephala*

Description of species: Black-headed heron is a large bird, standing 85 cm tall and having a 150 cm wingspan. It is nearly as large as the grey heron, which it resembles in appearance, although it is generally darker. Its plumage is largely grey above and paler grey below. It has a powerful dusky bill.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: much of sub-Saharan Africa and Madagascar
Habitat: open grassy habitats, sometimes moving into marshes and floodplains in southern Mozambique
Food and feeding: It often feeds in shallow water, spearing fish or frogs with its long, sharp bill. It also hunts well away from water, taking large insects, small mammals and birds. It waits motionless for its prey or slowly stalks its victim.
Breeding: This species usually breeds during the wet season in colonies in trees, reedbeds or cliffs. It builds a bulky stick nest and lays 2–4 eggs.



Figure 12: Squacco heron (Picture: Ronja Krebs)

English common name: Squacco heron
Latin name: *Ardeola ralloides*

Description of the species: Over most of its range this species is the only *Ardeola*. Appears mainly brownish buff at rest.
Movement: Wintering and Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: SW & C Europe, NW Africa (Morocco), E to
region of Aral Sea and SE Iran; some N populations winter in
Mediterranean area and Middle East, but main wintering areas are in tropical sub-Saharan Africa.
Habitat: Wide variety of preferably freshwater wetland habitats, including swampy plains and river valleys.
Food and feeding: Mainly insect larvae (mayflies, dragonflies and flies) and some fish (*Scardinus*, *Cyprinus*, *Carassius).*
Breeding: Apr–Jul in Eurasia and N Africa; mainly during rains in Africa S of Sahara.



Figure 13: Black crowned cranes (Picture: Ronja Krebs)

English common name: Black crowned crane
Latin name: *Balearica pavonina*

Description of the species: Its name comes from its dark slaty-grey to black plumage with the crown of stiff, golden feathers atop the head. Distinctive white feathers are at the leading edge of the wing and a small pouch of red skin hangs under the chin. This is known as the gular sac, which is similar to a wattle, but can be inflated to enable the bird to emit a long sequence of low, booming calls. The legs and toes are black and the long hind toe enables the bird to grasp to perches. The bird has bare cheek patches that are white and reddish. There are two subspecies: in the West African (*Balearica pavonina pavonina*) the lower half of the cheek patch is red, whereas in the Sudanean (*Balearica pavonina ceciliae*) the red extends to the upper half of the cheek patch.
Movement: Resident
IUCN's Red List Category: Vulnerable
Distribution: sub-Saharan W Africa from Senegambia to L Chad, Sudan, South Sudan, Ethiopia, Eritrea and N Kenya, especially in basin of upper R Nile
Habitat: wetter habitats for foraging, only cranes that can nest in trees
Food and feeding: feeds on insects, including grasshoppers and flies; other invertebrates including molluscs, millipedes and crustaceans; fish
Breeding: Clutches of two to five eggs are laid after an incubation period of 28 to 31 days. Both parents chase away other birds that dare to enter the area. After hatching, the chicks forage with the parents and fledge after 60 to 100 days. The bird does not apparently breed until four years of age.



Figure 14: Hadeda ibis (Picture: Ronja Krebs)

English common name: Hadeda ibis
Latin name: *Bostrychia hagedash*

Description of the species: Grey-to-partly brown species of ibis. It has a narrow, white, roughly horizontal stripe across its cheeks. This is sometimes called the "moustache" though it does not reach the mouth corners. The plumage over the wings has an iridescent purple sheen. It has blackish legs and a large grey-to-black bill with a red stripe on the upper mandible. The upper surfaces of the toes are of a similar red.
The wings are powerful and broad, enabling quick take-offs and easy manoeuvring through dense tree cover.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Sub-Saharan Africa
Habitat: open grasslands, savanna and wetlands, as well as urban parks, green corridors and large gardens
Food and feeding: Earthworms, using its long scimitar-like bill to probe soft soil. It also eats larger insects, spiders and small lizards.
Breeding: The breeding season is lengthy, usually peaking during and after the main rains.



Figure 15: Wattled crane (Picture: Mathias Putze)

English common name: Wattled crane
Latin name: *Burgeranus carunculatus*

Description of the species: The Wattled crane is the largest in Africa. The back and wings are ashen. The feathered portion of the head is dark slate gray above the eyes and on the crown including the wattles, which are fully feathered and hang down from under the upper throat. The breast, primaries, secondaries and tail coverts are black. The secondaries are long and nearly reach the ground. The upper breast and neck are white all the way to the face. The skin in front of the eye extending to the base of the beak and tip of the wattles is red and bare of feathers and covered by small round wart-like bumps. Wattled cranes have long bills and black legs and toes.
Movement: Resident
IUCN's Red List Category: Vulnerable
Distribution: Occurs in sub-Saharan countries including an
isolated population in the highlands of Ethiopia.
Habitat: Inhabits inaccessible wetlands. Requires shallow marsh-like habitats with good sedge-based vegetation.
Food and feeding: Omnivorous. The principal food is mainly
aquatic, by eating the tubers and rhizomes of submerged sedges and water lilies. It is one of the more herbivorous of extant cranes. The diet consists of aquatic insects, snails, amphibians and snakes.
Breeding: The average clutch size of the species is the smallest of any of the world's cranes, with an average of

	1.6 eggs. Even if there are two eggs, usually only one chick successfully survives to hatch or fledge. The incubation period takes 33 to 36 days with both parents caring. The fledging period occurs at 100–150 days.
 Figure 16: Senegal thick-knee (Picture: Bruno D'Amici)	**English common name:** Senegal thick-knee **Latin name:** *Burhinus senegalensis* **Description of the species**: Senegal thick-knees are medium-large waders with strong black and yellow black bills and large yellow eyes, giving them a reptilian appearance. The scientific name refers to the prominent joints in the long yellow or greenish legs.The long dark bill, single black bar on the folded wing and darker cheek stripe are distinctions from the European species. **Movement:** Resident **IUCN's Red List Category**: Least Concern (LC) **Distribution**: It is a resident breeder in Africa between the sahara and the equator as well as in the Nile valley. **Habitat:** dry open habitats with some bare ground, preferably near water **Food and feeding**: insects, crustaceans and other invertebrates; also other small prey **Breeding**: It lays two blotchy light brown eggs on a ground scrape. It is most active at dawn and dusk.



Figure 17: Little stint (Picture: Bernhard Walter)

English common name: Little stint
Latin name: *Calidris minuta*

Description of the species: Its small size, fine dark bill, dark legs and quicker movements distinguish this species from all waders except the other dark-legged stints. It can be distinguished from these in all plumages by its combination of a fine bill tip, unwebbed toes and long primary projection. The breeding adult has an orange wash to the breast, a white throat and a strong white V on its back.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distribution: Breeds in the Arctic tundra from northern Norway to Siberia, heading south in the non-breeding season to India, Arabia and sub-Saharan Africa.
Habitat: Within southern Africa it is common in patches across the region, occurring in both coastal and inland wetlands such as intertidal mud and sand flats as well as temporary pans.
Food and feeding: small invertebrates picked off the mud
Breeding: This bird nests on a scrape in bare ground, laying 3–5 eggs. It is polygamous, male and female may incubate separate clutches.



Figure 18: African pied kingfisher (Picture: Bruno D'Amicis)

English common name: African pied kingfisher
Latin name: *Ceryle rudis*

Description of the species: *Ceryle rudis* is about 25 cm long with a white and black mask, a white supercilium and black breast bands. The crest is neat and the upperparts are barred in black. Males have a narrow second breast-band while females have a single broken breast band.
Distribution: sub-Saharan Africa and southern Asia from Turkey to India to China
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Habitat: any water body, as long as there are small fish, such as streams, rivers, lakes, temporary pans, estuaries, temporarily flooded areas and rocky coasts
Food and feeding: Fish, but also crustaceans and large aquatic insects such as dragonfly larvae; it usually hunts by hovering over the water to detect prey and diving vertically bill-first to capture fish.
Breeding: Several birds may nest in the same vicinity. The usual clutch is three to six white eggs. Sometimes reproduces cooperatively, with young non-breeding birds from an earlier brood assisting parents or even unrelated older birds.



Figure 19: Western marsh-harrier (Picture: Bruno D'Amicis)

English common name: Western marsh-harrier
Latin name: *Circus aeruginosus*

Description of the species: The Western marsh-harrier is a large, bulky harrier with fairly broad wings and a strong and peculiar sexual dichromatism. The male's plumage is mostly a cryptic reddish-brown with lighter yellowish streaks, which are particularly prominent on the breast. The head and shoulders are mostly pale greyish-yellowish.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distribution: This species has a wide breeding range from Europe and northwestern Africa to Central Asia and the northern parts of the Middle East. Most populations of the Western marsh-harrier are migratory or dispersive. Some birds winter in milder regions of southern and western Europe, while others migrate to the Sahel, Nile basin and Great Lakes region in Africa or to Arabia, the Indian subcontinent and Myanmar. The all-year resident subspecies *harterti* inhabits Morocco, Algeria and Tunisia.
Habitat: Strongly associated with wetland areas, especially those rich in common reed (*Phragmites australis*). It can also be met within a variety of other open habitats, such as farmland and grassland, particularly where these border marshland.
Food and feeding: It feeds on small mammals, small birds,
insects, reptiles and frogs.
Breeding: The ground nest is made of sticks, reeds and grasses. It is usually built in a reedbed, but the species will also nest in arable fields. There are between three and eight eggs in a normal clutch. The eggs are oval in shape and white in colour, with a bluish or greenish tinge when recently laid. The eggs are incubated for 31–38 days and the young birds fledge after 35–40 days.



Figure 20: Saddle-billed stork (Picture: Bruno D'Amicis)

English common name: Saddle-billed stork
Latin name: *Ephippiorhynchus senegalensis*

Description of the species: It is probably the tallest of the storks (though not the heaviest), due to its extremely long legs (tarsus length is up to 36.5 cm). The sexes can be readily distinguished by the golden yellow irises of the female and the brown irises and dangling yellow wattles of the male.It is spectacularly plumaged; both the female and male appear identical when perched, but the female shows much more white in the primaries in flight. The head, neck, back, wings and tail are iridescent black, with the rest of the body and the primary flight feathers being white. Juveniles are browner grey in plumage. The massive bill is red with a black band and a yellow frontal shield (the "saddle"). The legs and feet are black with pink hocks. On the chest is a bare red patch of skin, whose colour darkens during breeding season.

