

BIRD ACTIVITY BOOK

For Wildlife Clubs of Malawi



WILDLIFE AND ENVIRONMENTAL SOCIETY OF MALAWI

Bird Activity Book For Wildlife Clubs of Malawi

Wildlife and Environmental Society of Malawi, Zomba.

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BIRD ACTIVITY BOOK FOR WILDLIFE CLUBS OF MALAWI

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WILDLIFE AND ENVIRONMENTAL
SOCIETY OF MALAWI

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The Branch is indebted to Danish supporters for funding the printing of this book.

Stephen Carr

Chairperson, Wildlife and Environmental Society of Malawi (Zomba)

1. Introduction to WESM

Background

WESM was founded in Blantyre in 1947 and in its early days concentrated on the protection of larger mammals. It was active in the establishment of national reserves and parks and successfully campaigned for the tightening of hunting laws. In 1975 the Zomba branch was established and in the 1980's the Society started to focus more broadly on the whole environment and not just on mammals. It issued a mission statement to the effect that it "Would promote full public participation in the wise management of wildlife, natural resources and the environment of Malawi." In consequence it was heavily involved in the development of the National Environmental Action Plan and in the production of a wide range of publications on environmental issues. At the national level the Society has been involved in conservation, integrated natural resources management and advocacy. Realising the importance of encouraging young people to be aware of their natural environment and its conservation the Society has established Wildlife Clubs in schools and colleges across the country.

Activities of WESM Zomba

The Branch is situated near to three major areas of environmental richness, namely The Zomba Plateau, Liwonde National Park and Lake Chilwa and it has sought to help local members to have a greater understanding of the potential of these areas as well as the threats to them. On the Plateau club members have been responsible for changing the site of a major dam so as to save a unique floral system, subsequently rehabilitating the area damaged by the dam's construction and maintaining a system of paths around the Plateau to provide access to its rich environment. In Liwonde National Park the branch has provided the backbone of animal monitoring exercises. On Lake Chilwa the branch has focussed on helping the bird hunting community to establish 1,000 hectares of protected breeding areas for different species of birds as well as encouraging methods of hunting which will help to sustain the valuable bird resource of this Ramsar site. To reinforce this work it has established some 400 Wildlife Clubs and supports three full time coordinators to assist the Club leaders.

The Purpose of this book:

A range of publications to help Club leaders have been distributed over the years, but none have focused on birds. The bird population in Malawi is under threat from habitat destruction and hunting and WESM is concerned to make young people aware of this potential loss of an essential component to their environment by raising their awareness and interest in birds. The book seeks to involve the young people in activities and not just in passive classroom teaching and to provide club leaders with a range of ideas to make their meetings more attractive and consequently more effective.

Stephen Carr

Chairperson, Wildlife and Environmental Society of Malawi (Zomba)

2. Bird Education in the School Curriculum

Over the years we have gradually become aware of the impact of our species on the rest of life on Earth. We are yet to find answers to the problems we have created on other species. Some species are so vulnerable that if we do not have empathy on them they may become extinct within our lifetime.

Birds are vulnerable creatures. A simple catapult can kill a bird in any position. Yet some of us resort to even using a shotgun to kill birds. This ignorance about the importance of birds in the environment compels us to instill skills in our school children, which will sustain the bird population in our country. Birds which eat insects and pests in our gardens are useful to us by helping our plants to grow and not damaged from pest infestation. Birds are thus better than insecticides and pesticides that we would spray in our garden, as such chemicals have adverse health impacts to us.

The study of birds is very interesting – it is a healthy and soothing experience to watch birds. One can relax after hard work by bird watching. Bird watching also sharpens the ability to observe purposefully. As children keep accurate records, they will develop critical thinking skills.

Some birds are observed in captivity. After analysis of the types of snares and traps for catching birds, children will learn positive attitudes towards birds. They will appreciate the vulnerable nature of such little creatures. They will learn to be responsible for protection of wild birds. They will learn to recognize humans' role in the loss of some of the birds and their habitats. They will love nature and adore the variety in colour, voices and habits of birds.