	Movement: Resident **IUCN's Red List Category**: Least Concern (LC) **Distribution**: sub-Saharan Africa from Sudan, Ethiopia and Kenya south to South Africa as well as Gambia, Senegal, Côte d'Ivoire and Chad in west Africa **Habitat**: Varied aquatic habitats, preferably large scale such as marshes and wet grassland. **Food and feeding**: Fish, frogs and crabs, but also on small birds and reptiles; they move in a deliberate and stately manner as they hunt, in a similar way to the larger herons. **Breeding**: The saddle-billed stork breeds in forested waterlands and other floodlands in tropical lowland laying one or two white eggs weighing about 146 g each. It does not form breeding colonies and is usually found alone or in pairs. The incubation period is 30–35 days, with another 70 – 100 days before the chicks fledge.
 Figure 21: Rueppell's vulture (Picture: Bruno D'Amicis)	**English common name:** Rueppell's vulture **Latin name:** *Gyps rueppellii* **Description of the species**: Both genders look alike: mottled brown or black overall with a whitish-brown underbelly and thin, dirty-white fluff covering the head and neck. The base of the neck has a white collar, the eye is yellow or amber, the crop patch deep brown. Feeding at a carcass, squealing is a great deal. **Movement**: Resident **IUCN's Red List Category**: Endangered **Distribution**: throughout the Sahel region of central Africa **Habitat:** grasslands, mountains and woodlands **Food and feeding**: They have an especially powerful build and, after the most attractive soft parts of a carcass have been consumed, they continue with the hide and even the bones, gorging themselves until they can barely fly. They have backward-pointing spikes on the tongue to help remove meat from bone. **Breeding**: Monogamous. Both parents share in incubation of their egg over a period of 55 days. Once the chick hatches, both parents will feed and tend to it for about 150 days when it fledges. Young remain dependent on their parents after fledging, not reaching independence until the next breeding season.



Figure 22: Woodland kingfisher (Picture: Mathias Putze)

English common name: Woodland kingfisher
Latin name: *Halcyon senegalensis*

Description of the species: The adult has a bright blue back, wing panel and tail. Its head, neck and underparts are white, shoulders are black. The flight of the woodland kingfisher is rapid and direct. The large bill has a red upper mandible and black lower mandible.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: tropical Africa south of the Sahara and from
Pretoria northwards; resident within 8° of the equator, but northern and southern populations are migratory, moving into the equatorial zone in the dry season.
Habitat: A variety of wooded habitats with some trees, especially Acacias, also around human habitation. Although it is a "kingfisher", it prefers drier habitats in more
traditional woodland and can be far from water. It is often solitary but can occur in small groups.
Food and feeding: It hunts from an exposed perch, often on a dead branch of a tree or perches quietly in semi-shade while seeking food.
Breeding: The nest is a tree hole excavated by a woodpecker or barbet. A single clutch of three round white eggs is typical. The young are cared for by both parents for up to five weeks after leaving the nest.



Figure 23: African fish-eagle (Picture: Mathias Putze)

English common name: African fish-eagle
Latin name: *Haliaeetus vocifer*

Description of the species: A large bird, with the female being larger than the male. This is typical sexual dimorphism in birds of prey. The adult is very distinctive in appearance with a mostly brown body with a white head like the bald eagle and large, powerful, black wings. The head, breast and tail of African fish eagles are snow white, with the exception of the featherless face being yellow. The hook-shaped beak, ideal for a carnivorous lifestyle, is yellow with a black tip.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Habitat: open water with sufficient prey and a good perch,
grassland, swamps, marshes, tropical rainforest, fynbos and
even desert-bordering coastlines, such as that of Namibia; absent from arid areas with little surface water
Food and feeding: Feeds mainly on fish, which it swoops down upon from a perch in a tree, snatching the prey from the water with its large, clawed talons. The eagle then flies back to its perch to eat its catch. Like other sea eagles, the African fish eagle has structures on its toes called spiricules that allow it to grasp fish and other slippery prey.
Breeding: Breeds during the dry season, when water levels are low. They are believed to mate for life. Pairs often maintain two or more nests, which they frequently reuse. Because nests are reused and built upon over the years, they can grow quite large. The female lays one to three eggs, which are primarily white with a few reddish speckles. Incubation is mostly done by the female, but the male incubates when the female leaves to hunt. Incubation lasts for 42 to 45 days before the chicks hatch. Siblicide does not normally occur in this taxon and the parents often successfully rear two or three chicks. Chicks fledge around
70 to 75 days old.



Figure 24: Black-winged stilt (Picture: Bruno D'Amicis)

English common name: Black-winged stilt
Latin name: *Himantopus himantopus*

Description of the species: They have long pink legs, a long thin black bill and are blackish above and white below, with a white head and neck with a varying amount of black. Males have a black back, often with greenish gloss.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distribution France and Iberia S to sub-Saharan Africa and
Madagascar, E to C Asia and NC China, Indian Subcontinent, Indochina and Taiwan; winters W & S USA
through Central America and West Indies to Colombia, N Venezuela, Galapagos, E Ecuador to SW Peru, NE Brazil, Paraguay to SE Brazil, S to SC Argentina, S to Africa, Middle East and S & SE Asia to Borneo and Philippines, S Sumatra and Java E to New Guinea, S to Australia, Tasmania and New Zealand, Philippines, Greater Sundas and Sulawesi and as far as Sri Lanka
Habitat: marshes, shallow lakes and ponds, ocean coasts
Food and feeding: These birds pick up their food from sand or water. They mainly eat insects and crustaceans.



Figure 25: Red-billed firefinch (Picture: Ronja Krebs)

English common name: Red-billed firefinch
Latin name: *Lagonosticta chalybaeus*

Description of the species: The adult male has entirely scarlet plumage apart from brown wings. The bill is pink and there is a yellow eye-ring. Females have uniformly brown upperparts and buff underparts. There is a small red patch in front of both eyes and the bill is pink.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: It is a resident breeding bird in most of Sub-Saharan Africa.
Habitat: open grassland and cultivation
Food and feeding: grain and other seeds
Breeding: Three to six white eggs are laid. The nest of this
species is parasitised by the village indigobird.



Figure 26: Greater blue-eared starling (Picture: Bruno D'Amicis)

English common name: Greater blue-eared starling
Latin name: *Lamprotornis chalybaeus*

Description of the species: Short tailed bird. Glossy blue-green with a purple-blue belly and blue ear patch. Its iris is bright yellow or orange. The sexes are similar, but the juvenile is duller and has blackish brown underparts.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: S Mauritania, Senegambia, S Mali, Burkina Faso, S Niger and N Nigeria E to S Sudan and N South Sudan; dry-season visitor to N Ivory Coast, Ghana, Togo and Benin,
Eritrea, Ethiopia, NW Somalia, N Uganda, E DRCongo and N
Kenya, probably also adjacent SE South Sudan, SW Uganda, S Kenya, Rwanda, Burundi, Tanzania, SE DRCongo, N & E
Zambia, Malawi and W Mozambique. S Angola and N Namibia E to N & E Botswana, S Zambia, Zimbabwe, NE South Africa and S Mozambique
Habitat: open woodland bird
Food and feeding: An omnivore, taking a wide range of invertebrates, seeds and berries, especially figs; mainly insects taken from the ground.
Breeding: The greater blue-eared starling nests in holes in trees, either natural or excavated by woodpeckers or barbets. It also nests inside the large stick nests of the sacred ibis or Abdim's stork. A nest includes three to five eggs, which are usually greenish-blue with brown or purple spots and hatch in 13–14 days. The chicks leave the nest roughly 23 days after hatching.



Figure 27: Common fiscal (Picture: Bruno D'Amicis)

English common name: Common fiscal
Latin name: *Lanius collaris*

Description of the species: A medium-large black-and-white shrike with long, thin, graduated tail. Male nominate race, having top and side of head to mantle and a black back.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Sub-Saharan Africa, absent from much of the
DRC, Somalia and Ethiopia; almost everywhere in South Africa, extending into much of Namibia, Zimbabwe and southern Botswana.
Habitat: Open habitats with scattered trees, such as savanna, open woodland, shrubland and grassland. It is also extremely common in man-made habitats such as gardens, parks, farmland and roadsides.
Food and feeding: mainly invertebrates (including crickets), fewer vertebrates; occasionally seeds
Breeding: monogamous; breeds mainly in rainy season when food is abundant



Figure 28: Woodchat shrike (Picture: Bernhard Walter)

English common name: Woodchat shrike
Latin name: *Lanius senator*

Description of the species: The male with black and white upper parts, a chestnut crown and pure white underparts. Females and young birds have brown and white and vermiculated upperparts. Underparts are buff and also vermiculated.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distribution: The breeding range is in southern Europe, northern Africa and the Middle East. The range extends from
Portugal to Greece, Turkey, Iraq and Iran as well as from Mauritania and Western Sahara in northern Africa to Libya. This bird overwinters in tropical central Africa, its winter range extending from Senegal to Sudan and Ethiopia in the east and southwards to Gabon.
Habitat: orchard trees, some bare or sandy ground
Food and feeding: Eats large insects, small birds and amphibians and hunts from prominent perches, impales corpses on thorns or barbed wire as a "larder" .
Breeding: lays early May to end Jun in C Europe; from Apr in N Africa and from Mar in Israel



Figure 29: Marabou stork (Picture: Bruno D'Amicis)

English common name: Marabou stork
Latin name: *Leptoptilos crumeniferus*

Description of the species: The marabou is unmistakable due to its size, bare head and neck, black back and white underparts. It has a huge bill, a pink gular sac at its throat (*crumenifer(us)* means "carrier of a pouch for money"), a neck ruff and black legs and wings. The sexes are alike, but the young bird is browner and has a smaller bill. Full maturity is not reached for up to four years.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: sub-Saharan africa
Habitat: both wet and arid habitats, often near human habitation, especially landfill sites
Food and feeding: Scavenger, naked head and neck are adaptations to this livelihood. In both cases, a feathered head would become rapidly clotted with blood and other substances when the bird's head was inside a large corpse and the bare head is easier to keep clean. It occasionally eats other birds including *quelea* nestlings, pigeons, doves, pelican and cormorant chicks and even flamingos. During the breeding season common prey may consist of fish, frogs, insects, eggs, small mammals and reptiles such as crocodile hatchlings and eggs, lizards and snakes.
Breeding: Breeds in colonies, starting during the dry season.
The female lays two to three eggs in a small nest made of
sticks; eggs hatch after an incubation period of 30 days. Their young reach sexual maturity at 4 years. Lifespan is 41 years in captivity and 25 years in wild.



Figure 30: Double-toothed barbet (Picture: Bruno D'Amicis)

English common name: Double-toothed barbet
Latin name: *Lybius bidentatus*

Description of the species: Large, white-billed red and black barbet. Male nominate race glossy black above, with small white patch on lower back and a narrow red wingbar.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Guinea-Bissau, Guinea, Sierra Leone and Liberia E to C Cameroon; E Cameroon E to C Ethiopia, S to NW Angola, N DRCongo, Burundi and NW Tanzania
Habitat: forest understorey, particularly at edges and around clearings; also secondary forest, streamside.
Food and feeding: Eats fruits and arthropods: avocados, figs, fruits of *Musanga*, papayas, red peppers, palm nuts, ants, beetles and hemiptera.
Breeding: Season long, perhaps all year in many areas; more often Nov–May in W Africa, also Apr–Nov in Cameroon,

	Gabon, Ethiopia



Figure 31: Giant kingfisher (Picture: Bruno D'Amicis)

English common name: Giant kingfisher
Latin name: *Megaceryle maxima*

Description of the species: The giant kingfisher has a large shaggy crest, a large black bill and fine white spots on black upperparts. The male has a chestnut breast band and otherwise white underparts with dark flank barring. The female has a white-spotted black breast band and a chestnut belly.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: over most of the continent south of the Sahara
Desert other than the arid southwest
Habitat: large perennial rivers, dams and lakes with plenty of marginal woody growth
Food and feeding: This large species feeds on crabs, fish, and frogs, caught by diving from a perch.
Breeding: In South Africa breeding takes place between September and January, in Zimbabwe from August to March, in Zambia March to April and in Liberia December to January. It is monogamous and a solitary breeder. The nest is a long horizontal tunnel that is excavated into a river bank by both sexes using their feet and bills. The entrance hole is 11 cm high and 15 cm wide. The tunnel is typically 2 m in length but a tunnel of 8.5 m has been recorded. A clutch of around three eggs is laid in a chamber at the end of the tunnel.



Figure 32: Northern carmine bee-eater (Picture: Mathias Putze)

English common name: Northern carmine bee-eater
Latin name: *Merops nubicus*

Description of the species: Richly colored, slender bird, predominantly carmine in color, except for a greenish blue head and throat and distinctive black mask. This species has red eyes, a black, pointed, decurved beak and elongated central tail feathers.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: throughout Africa
Habitat: flooded grasslands and savannas, montane grasslands and shrublands, tropical and subtropical dry broadleaf forests
Food and feeding: Their diet is made up primarily of bees and other flying insects, such as flying ants, grasshoppers and locusts. The main hunting strategy of bee-eaters is to watch out for flying insects from a perch and then snatch them out of the air using their beaks, before returning to the perch.
Breeding: They nest in large colonies in cliffs, usually near
river banks, where they use their bills to dig long horizontal
nesting tunnels, often eight feet or more in length. Three

	to five eggs are laid per clutch**.**
 Figure 33: Little bee-eater (Picture: Mathias Putze)	**English common name:** Little bee-eater **Latin name:** *Merops pusillus* **Description of the species**: This species, like other bee-eaters, is a rich and brightly coloured slender bird. It has green upper parts, a yellow throat, black gorget and rich brown upper breast fading to buffish ocre on the belly. The wings are green and brown, the beak is black. It reaches a length of 15–17 cm, which makes it the smallest African bee-eater. Sexes are alike. **Movement:** Resident **IUCN's Red List Category:** Least Concern (LC) **Distribution:** It is resident in much of Sub-Saharan Africa. **Habitat**: Open country with bushes, preferably near water. **Food and feeding:** Eats insects, especially bees, wasps and hornets, which are caught in the air by sorties from an open perch. **Breeding:** Unlike most bee-eaters, these are solitary nesters, making a tunnel in sandy banks or sometimes in the entrance to an Aardvark den. They lay 4 to 6 spherical white eggs. Both the male and the female take care of the eggs.
 Figure 34: Lesser jacana (Picture: Bernhard Walter)	**English common name:** Lesser jacana **Latin name:** *Microparra capensis* **Description of the species**: Lesser jacana is much smaller than other jacanas. The frontal shield is very small or lacking. Extended wings are dark with conspicuous white trailing edges. **Movement:** Vagrant **UCN's Red List Category:** Least Concern (LC) **Distribution:** Occurs discontinuously in sub-Saharan Africa, including patches of the area from Senegal to Ethiopia. However, it is especially widespread from Uganda, Tanzania, Zambia and Angola to southern Africa. Within southern Africa it is uncommon to locally common in eastern KwaZulu-Natal, small parts of Mozambique and Zimbabwe, while it is most common in northern Botswana and the Caprivi Strip (Namibia). **Habitat:** It generally prefers shallow, freshwater wetlands and backwaters of lakes and dams, especially with emergent grasses. **Food and feeding:** Primarily insects; also reported to take bits of aquatic vegetation on occasion. Insects are gleaned from the substrate and from emergent vegetation.

	Breeding: Monogamous, solitary nester. Egg-laying season is from February-November, peaking from March-April. It lays 2-5 eggs, which are incubated by both sexes for approximately 21 days. When threatened they dive underwater, with just the bill tip protruding so that they can breathe. The parents intermittently brood them for the first month by holding them between wings and body.
 Figure 35: Black kite (Picture: Bruno D'Amicis)	**English common name:** Black kite **Latin name:** *Milvus migrans* **Description of the species**: Male 630–928 g, female 750–1080 g; wingspan 120–153 cm. Mostly reddish brown, tail brown and only slightly forked. **Movement:** Resident **IUCN's Red List Category:** Least Concern (LC) **Distribution:** The species is found in Europe, Asia, Africa and Australia. The temperate populations of this kite tend to be migratory while the tropical ones are resident. **Habitat:** Ubiquitous, occurring from semi desert, grassland and savanna to woodland but avoiding dense forest. **Food and feeding:** Black kites are most often seen gliding and soaring on thermals as they search for food. The flight is buoyant and the bird glides with ease, changing directions easily. They swoop down with their legs lowered to snatch small live prey, fish, household refuse and carrion. **Breeding:** Both the male and female take part in nest building, incubation and care of chicks. The typical clutch size is 2 or sometimes 3 eggs. The incubation period varies from 30–34 days.
 Figure 36: African pied wagtail (Picture: Ronja Krebs)	**English common name:** African pied wagtail **Latin name:** *Motacilla aguimp* **Description of the species**: A striking black and white wagtail with black upperparts contrasting with white underparts, a white supercilium and a white patch in the folded wing. Juvenile birds are greyer, while birds of the nominate subspecies show grey flanks. They are 20 cm long. **Movement:** Resident **IUCN's Red List Category:** Least Concern (LC) **Distribution:** Found in sub-Saharan Africa from the Eastern Cape north to extreme southern Egypt and from Guinea to western Eritrea and Somalia. It is a vagrant to Burkina Faso, Gambia, Mauritania and the Western Cape.

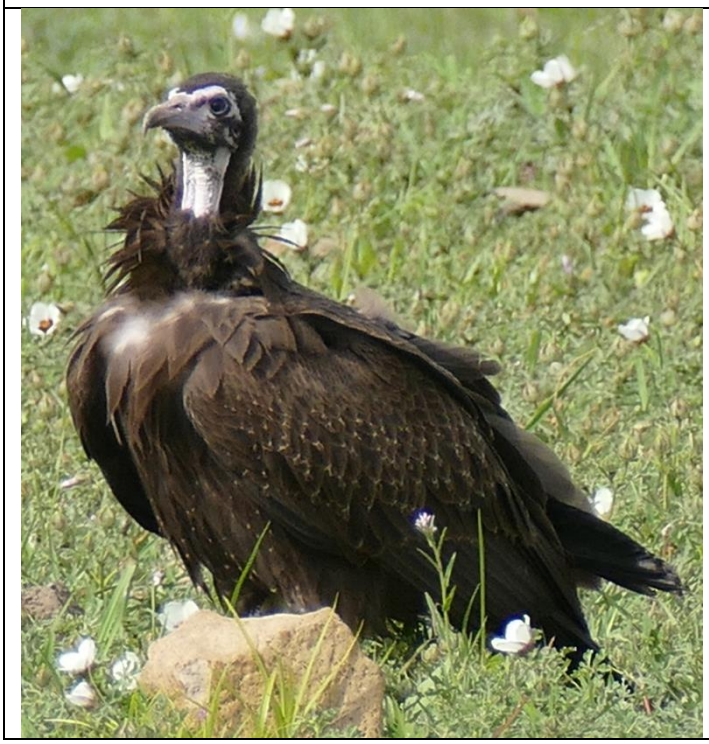
	Habitat: The African pied wagtail inhabits subtropical or tropical seasonally wet or flooded lowland grassland, rivers, and, sometimes, freshwater marshes. In some areas it is commensal with humans in towns and villages. **Food and feeding:** variety of small terrestrial and aquatic invertebrates, mainly insects **Breeding:** Both the males and females participate in nest building and feeding, but only the female incubates. The mean clutch in Malawi was found to be 3.9 eggs. The African pied wagtail is monogamous.
 Figure 37: Yellow wagtail (Picture: Ronja Krebs)	**English common name:** Yellow wagtail **Latin name:** *Motacilla flava* **Description of the species**: It is a slender 15–16 cm long bird, with the characteristic long, constantly wagging tail of its genus. The breeding adult male is basically olive above and yellow below. In other plumages, the yellow may be diluted by white. The heads of breeding males come in a variety of colours and patterns depending on subspecies. **Movement:** Wintering **IUCN's Red List Category:** Least Concern (LC) **Distribution:** This species breeds in much of temperate Europe and Asia. It is resident in the milder parts of its range, such as western Europe, but northern and eastern populations migrate to Africa and south Asia. **Habitat:** variety of damp or wet habitats with low vegetation, from meadows, marshes and waterside pastures **Food and feeding:** terrestrial and aquatic invertebrates; also some plant material, especially seeds **Breeding:** Apr–Aug, varying with latitude; 1–2 broods; monogamous; solitary, territorial breeder



Figure 38: Yellow-billed stork (Picture: Mathias Putze)

English common name: Yellow-billed stork
Latin name: *Mycteria ibis*

Description of the species: It is a medium-sized stork standing 90–105 cm tall. The body is white with a short black tail that is glossed green and purple when freshly moulted. The bill is deep yellow, slightly decurved at the end and has a rounder cross-section than in other stork species outside the *Mycteria*. Feathers extend onto the head and neck just behind the eyes, with the face and forehead being covered by deep red skin. Both sexes are similar in appearance, but the male is larger and has a slightly longer heavier bill.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: The yellow-billed stork occurs primarily in Eastern Africa, but is widely distributed in areas extending from Senegal and Somalia down to South Africa and in some regions of western Madagascar.
Habitat: Its preferred habitats include wetlands, shallow lakes and mudflats. It avoids flooded regions and deep expansive bodies of water because feeding conditions there are unsuitable for their typical grope and stir feeding techniques.
Food and feeding: Their diet comprises mainly small, freshwater fish. They also feed on crustaceans, worms, aquatic insects, frogs and occasionally small mammals and birds.
Breeding: The male and female build the nest together either in high trees on dry land away from predators or in small trees over water.