As the children work on activities in this book such as weaving imitations of birds' nests, they will observe the skill and ingenuity used in building. Bird observation and study should lead to a safe and sustainable environment in which birds will live without fear of snares and people. Such a development will attract people to these areas which the Wildlife Clubs of Malawi have created.

3. Introduction to Birds

This Bird Activity book is intended to create awareness and educate students at primary school levels about bird life in Malawi. The Wildlife clubs in the schools can use this book to make learning about birds both fun and stimulating. This book introduces the children to Ornithology and bird activities that can be done both inside the classroom and in the field, thus making learning interesting. Let us begin with the basic understanding of what a bird is.

3.1 What is a Bird?

A bird is a two legged, feathered, warm blooded creature that lays eggs. Most birds are able to fly with the help of their wings. Scientists believe there are over 9000 different species of birds in the world. Birds are found in woodlands, wetlands, cities, deserts, grasslands and almost anywhere! Birds come in a variety of colours but all of them will have two legs, two wings, a beak and feathers. In Malawi there are about 653 species of birds and is a popular country for birdwatchers. There are some birds only found in Malawi and not found anywhere else in the world. The next section will discuss the parts of a bird.

3.2 Parts of a Bird

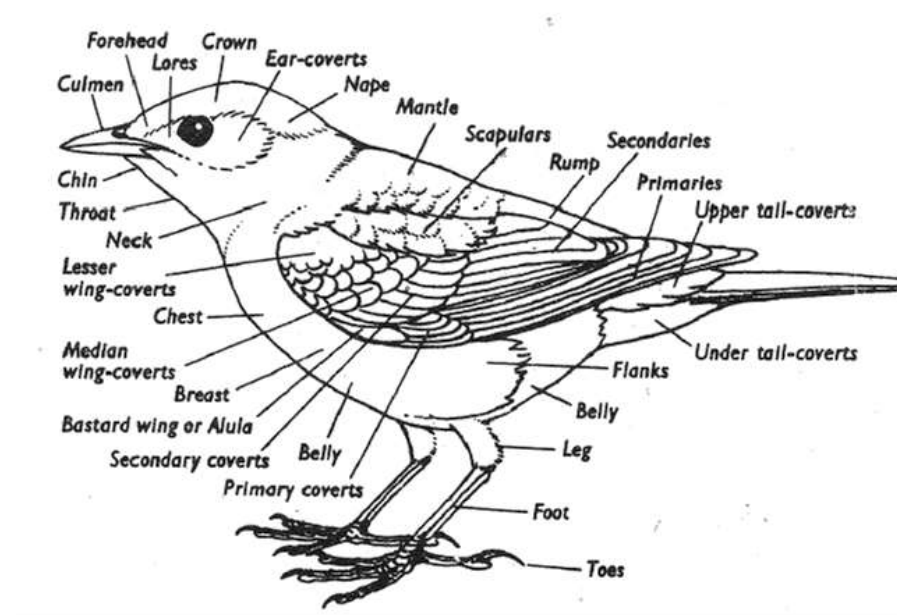


Figure 1 Parts of a Bird (*Image Source: African Handbook of Birds*)

Figure 1 shows the different parts of a bird. Birds have wings and feathers that help them to fly. They have beaks that help them eat food. They have eyes, ears and feet just like us and all these parts are discussed in detail in this chapter.

Did you know?

Not all creatures that fly are birds; Bats are animals that can fly but they are not birds.



Penguins are also birds. Infact they are the fastest swimming birds, however due to their solid heavier bones they cannot fly.



3.2.1 Feathers and wings

The flight of a bird is a beautiful sight because its body is perfectly created for flying. Birds have a light skeletal system but have very strong muscles that help them raise their wings up and down which allows them to fly. The feathers in their wings help the bird fly as well as keep it warm. Feathers also have an important function of waterproofing the bird, i.e. keeping the rain away. Every type of bird has a different type or colour of feathers. Feathers are made from keratin, which is a type of protein, also found in humans and animals that help form hair and nails in humans, and, horn and hair in animals. Keratin is the protein that helps grow beaks in birds.