English common name: Hooded vulture
Latin name: *Necrosyrtes monachus*

Description of the species: Head usually white, but flushes red when agitated and a greyish "hood". It has fairly uniform dark brown body plumage and broad wings for soaring and short tail feathers. It is a small species compared to most vultures. Female are also often seen to have longer eyelashes than the males.
Movement: Resident
IUCN's Red List Category: Endangered
Distribution: sub-Saharan Africa from S Mauritania and Senegal E through Niger and Chad to W Sudan, South Sudan
and N Uganda, E Sudan, Eritrea, Ethiopia and W Somalia to N Namibia and Botswana, Zimbabwe, Mozambique and NE South Africa
Habitat: Mainly open woodland and savanna, also forest edge; generally absent from desert and dense forest.
Food and feeding: Scavenger, feeding mostly from carcasses of dead animals and waste which it finds by soaring over savannah and around human habitation, including waste tips and abattoirs.

Figure 39: Hooded vulture (Picture: Ronja Krebs)	**Breeding:** monogamous



Figure 40: African pygmy goose (Picture: Mathias Putze)

English common name: African pygmy goose
Latin name: *Nettapus auritus*

Description of the species: African pygmy gooses have a short bill which extends up the forehead so they superficially resemble geese.The males have a white face with black eye patches. The upper half of the fore neck is white and forms an open collar around the neck whereas the base of the neck and breast are light chestnut colored. The bill is yellow with a black tip and the feet are dark-gray to black.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Nomadic; can be found across a wide area of
sub-Saharan Africa and Madagascar
Habitat: slow flowing or stagnant water with a cover of water lilies (mostly inland wetlands, but also open swamps, farm dens, river pools, and estuaries)
Food and feeding: seeds of water lilies (*Nymphaea*), seeds and green parts of other aquatic plants
Breeding: season varies with locality, but probably triggered by local rains



Figure 41: Namaqua dove (Picture: Ronja Krebs)

English common name: Namaqua dove
Latin name: *Oena capensis*

Description of the species: The Namaqua dove is a tiny sparrow-sized pigeon. It has a very long black tapered tail and the size and shape have led to comparison with the budgerigar. The plumage is mostly grey apart from a white belly and chestnut primary feathers which are visible in flight.The adult male has a yellow and red beak and a black face, throat and breast. The adult female lacks the black and has a red-based grey bill.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: The dove is a widespread resident breeding bird in Sub-Saharan Africa and Madagascar with its range extending into the Arabian Peninsula southern Israel, Jordan and as far north as Turkey.
Habitat: It is found in near desert with acacia and bushes.
Food and feeding: The food is almost exclusively minute
seeds such as those of grasses, sedges and weeds.
Breeding: It builds a stick nest in a bush and lays two white
eggs, which are incubated for 16 days in typical pigeon fashion: the female at night and early morning and the male from mid morning till late afternoon.



Figure 42: Isabelline wheatear (Picture: Bernhard Walter)

English common name: Isabelline wheatear
Latin name: *Oenanthe isabellina*

Description of the species: The lower back of this bird is isabelline, a pale grey-yellow, fawn, cream-brown or parchment colour. The axillaries and underwing coverts are white. The tail feathers are brownish-black with a narrow edge and tip of buff and a large white base. There is an over-eye streak of creamy white and the ear-coverts are pale brown. The chin is pale cream and the throat pale buff. The wing feathers are brownish-black, tipped and edged with creamy buff. The beak, legs and feet are black and the irises are brown. Sexes are alike.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: It extends from Southern Russia, the Caspian region, the Kyzyl Kum Desert and Mongolia to Afghanistan, Iran, Iraq, Saudi Arabia, Syria, Jordan and Israel. It winters in Africa and northwestern India and occurred as a summer vagrant to Greece, Cyprus, Algeria and Tunisia.
Habitat: Arid, open, sparsely vegetated country, including dry plains, mountain and lowland steppes.
Food and feeding: Invertebrates and vegetable matter; mainly insects 2–40 mm in length, particularly beetles and ants.
Breeding: The nest is bulky, four to six pale blue eggs are
laid.Both parents feed the chicks with small caterpillars and
other insects. After they leave the nest, the chicks continue to be fed for about two weeks but after this the parents drive them out of the territory.



Figure 43: Northern wheatear (Picture: Mathias Putze)

English common name: Nothern wheatear
Latin name: *Oenanthe oenanthe*

Description of the species: The plumage of the summer male has grey upperparts, buff throat, black wings and face mask. In autumn it resembles the female apart from the black wings. The female is pale brown above and buff below with darker brown wings.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distribution: Europe and Asia with footholds in northeastern Canada and Greenland as well as in northwestern Canada and Alaska. It nests in rock crevices and rabbit burrows. All birds spend most of their winter in Africa.
Habitat: Short turf such as moors, cliff-tops, tundra and rocky fields. It uses a variety of open habitats whilst migrating, including cultivated areas and deserts as well as human settlements.
Food and feeding: insectivorous
Breeding: The nest is built entirely by the female while the

	male perches nearby, sings and sometimes performs song- flights. The nest is placed in a cavity such as a rabbit burrow, a crevice among rocks or in a made-made object such as a wall or pipe. The female lays eggs at daily intervals. The eggs hatch after approximately 13 days. The chicks are fed by both parents and are brooded by the female for the first five or six days.



Figure 44: Pied wheatear (Picture: Bernhard Walter)

English common name: Pied wheatear
Latin name: *Oenanthe pleschanka*

Description of the species: The crown, nape and neck of the adult male pied wheatear are pale brown, the feathers having pale tips and white bases. The back, rump and upper tail-coverts are creamy-white. The central pair of tail feather is black with white bases but the rest are white with black tips, the outer pair having rather more black than the rest.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distribution: The pied wheatear is native to Southeast Europe and Western Asia. The breeding range extends from Romania and Bulgaria to Siberia, Altai and Mongolia and southwards to the Caucasus, Transcaspia, Turkestan, Iran and Afghanistan. It occurs at altitudes of up to 2,000 metres in the Altai and up to 3,000 metres in the Tien Shan. It migrates to Northeast Africa, passing through Southwest Asia on the way.
Habitat: In the breeding season it is found in rough open country, steppes with scant vegetation, stony slopes and hilly country. In its winter quarters it is found in similar locations with rock, scree and on plains with thorny scrub. It sometimes visits grassy areas and gardens.
Food and feeding: The pied wheatear primarily eats insects and seeds.
Breeding: The nest is made in holes in a riverbank, under
stones and rocks and in crevices. Four to six greenish-blue eggs with rust-coloured spots on the larger end are laid from early May onwards.



Figure 45: Slender-billed starling (Picture: Bruno D'Amicis)

English common name: Slender-billed starling
Latin name: *Onychognathus tenuiostris*

Description of the species: Dark starling with rufous in wing and a long sharply graduated tail. Male has crown, nape and chin black with greenish gloss.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: SC Eritrea S to C & S Ethiopia; E DRCongo, SW
Uganda, Rwanda and Burundi; Mt Elgon (Uganda–Kenya
border) and W & C Kenya; NE, C & S Tanzania (Eastern Arc
Mts); NE Zambia and N Malawi (Nyika Plateau)
Habitat: Inhabits montane forest from 1500 m to 3000 m,
ranging up into alpine moorland zone.
Food and feeding: diet primarily fruit; also nectar and some invertebrates
Breeding: Season Dec–Jan in Ethiopia, Dec in Ruwenzori
region of SW Uganda, Jan–Mar and Aug–Dec in Kenya

	and Tanzania



Figure 46: Ethiopian (dark-headed) oriole (Picture: Bruno D'Amicis)

English common name: Ethiopian (dark-headed) oriole
Latin name: *Oriolus monacha*

Description of the species: Nominate race has head, neck and upper breast glossy black, hindneck and upper mantle bright yellow, rest of mantle and back olive-yellow.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: It is found in north-eastern Africa where its natural habitat is subtropical or tropical dry forests.
Habitat: damp highland forests, mostly between 950 m and
2000 m, e.g. gallery woodland, evergreen forests
Food and feeding: berries, fruits, e.g. figs; also invertebrates, e.g. mantids, caterpillars; forages alone or in pairs
Breeding: Nest-building in Aug in Eritrea, and young out of
nest being fed with berries in Jun in Ethiopia. Nest built by
female, made out of grasses.



Figure 47: Great white pelican (Picture: Bruno D'Amicis)

English common name: Great white pelican
Latin name: *Pelecanus onocrotalus*

Description of the species: The male has a downward bend in the neck and the female has a shorter, straighter beak. The plumage is predominantly white except on remiges, with a faint pink tinge on the neck and a yellowish base on the foreneck. The primary feathers are black, with white shafts at the bases, occasionally with paler tips and narrow fringes. Its face is naked and the feathering on its forehead tapers to a fine point, whereas other species are completely feathered.
Movement: Wintering and Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: It breeds from southeastern Europe through
Asia and Africa, in swamps and shallow lakes. The breeding range of the great white pelican extends to Ethiopia, Tanzania, Chad, northern Cameroons and Nigeria in Africa and has been observed or reported breeding in Zambia, Botswana and South Africa. Migratory populations are found from Eastern Europe to Kazakhstan during the breeding season.
Habitat: Great white pelicans usually prefer shallow,

	(seasonally or tropical) warm fresh water. **Food and feeding:** It mainly eats fish. They eat chicks of other birds. It leaves its roost to feed early in the morning and may fly over 100 km in search of food. They also rob other birds of their prey. During periods of starvation, they also eat seagulls and ducklings. **Breeding:** The breeding season commences in April or May in temperate zones but is essentially all year around in Africa. The female can lay 1 to 4 eggs in a clutch, with two being the average. Incubation takes 29 to 36 days. The chicks are naked when they hatch but quickly sprout blackish-brown down. The young are cared for by both parents. The colony gathers in "pods" around 20 to 25 days after the eggs hatch. The young fledge at 65 to 75 days of age.
 Figure 48: Pink-backed pelican (Picture: Bernhard Walter)	**English common name:** Pink-backed pelican **Latin name:** *Pelecanus rufescens* **Description of the species**: It is a relatively small pelican, still by no means a small bird. The bill is 30 to 38 cm in length. The plumage is grey and white, with a pinkish hue on the back occasionally apparent (never the deep pink of a flamingo). The top of the bill is yellow and the pouch is usually greyish. Breeding adults have long feather plumes on the head. **Movement:** Resident **IUCN's Red List Category:** Least Concern (LC) **Distribution:** It is a resident breeder in the swamps and shallow lakes of Africa, southern Arabia, southern India and is apparently extirpated in Madagascar. **Habitat:** Found in a range of aquatic habitats, but prefers quiet backwaters with shallow water, avoiding steep, vegetated lake banks. It prefers freshwater lakes, swamps, large slow-flowing rivers and seasonal pools but also frequents reservoirs, seasonally flooded land and flood-plains near river mouths. It may occur on alkaline and saline lakes and lagoons and can sometimes be found along the coast in bays and estuaries (although seldom on open seashores). The species tends to roost and breed in trees (e.g. mangroves), but will also roost on sandy islands, cliffs, coral reefs and sand-dunes. **Food and feeding:** Food is usually fish (of any size up to 450 g, usually in the 80-290 g range) as well as amphibians and is usually obtained by fishing in groups. Among the fish preyed upon are cichlids like *Haplochromis* and *Tilapia*. **Breeding:** Its nest is a large heap of sticks and may be 10–50 m above the ground. The female lays two to three large white eggs and later the chicks feed by plunging their heads deep into the adult's pouch and taking the partially digested regurgitated fish.



Figure 49: Great cormorant (Picture: Bernhard Walter)

English common name: Great cormorant
Latin name: *Phalacrocorax carbo*

Description: The great cormorant is a large black bird, but there is a wide variation in size in the species wide range. Males are typically larger and heavier than females. They are tied as the second largest extant species of cormorant after the flightless cormorant. It has a longish tail and yellow throat-patch. Adults have white patches on the thighs and on the throat in the breeding season. Great cormorants are mostly silent, but they make various guttural noises at their breeding colonies.
Movement: Wintering and Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: This is a very common and widespread bird species. Northern birds migrate south and winter along any coast that is well-supplied with fish. It is found mainly in Atlantic waters and nearby inland areas: on western European coasts and south to North Africa, the Faroe Islands, Iceland and Greenland; and on the eastern seaboard of North America, though in America it breeds only in the north of its range, in the Canadian maritime provinces. **Habitat:** The most widespread cormorant species, ranging from Arctic to tropics. Frequents open waters.
Food and feeding: It feeds on the sea, in estuaries and on
freshwater lakes and rivers. Northern birds migrate south and winter along any coast that is well-supplied with fish caught through diving.
Breeding: This cormorant lays a clutch of three to five eggs that measure 63 by 41 millimetres on average. The eggs are of pale blue or green and sometimes have a white chalky layer covering them. These eggs are incubated for a period of about 28 to 31 days.



Figure 50: Black-billed wood-hoopoe (Picture: Mathias Putze)

English common name: Black-billed wood-hoopoe
Latin name: *Phoeniculus somaliensis*

Description of the species: The black-billed wood hoopoe is very similar to the green wood hoopoe (*Phoeniculus purpureus*) in appearance, but lacks the greenish gloss on head and mantle and has a black beak rather than a red one, though there is sometimes a reddish tinge at the base of the beak. The sexes are similar and the adult bird is about 37 cm long. The plumage is generally black with a bluish or purplish gloss and a row of white spots on the flight feathers giving a white bar on the wings in flight. The long, graduated tail has white spots at the edge.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: It is found in eastern Africa, its range including
Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and South
Sudan at altitudes of up to about 2,000 m.
Habitat: It is a bird of woodland, scrubby areas, forest edges and gallery forests and among large trees such as *Acacias* growing in wadis.
Food and feeding: Feeds on arthropods, millipedes, beetles and other invertebrates, foraging on trunks and branches by creeping along the bark, sometimes upside-down, and probing into crevices. It breeds in holes in trees.



Figure 51: African spoonbill (Picture: Bruno D'Amicis)

English common name: African spoonbill
Latin name: *Platalea alba*

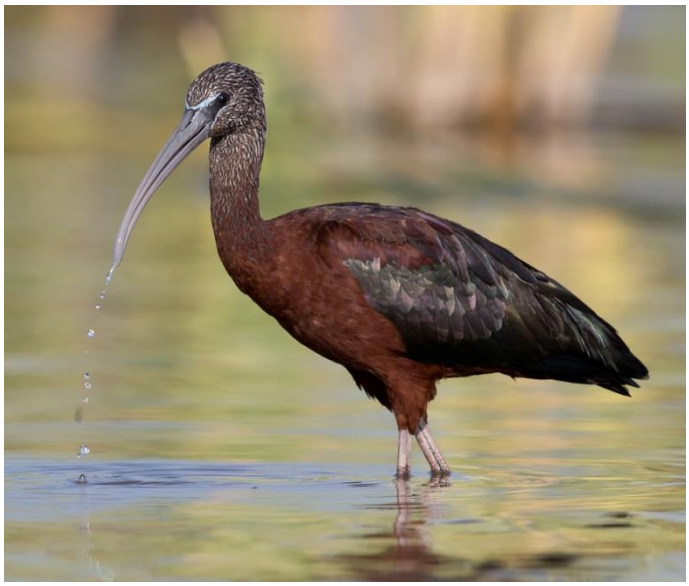
Description of the species: Long legs and thin, pointed toes enable it to walk easily through varying depths of water.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: across Africa and Madagascar; Botswana, Kenya, Mozambique, Namibia, South Africa, Zimbabwe
Habitat: Generally preferring the margins of rivers or lakes,
pans, marshes, flood plains, sewage works, dams, coastal
estuaries and lagoons; it mainly breeds in swamps with stands of sedges (*Juncus*) and reeds (*Phragmites*).
Food and feeding: Mainly eats small fish and aquatic invertebrates, foraging by wading through the water while
sweeping its bill from side to side, snapping prey up instinctively when its bill makes contact. The spoon shape makes it easier to grab slippery prey.
Breeding: Begins breeding in the winter, which lasts until
spring.The nest, generally located in trees above water, is built from sticks and reeds and lined with leaves. Three to five eggs are laid by the female birds, usually during the months of April or May. The eggs are incubated by both parents for up to 29 days and upon hatching the young birds are cared for by both parents for around 20 to 30 days.



Figure 52: Brown-throated wattle-eye (Picture: Bruno D'Amicis)

English common name: Brown-throated wattle-eye
Latin name: *Platysteira cyanea*

Description of the species: The adult brown-throated wattle-eye is a stout bird about 14 cm long. The breeding male has glossy black upperparts and white underparts with a neat black breast band. There is a strong white wingbar and fleshy red wattles above the eye. The females are grey-black above and also have the white wing bar and red wattles.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Senegal E to W Central African Republic, S to
NW Angola and NW DRCongo (S approximately to R Congo),
W Ethiopia and E South Sudan
Habitat: Found in secondary forest and other woodland areas, including gardens.
Food and feeding: Arthropods. Many orders of insects recorded, lepidopterans, hymenopterans, termites (Isoptera), orthopterans, flies (Diptera), bugs.
Breeding: The eggs are laid in a small neat lichen and cobweb cup low in a tree or bush. Seems to nest nearly

	year round in equatorial areas; adults feeding young and fledglings in Jan, Mar and Jul–Aug.
 Figure 53: Glossy ibis (Picture: Mathias Putze)	**English common name:** Glossy ibis **Latin name:** *Plegadis falcinellus* **Description of the species**: Breeding adults have reddish-brown bodies and shiny bottle-green wings. Non-breeders and juveniles have duller bodies. This species has a brownish bill, dark facial skin bordered above and below in blue-gray (non-breeding) to cobalt blue (breeding) and red-brown legs. **Movement**: Wintering and Resident **IUCN's Red List Category**: Least Concern (LC) **Distribution:** This is the most widespread ibis species, breeding in scattered sites in warm regions of Europe, Asia, Africa, Australia and the Atlantic and Caribbean regions of the Americas. **Habitat:** They prefer marshes at the margins of lakes and rivers but can also be found at lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, paddies and irrigated farmland. It is less commonly found in coastal locations such as estuaries, deltas, salt marshes and coastal lagoons. Preferred roosting sites are normally in large trees which may be distant from the feeding areas. **Food and feeding:** Prey includes adult and larval insects and occasionally fish, amphibians, lizards, small snakes and nestling birds. **Breeding:** The nest is usually a platform of twigs and vegetation positioned at least 1 m above water, sometimes up to 7 m tall, dense stands of emergent vegetation, low trees or bushes.
 Figure 54: Baglafecht weaver (Picture: Bruno D'Amicis)	**English common name:** Baglafecht weaver **Latin name**: *Ploceus baglafecht* **Description of the species**: The adult male baglafecht weaver has a distinctive black mask which extends from the bill through the eye and onto the ear coverts contrasting with the bright yellow forehead, forecrown and throat. The upperparts are yellowish green with dark centres to the feathers creating a faint streaking. The underparts are bright yellow on the breast fading to white towards the vent. The tail is yellow washed dark brown. The bill is black and the eye is pale yellow.The female baglafecht weaver lacks a mask but has dusky lores with yellowish-green cap, concolorous with the upperparts. Juveniles and immature birds do not have a mask on the dark-yellowish green head. **Movement**: Resident **IUCN's Red List Category**: Least Concern (LC)

	Distribution: It is found in Burundi, Cameroon, Central African Republic, DRC, Eritrea, Ethiopia, Kenya, Malawi, Nigeria, Rwanda, South Sudan, Tanzania, Uganda and Zambia. **Habitat**: It is found on forest edges, woodlands, gardens and towns. **Food and feeding:** Mainly insectivorous; fruit, seeds and nectar also taken. Food brought to nest spiders (Araneae), moth larvae (Lepidoptera) and crickets.