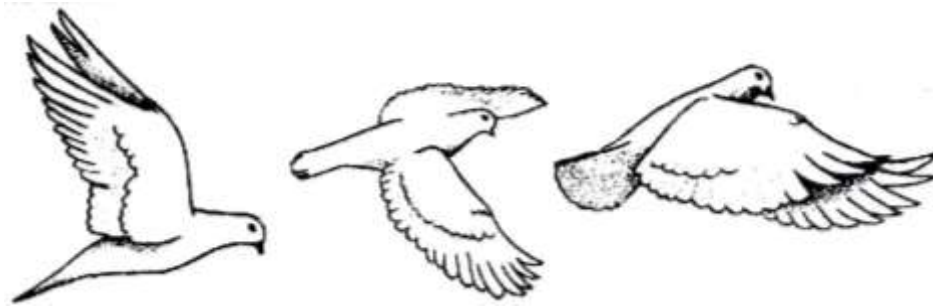


Figure 2 Feathers and wings help birds fly (Image Source : Birdlife Botswana)

Birds don't have the same type of feathers all over their body. The contour feathers are the first feathers you see on the outside of the bird and it also gives the bird its colour. The down feathers are found under the bird and are usually soft and fluffy as it keeps the bird warm. The wing and tail feathers need to be stronger as they assist the bird to fly, so they are stiffer. In addition to these feathers there are many more feathers on a bird's body such as Semiplumes, Filoplumes, Bristles and Powder feathers.

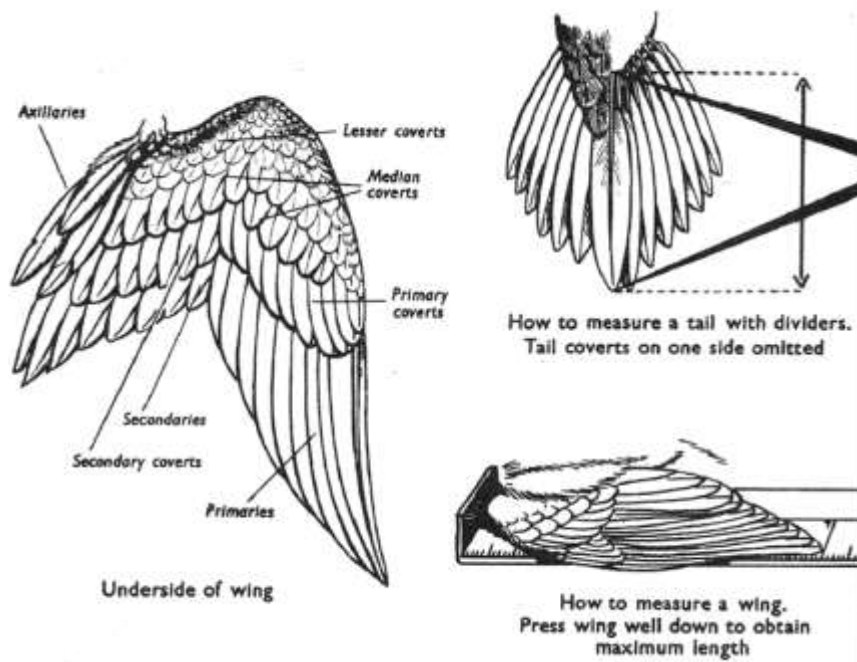


Figure 3 Bird Wing parts (Image source: African Handbook of Birds)

Figure 3 shows the different parts of a bird's wing. Note how the feathers are arranged.

3.2.2 Bills or Beaks

Bird bills or beaks are used by birds to eat their food. They are of different shapes and by looking at a bird's beak you can tell what kind of food it eats. Beaks are very hard and are of different shapes (long, short, pointed, curved etc) as shown in figure 4. Depending on what a bird eats, its beaks are shaped accordingly. For example some are designed to collect seeds, others to tear flesh, some to suck nectar and yet others to catch insects. Looking at the shape of a bird's beak one can easily tell what its food consist of.