Figure 55: Village weaver (Picture: Ronja Krebs)

English common name: Village weaver
Latin name: *Ploceus cucullatus*

Description of the species: The village weaver is a stocky 15–17 cm bird with a strong conical bill and dark reddish eyes. In the northern part of its range, the breeding male has a black head edged by chestnut. Towards the southern part of its range, the amount of black and chestnut diminish and the breeding males of the southernmost subspecies only have a black face and throat, while the nape and crown are yellow. The adult female has streaked olive upperparts, yellow and black wings and pale yellow underparts. Young birds are like the female but browner on the back.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Found in much of sub-Saharan Africa. It has also been introduced to Hispaniola, Mauritius and Réunion.
Habitat: Open or semi-open habitats, including woodlands and human habitation and frequently forms large noisy colonies in towns, villages and hotel grounds**.**
Food and feeding: Village weavers feed principally on seeds
and grain and can be a crop pest, but it will readily take insects, especially when feeding young, which partially redresses the damage to agriculture.
Breeding: This weaver builds a large coarsely woven nest made of grass and leaf strips with a downward facing entrance which is suspended from a branch in a tree. 2-3 eggs are laid. It is a colonial breeder, hence many nests may hang from one tree.



Figure 56: Yellow-fronted parrot (Picture: Bruno D'Amicis)

English common name: Yellow-fronted parrot
Latin name: *Poicephalus flavifrons*

Description of the species: The yellow-fronted parrot is mostly green with the upper parts being a darker green, the tail being olive-brown and the legs are a dark grey-brown. The face is orange-yellow.The upper beak is brownish-grey and the lower beak is bone coloured. Male and female adults have identical external appearance.
Movement: Resident (Endemic)
IUCN's Red List Category: Least Concern (LC)
Distribution: This parrot is endemic to the Ethiopian Highlands at about 1,000–3,000 metres above sea level. When two subspecies are recognized, the nominate is found in the highlands around Lake Tana and also in central Ethiopia and *P. f. suahelicus* is found in southwestern Ethiopia.
Habitat: *Ficus-Acacia* riverine forest
Food and feeding: Poorly recorded, but presumably observed feeding on ripe fruits of *Dovyalis abyssinica.*
Breeding: Largely unknown breeding habits, but it is suspected that nest usually in tree cavities.The time of incubation is of 28 days. Birds fly off the nest after 80 days after the hatching.

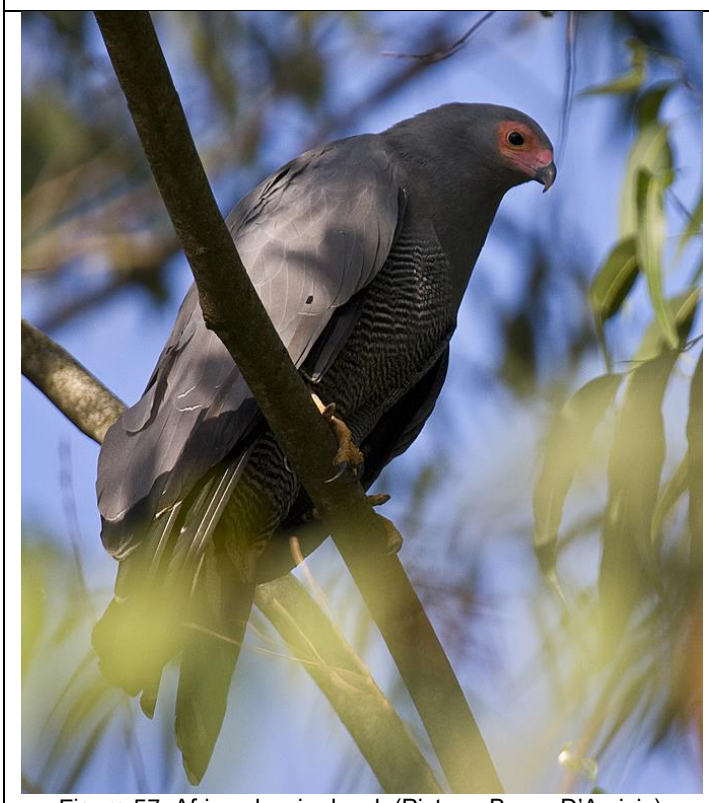


Figure 57: African harrier hawk (Picture: Bruno D'Amicis)

English common name: African harrier hawk
Latin name: *Polyboroides typus*

Description of the species: It is a medium-sized raptor. The upperparts, head and breast are pale grey. The belly is white with fine dark barring. The broad wings are pale grey with a black trailing edge fringed with a narrow white line. The tail is black with a single broad white band. There is a bare facial patch of variable colour, usually red or yellow.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Occurs across much of sub-Saharan Africa; in
southern Africa it is locally common in Zimbabwe, Mozambique, northern and eastern Botswana, northern Namibia and eastern and southern South Africa.
Habitat: All forms of forest, from moist woodlands to savanna and arid steppe including Ethiopian highlands.
Food and feeding: Mainly small animals such as birds, their
eggs and nestlings, bats, squirrels, lizards, various arthropods and insect larvae.
Breeding: Usually monogamous. Egg-laying season is from
August-December, peaking from September-November. It lays 1-3 eggs which are mainly incubated by the

	female for about 35-36 days, while the male provides food to her at the nest. The chicks are fed by the male and brooded constantly by the female for the first week of their lives, after which she remains near the nest to protect them. The older chick sometimes kills its younger sibling, even if it is fully fed and supervised by an adult. The young leave the nest at about 45-55 days old, remaining partially dependent on their parents for at least another 10 days.
 Figure 58: Hamerkop (Picture: Bruno D'Amicis)	**English common name**: Hamerkop **Latin name**: *Scopus umbretta* **Description of the species**: A medium-sized waterbird, standing 56 cm high and weighing 470 g. Its plumage is a drab brown with purple iridescence on the back. The tail is faintly barred with darker brown. The sexes are alike and fledglings resembled adults.The bill is long with 80 to 85 mm and slightly hooked at the end. It resembles the bill of a shoebill and is quite compressed and thin, particularly at the lower half of the bottom mandible. The bill of young birds is brown but has become black by the time a bird fledges. **Movement:** Resident **IUCN's Red List Category:** Least Concern (LC) **Distribution:** Africa, Madagascar to Arabia **Habitat:** wide variety of wetlands, including estuaries, lakesides, fish ponds, riverbanks and rocky coasts **Food and feeding:** This species normally feed alone or in pairs, but will also feed in large flocks sometimes. It is a generalist, although amphibians and fish form the larger part of its diet. The diet also includes shrimp, insects and rodents. **Breeding:** Year-round in East Africa and in the rest of its range it peaks at different times, with a slight bias towards the dry season. Monogamous solitary nester. The nest is usually built by both sexes, rarely a group of up to seven birds, with construction taking anything from 40-43 days to several months.



Figure 59: Laughing dove (Picture: Ronja Krebs)

English common name: Laughing dove
Latin name: *Stigmatopelia senegalensis*

Description of the species: Long-tailed, slim pigeon, 25 cm in length. It is pinkish brown on the underside with a lilac tinged head and neck. The head and underparts are pinkish, shading to buff on the lower abdomen. A chequered rufous and grey patch is found on the sides of the neck and are made up of split feathers. The upper parts are brownish with a bluish-grey band along the wing. The back is uniform and dull brown in the Indian population. The African populations have a bluish grey rump and upper tail coverts but differ in the shades of the neck and wing feathers while *aegyptiaca* is larger and the head and nape are vinous and upper wing coverts are rufous. The tail is graduated and the outer feathers are tipped in white. The sexes are indistinguishable in the field.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Resident breeder in Africa, the Middle East and the Indian Subcontinent**.**
Habitat: Found in dry scrub and semi-desert habitats where
pairs can often be seen feeding on the ground.
Food and feeding: Eats the fallen seeds, mainly of grasses, other vegetable matter and small ground insects such as termites and beetles. They are fairly terrestrial, foraging on the ground in grasslands and cultivation.
Breeding: Two eggs are laid within an interval of a day and both parents take part in building the nest, incubating and feeding the young. Males spend more time incubating the nest during the day. The eggs are incubated after the second egg is laid and the eggs hatch after about 13 to 15 days. The young fledge and leave the nest after about 14 to 16 days.



Figure 60: White-cheeked turaco (Picture: Bruno D'Amicis)

English common name: White-cheeked turaco
Latin name: *Tauraco leucotis*

Description of the species: A mid-sized species, it measures about 43 cm in length, including a tail of 19 cm and weighs about 200–315 g.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distibution: The highlands from western Eritrea south through Ethiopia to southeastern Sudan. Its range turns eastward up the Rift Valley and terminates in central Ethiopia.
Habitat: Prefers humid montane forest at elevations from 1800 to 3200 metres. They also like trees and bush along rivers down to about 1500 metres.
Food and feeding: Feeds on fruits and berries, preferring
juniper, podocarpus and fig trees. Insects are eaten for their
protein as well as the occasional small lizard.
Breeding: Begins with increased vocalization and chasing from tree to tree. Courtship feeding takes place with the female taking a position slightly below the male, then turns her head to the side and up. The male feeds her regurgitated food. Two eggs are laid in a thin, fragile nest. The pair chooses a forked branch 5 to 20 metres off the ground amidst dense foliage. Incubation, by both sexes, is 21 to 23 days. When incubating, the parents take turns at hourly intervals.



Figure 61: African paradise flycatcher (Picture: Bruno D'Amicis)

English common name: African paradise flycatcher
Latin name: *Terpsiphone viridis*

Description of the species: The adult male is about 17 cm long, but the very long tail streamers double this. It has a black head, neck and under parts, chestnut wings and tail. There is a prominent white wing bar. The female has a browner tint to the under parts and lacks the wing bar and tail streamers. Young birds are similar to the female but duller. Males have prominent blue orbital.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: Occurs across sub-Saharan Africa, absent only
from very arid areas. In southern Africa, it is common from
Zimbabwe, Mozambique and Botswana to large areas of South Africa, all the way down to Cape Town.
Habitat: It prefers woodland and forest, such as *Brachystegia* (miombo) woodland, evergreen forest and suburban gardens.
Food and feeding: It mainly eats invertebrates, occasionally

	eating small berries. It uses a variety of foraging techniques, catching most of its prey on the wing, although it regularly gleans insects from leaves and branches. **Breeding:** Egg-laying season peaks from October-December. It lays 1-4 eggs, which are incubated by both sexes for about 11-19 days. They change shifts every 20-60 minutes, although the female often does most of the incubating at night.
 Figure 62: African sacred ibis (Picture: Bruno D'Amicis)	**English common name:** African sacred ibis **Latin name:** *Threskiornis aethiopicus* **Description of the species**: Long with all-white body plumage apart from dark plumes on the rump. Wingspan is 112 to 124 cm and body weight 1.35 to 1.5 kg. The bald head and neck, thick curved bill and legs are black. The white wings show a black rear border in flight. **Movement**: Resident **IUCN's Red List Category**: Least Concern (LC) **Distribution**: Sacred ibises are native and abundant in sub- Saharan Africa and southeast Iraq. **Habitat:** Occurs in marshy wetlands and mud flats, both inland and on the coast. Also visits cultivation and rubbish dumps. **Food and feeding**: The species feeds primarily by day, generally in flocks wading in shallow wetlands. The diet consists of various fish, frogs, small mammals, reptiles and smaller birds as well as insects and other invertebrates, and carrion. It may also probe into the soil with its long beak for invertebrates such as earthworms. **Breeding:** Monogamous breeding pairs that nest in large nesting colonies.The species breeds once per year from March to August in Africa, from April to May in Iraq. Females lay 1-5 eggs per season, incubated by both parents for 21-29 days. After hatching, one parent continuously stays at the nest for the first 7-days. Chicks fledge after 35-40 days and are independent after 44-48 days, reaching sexual maturity 1-5 years after hatching.



Figure 63: Bruce's green pigeon (Picture: Bernhard Walter)

English common name: Bruce's green pigeon
Latin name: *Treron waalia*

Description of the species: Head, neck and breast light greenish grey; mantle, back, rump, scapulars, most wing-coverts and innermost secondaries light yellowish olive.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: S Mauritania and Senegambia through Sahel zone to Eritrea and N Somalia and S to N Uganda; also Socotra, Yemen, SW Saudi Arabia and extreme W Oman
Habitat: densely wooded valleys, forest patches near water-
holes; less commonly savanna and thorn-scrub
Food and feeding: Frugivorous; reported to feed largely on
various species of figs.
Breeding: recorded Dec–Sept in W Africa; Nov–May in N
parts of E Africa; Apr–May in rest of E Africa



Figure 64: Green sandpiper (Picture: Ronja Krebs)

English common name: Green sandpiper
Latin name: *Tringa ochropus*

Description of the species: This species is with a dark greenish-brown back and wings, greyish head and breast and otherwise white underparts. The back is spotted white to varying extents, being maximal in the breeding adult and less in winter and young birds. The legs and short bill are both dark green.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distibution: It breeds across subarctic Europe and Asia and is a migratory bird, wintering in southern Europe, the Indian
Subcontinent, Southeast Asia and tropical Africa.
Habitat: damp wooded areas, old, swampy woodland and montane forest; preferably pine woods
Food and feeding: Feeds on aquatic and terrestrial insects,
mainly adults and larvae of beetles, Diptera and Trichoptera, but also dragonfly larvae, ants.
Breeding: It lays 2–4 eggs in an old tree nest of another species, such as a fieldfare (*Turdus pilaris*). The clutch takes about three weeks to hatch. Lays mid/late Apr to late Jun.



Figure 65: Marsh sandpiper (Picture: Bruno D'Amicis)

English common name: Marsh sandpiper
Latin name: *Tringa stagnatilis*

Description of the species: It resembles a small elegant greenshank, with a long fine bill and very long yellowish legs. Like the greenshank, it is greyish brown in breeding plumage, paler in winter and has a white wedge up its back that is visible in flight. 22–26 cm; 43–120 g; wingspan 55–59 cm. Small body, long legs and straightish, needle-like bill.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distibution: Majority of birds wintering in Africa and India, E
Romania, E Ukraine and W Russia through N Kazakhstan and S Siberia to Transbaikalia, NE China (Heilongjiang) and
Ussuriland; isolated populations in Baltic States W to Poland. Winters from Mediterranean and sub-Saharan Africa through Persian Gulf and S Asia to Indonesia and Australia.
Habitat: Steppe and boreal wetlands, far inland, preferably in open marshland with fresh grassy cover.
Food and feeding: Includes at least small fish, crustaceans,
molluscs and many insects; mostly aquatic, sometimes terrestrial.
Breeding: Lays late Apr to Jun. Probably monogamous.



Figure 66: Eurasian hoopoe (Picture: Bernhard Walter)

English common name: Eurasian hoopoe
Latin name: *Upupa epops*

Description of the species: Notable for their distinctive "crown" of feathers.
Movement: Wintering
IUCN's Red List Category: Least Concern (LC)
Distibution: Hoopoes are widespread in Europe, Asia and
North Africa, Sub-Saharan Africa and Madagascar.
Habitat: The hoopoe has two basic requirements of its habitat: bare or lightly vegetated ground on which to forage and vertical surfaces with cavities (such as trees, cliffs or even walls, nestboxes, haystacks and abandoned burrows in which to nest).
Food and feeding: Mostly composed of insects, although small reptiles, frogs and plant matter such as seeds and berries are sometimes taken as well. It is a solitary forager which typically feeds on the ground. More rarely they feed in the air, where their strong and rounded wings make them fast and manoeuvrable, in pursuit of numerous swarming insects.
Breeding: Hoopoes are monogamous, although the pair bond apparently only lasts for a single season; territorial.



Figure 67: Red-cheeked cordon-bleu (Pictures: Ronja Krebs)

English common name: Red-cheeked cordon-blue
Latin name: *Uraeginthus bengalus*

Description of the species: It weighs 9.9 g on average, with known extremes in wild populations ranging from 8.9–11 g. The adult male has uniform brown upperpart, pale blue breast, flanks and tail and a yellow belly. There is a red patch on each cheek, but this can rarely appear orange or even yellow. Females are similar but duller and lack the cheek spot. Immature birds are like the female, but with blue restricted to the face and throat.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distibution: Common and widespread across much of central and eastern Africa. Its range stretches from the West African countries of Senegal, Gambia and southwestern Mauritania east through southern Mali, southern Niger, southern Chad and southern Sudan to Ethiopia and northwestern and southwestern Somalia, and then south to southern Democratic Republic of the Congo, eastern Angola, northern and western Zambia, southern Tanzania and northern Mozambique. It has also been introduced to the Hawaiian Islands of Hawaii and Oahu. It has been found
one time on Cape Verde and was recorded in the Maadi area in northern Egypt.
Food and Feeding: Granivore, feeding principally on grass seeds, but also on millet and other small seeds. It is also known to feed sporadically on beeswax.
Breeding: The nest is a large domed grass structure with a side entrance in a tree, bush or thatch into which 4–5 white eggs are laid.



English common name: Spur-winged lapwing
Latin name: *Vanellus spinosus*

Description of the species: Crown, forehead and throat are black, while cheeks and sides of neck are white. They are medium-large waders with black crown, chest, foreneck stripe and tail. The face, the rest of the neck and belly are white and the wings and back are light brown. The bill and legs are black.
Movement: Resident
IUCN's Red List Category: Least Concern (LC)
Distribution: The spur-winged lapwing breeds around the
eastern Mediterranean and in a wide band from sub-Saharan west Africa to Arabia. The species is declining in its northern range, but is abundant in much of tropical Africa, being seen at almost any wetland habitat in its range.
Habitat: Frequents dry ground close to fresh or saline pools,
lakes, rivers, lagoons or marshes as well as burnt grassland,
cultivated, flooded or irrigated fields, saltflats by alkaline

Figure 68: Spur-winged lapwing (Picture: Bruno D'Amicis)	lakes, mudflats, sandflats, beaches, dunes and coastal saltpans. **Food and feeding:** Its diet consists predominantly of adult and larval insects as well as spiders, centipedes, millipedes and occasionally crustaceans, molluscs, small lizards, tadpoles, adult frogs, fish and seeds. **Breeding:** In tropical Africa, laying dates usually locally restricted, but considerable geographical variation. The nest is placed in a shallow natural depression in rocks or is a shallow scrape on dry bare ground or on mudflats.
 Figure 69: Pin-tailed whydah (Picture: Bruno D'Amicis)	**English common name:** Pin-tailed whydah **Latin name:** *Vidua macroura* **Description of the species:** The adult male has a black back and crown and a very long black tail. The wings are dark brown with white patches and the underparts and the head, apart from the crown, are white. The bill is bright red. The females and non-breeding males have streaked brown upperparts, whitish underparts with buff flanks and a buff and black face pattern. They lack the long tail extension, but retain the red bill. Immature birds are like the female but plainer and with a greyish bill. **Movement:** Resident **IUCN's Red List Category**: Least Concern (LC) **Distribution**: Sub-Saharan Africa except in driest regions: S Mauritania S to Liberia, E to Mali and S Niger, Nigeria and Cameroon, NE & S Chad, Central African Republic, South Sudan, Ethiopia and Eritrea, and from Gulf of Guinea E to Kenya, C & S Somalia, Tanzania and Zanzibar, and S to Namibia, N & E Botswana and South Africa; introduced on Puerto Rico, Caribbean **Habitat**: grassy and open shrubby habitats, marshes, bushed lands, cultivated lands and gardens **Food and Feeding:** Mostly small grass seeds, taken after seeds have fallen to ground; also flying termites (Isoptera).

4.3 Mammal species in LTBR



Figure 70: Hippopotamus (Picture: Bruno D'Amicis)

English common name: Hippopotamus
Latin name: *Hippopotamus amphibius*

Description of species: Hippopotamus *(Hippopotamus amphibius)* is a large, mostly herbivorous, semiaquatic mammal native to sub-Saharan Africa and one of only two extant species in the family Hippopotamidae, the other being the pygmy hippopotamus (*Choeropsis liberiensis)*. The name comes from the ancient Greek for "river horse". After the elephant and rhinoceros, the common hippopotamus is the third-largest type of land mammal and the heaviest extant artiodactyl. Despite their physical resemblance to pigs and other terrestrial even-toed ungulates, the closest living relatives of the Hippopotamidae are cetaceans (whales, dolphins, porpoises etc.) from which they diverged about 55 million years ago.
Species status according to IUCN: Least Concern (LC)
Distribution and habitat: Currently, hippopotamus are confined to Africa south of the Sahara. Hippopotamus always found close to water and tends to prefer areas close to grasslands, where they feed during the night. Hippos are most commonly found in the deep and slow-moving rivers and lakes.
Behaviour: The Hippopotamus spends up to 18 hours a day in the water to keep cool. It is one of the largest and most feared animals in Africa as both males and females are known to be incredibly aggressive. The Hippopotamus tends to live in small herds containing between 10 and 20 individuals. The herd is led by the dominant male who will fiercely guard his stretch of river bank from both intruders and rival males, threatening them by opening his enormous mouth to expose the half meter long tusks. If this fails, the two will fight and deadly injuries often being caused. Although the dominant male will allow other males to enter his territory providing they are well-behaved, he holds the breeding rights with the females in the herd.
Reproduction and Life Cycles: Gestation period lasts for about eight months. The female Hippopotamus gives birth to a single calf generally during the rainy season. Although like many other activities (including mating) the Hippopotamus often gives birth in the water, it is not actually that uncommon for their young to be born on land. The female protects her calf fiercely and it rides on her back to keep it safe. Hippopotamus calves are fully weaned by the time they are 18 months old but tend to remain with their mother until they are fully grown, often not leaving her until they are 7 or 8 years old. Although young males will become more independent and find

	their own patch of bank to patrol, females will join a herd of other females and young but despite this seemingly sociable behaviour, they do not seem to interact socially and will even graze on their own when they leave the water at night. **Life span:** 40 – 50 years **Diet:** Hippopotamus is a herbivorous animal regardless of its enormously long and sharp teeth. Different species of grasses are its main source of food. When they come onto land at night, Hippos may travel up to 5km during the night to get to their feeding grounds which they do by following paths that are marked with dung. Hippopotamus doesn't even use its large canines for eating at all but instead has strong lips that are used to clip the grasses and cheek teeth which then grind them up. Despite its large size, the Hippopotamus only eats around 40kg of food a night as it uses very little energy whilst floating in the water for most of the day. In areas that are close to human settlements, Hippos have also been known to invade crops consuming mainly rice plants and simply trampling over others. **Threats:** They are still preyed up by a number of predators. Big cats such as lions and other animals like hyenas and crocodiles are the most common predators of the Hippopotamus, particularly of the young or sick individuals. It is because of this that females are thought to congregate in herds as larger numbers are more intimidating to hungry carnivores. The Hippopotamus is also threatened by people not only from the loss of their natural habitats, but also from hunting. The Hippopotamus has been hunted by people for both its meat and its teeth which are made of ivory. Since the ban on trading Elephant ivory, the number of Hippos killed for their teeth has risen dramatically.



Figure 71: Grivet monkey (Picture: Ronja Krebs)

English common name: Grivet monkey
Latin name: *Chlorocebus aethiops*

Description of species: The grivet is an Old World monkey with long white tufts of hair along the sides of the face. Some authorities consider this and all of the members of the genus *Chlorocebus* to be a single species, *Cercopithecus aethiops*. As here defined, the grivet is restricted to Ethiopia, Sudan, Djibouti and Eritrea. In the southern part of its range, it comes into contact with the closely related vervet monkey (*C. pygerythrus*) and Bale Mountains vervet (*C. djamdjamensis*). Hybridizationbetween them is possible and may present a threat to the vulnerable Bale Mountains vervet.
Species status according to IUCN: Least Concern (LC)
Distribution and habitat: The main habitat of the grivet is
savanna woodlands. Its range is Ethiopia east to the Rift Valley, Eritrea and Sudan east of the White Nile. It is also found in Djibouti. The grivet needs to live around a source of water, especially during the dry season. It is able to adapt to many environments.
Behaviour: The grivet spends a lot of time grooming, playing, climbing and play fighting; all of these things help to ensure its survival.
Reproduction and life cycles: It is one of few species that has multiple-male groups that are of moderate size. In the hierarchy of males, an individual shows its dominance by putting its tail in a stiff upright position and strolling past lower-ranked males. Females will have a limited number of mates, while males will have numerous. Swelling of the female's vulva alerts males as to when the female is in heat. Giving birth to one baby at a time is common and gestation period usually lasts two to three months. When the baby is born, the mother will clean the infant and bite off the umbilical cord. Young have pink faces and black hair. It
will take around two months for them to get their adult coats. The first few months, the infant will stay very close to its mother, but after six months the infant is weaned.
Life span: 30 years
Diet: Grivets feed on mostly fruits, vegetables and sometimes small mammals, insects and birds, making it an omnivore. It also scavenger for human food.
Threats: Although grivets are not endangered, they are threatened through destruction of habitat by way of disappearing forests. It is preyed on by large snakes, leopards, humans and sometimes baboons.



Figure 72: Olive baboon (Picture: Bruno D'Amicis)

English common name: Olive baboon
Latin name*:* *Papio anubis*

Description of species: The olive baboon, also called the Anubis baboon, is a member of the family *Cercopithecidae*. The species is the most wide-ranging of all baboons, being found in 25 countries throughout Africa, extending from Mali eastward to Ethiopia and Tanzania. Isolated populations are also present in some mountainous regions of the Sahara. It inhabits savannahs, steppes and forests. The common name is derived from its coat color, which is a shade of green-grey at a distance. A variety of communications, vocal and non-vocal, facilitate a complex social structure.
Species status according to IUCN: Least Concern (LC)
Distribution and habitat: Throughout its wide range, the olive baboon can be found in a number of different habitats. It is usually classified as savanna-dwelling, living in the wide plains of the grasslands. The grasslands, especially those near open woodland, do make up a large part of its habitat, but the baboon also inhabits rainforests and deserts.
Behaviour: Olive baboons live in groups or "troops" ranging in size from 15 to 150 individuals**.** Within the troop, there are several adult males, numerous adult females and their offspring of various ages. Females almost always remain in their natal group for their entire lives whereas males disperse in order to mate. Because females do not emigrate but rather stay and breed with immigrant males, some females within a group are closely related. Mothers, daughters, grandmothers, aunts and nieces associate with each other as a subgroup of the larger troop.
Reproduction and life cycles: Both males and females reach sexual maturity between four and six years of age. Mating among olive baboons is promiscuous; both males and females have multiple mates. There is no seasonality in baboon reproduction; females cycle and give birth throughout the year**.**
Life span: about 38 years



Figure 73: Colobus monkey (Picture: Bruno D'Amicis)

English common name: Colobus monkey
Latin name*:* *Colobus guereza*

Description of species: The word "colobus" is Greek and used because in this genus the thumb is a stump. Colobuses are herbivorous, eating leaves, fruit, flowers and twigs. Their habitats include primary and secondary forests, riverine forests, and wooded grasslands; they are found more in higher-density logged forests than in other primary forests. Their ruminant-like digestive systems have enabled these leaf-eaters to occupy niches that are inaccessible to other primates. Colobuses live in territorial groups of about nine individuals, based upon a single male with a number of females and their offspring. Newborn colobuses are completely white. Cases of allomothering (members of the troop other than the infant's biological mother care for it) are documented. Colobuses are important for seed dispersal through their sloppy eating habits, as well as through their digestive systems.
Species status according to IUCN: Least Concern (LC)
Distribution and habitat: Black and white colobus monkeys
make their home high in the trees of a variety of tropical African forests. They spend almost their entire lives up in the branches, rarely touching the ground. Colobus monkeys are sometimes referred to by the locals as "messengers of God" because of the time they spend traveling back and forth between the tree tops and the ground.
Behaviour: Black and white colobus monkeys spend their days eating, relaxing and socializing with each other. Males defend their group and its territory from others with roars, tongue-clicks, chases and an unusual stiff-legged display. Colobus are mostly arboreal, spending their mornings sunbathing and will descend down to the lower levels to forage for aquatic plants. They produce a low-pitched roaring chorus for displaying and alarm-calling. They use subtle body language to show aggression including tongue-clicking and leg dropping. Social behavior and grooming are uncommon except between mother and infant. They will aggressively chase others from their territory.
Reproduction and life cycles: Gestation length is estimated at about six and half months long. Infants are born with white, curly fur and pink faces. With six months they will have achieved full adult coloration. After birth, infants immediately cling to their mother's stomach where they will be carried until they are weaned.
Life span: up to 20 years in captivity
Diet: Unlike other primates, colobus monkeys' cow-like stomachs allow them to subsist on a leafy diet. They don't even need to come down for water, finding enough in the treetops to survive. They eat high-protein leaves from forest trees. They also eat unripe fruit, seeds, flowers and bark. **Threats:** They are prey for many forest

	predators and are threatened by hunting for the bushmeat trade, logging as well as habitat destruction.
 Figure 74: Spotted hyena (Picture: Mathias Putze)	**English common name:** Spotted hyena **Latin name*:*** *Crocuta crocuta* **Description of species:** The spotted hyena, also known as the laughing hyena, is a species of hyena currently classed as the sole member of the genus *Crocuta*, native to Sub-Saharan Africa. The spotted hyena is the largest known member of the Hyaenidae and is further physically distinguished from other species by its vaguely bear-like build, rounded ears, less prominent mane, spotted pelt, more dual purposed dentition, fewer nipples and the presence of a pseudo-penis in the female. It is the only mammalian species to lack an external vaginal opening. The spotted hyena is the most social of the Carnivora as it has the largest group sizes and most complex social behaviours. Its social organisation is unlike that of any other carnivore, bearing closer resemblance to that of cercopithecine primates with respect to group-size, hierarchical structure and frequency of social interaction among both kin and unrelated group-mates. Females provide only for their own cubs rather than assist each other and males display no paternal care. Spotted hyena society is matriarchal. Females are larger than males and dominate them. **Species status according to IUCN**: Least Concern (LC) **Distribution and habitat**: Spotted hyenas are present in all habitats including semi-desert, savanna and open woodland, dense dry woodland and even montane habitats, such as the Ethiopian highlands up to 4,100 m altitude. **Behaviour**: Spotted hyenas are social animals which live in large communities. However, the social system of the spotted hyena is competitive rather than cooperative, with access to kills, mating opportunities and the time of dispersal for males depending on the ability to dominate other clan-members. **Reproduction and life cycles:** The spotted hyena is a non- seasonal breeder, though a birth peak does occur during the wet season. Females are polyestrus, with an estrus period lasting two weeks. The spotted hyaena is promiscuous and no enduring pair bonds are formed. Members of both sexes may copulate with several mates over the course of several years. The length of the gestation period tends to vary greatly, though 110 days is the average length of time. **Life span:** 12 years in captivity **Diet:** Spotted hyenas are known scavengers and often

	feed on the leftovers of other predators. But they are also skilled hunters that will take down wildebeest or antelope. They also kill and eat birds, lizards, snakes and insects. **Threats:** Spotted hyena populations are subject to persecution by humans through culling, trapping and poisoning. A further threat is posed by the decline in densities of wildlife species consumed by spotted hyaenas due to habitat loss caused by increased human settlement, overgrazing by livestock and game-meat hunting by humans.

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