Canaries have short and hard beaks for husking seeds.



Hérons have long slender pointed beaks for grabbing or stabbing water animals.



Ducks have flat and broad beaks for filtering fine food from mud.



Birds of prey (like the eagle) have hooked beaks to tear flesh.



Sunbirds have long curved beaks for getting nectar from flowers.



Flycatchers have short, sharply pointed beak for catching insects.

Figure 4 Beaks of birds (*Images adapted from Birdlife Botswana*)

3.2.3 Eyes, ears and feet

Eyes: All birds have two eyes, one on either side of their head. Only the owl has both of its eyes in the front of its face. Birds have three eyelids, one upper, one lower and one membrane which are transparent; meant to clean and protect the eyes from wind and dust. Birds have sharper vision than humans and can see very far distances, that is how eagles are able to catch fish from lakes while flying at great heights.

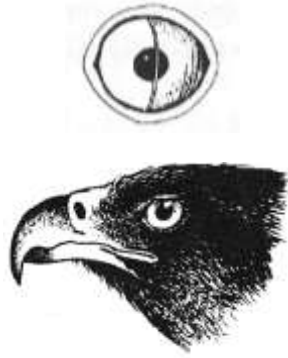


Figure 5 Eyes of Birds (Image source: *Birdlife Botswana, African Handbook of Birds*)

Ears: You must have heard birds sing and chirp; sound is a way of communication for birds with their flock. Birds have ears which are inconspicuous and mostly hidden with feathers, except for the owl which has large conspicuous ears. Bird's ears, shaped as holes, are on the sides of their head, below their eyes and can be as large as their eyes.

Feet: Birds have feet which are adapted to the way they live. Birds that live near waterways have different feet from those that live in woodlands. Birds that live on trees need feet that will help them clutch on to branches of trees. Birds that live near waterways such as ducks have webbed feet like paddles which help them swim. Chickens have strong toes with strong nails to help them scratch the ground to look for grains and worms that they feed on. Usually birds have four toes, with one large toe facing backwards and three facing forward.

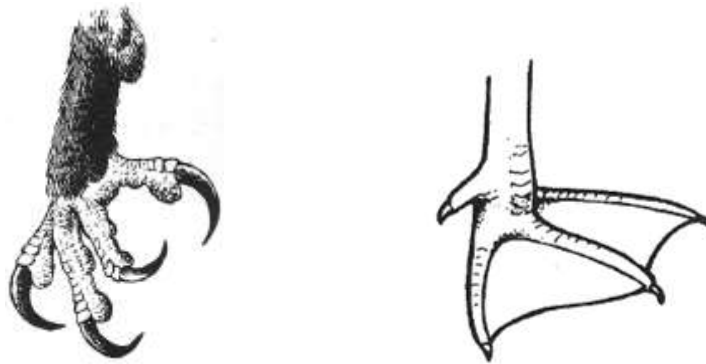


Figure 6 Foot of Eagle and Duck (Image Source: *African Handbook of Birds, Birdlife Botswana*)

3.3 Classification of Birds

Classification is the orderly grouping of things based on what they have in common. A common method of classifying birds is according to their size. Birds range from very small like the Blue Waxbill (*Silisili*) to very large like the White Stork (*Sinjachebele*). Have a look at Table 1 and the bird silhouettes below. Have you seen these birds near where you live?

Table 1 Identifying small and large birds (adapted from Birdlife Botswana)

<i>SIZE</i>	<i>ABBREVIATION</i>	<i>EXAMPLE OF BIRD</i>
Very Small	VS	Blue Waxbill (<i>Silisili</i>)
Small	S	House Sparrow (<i>Mbawa</i>)
Medium Small	MS	Tropical Bonbon(<i>Mwiyo, Mwiyo mwiyo</i>)
Medium	M	Plum coloured Starling(<i>Nkhuzikhuzi</i>)
Medium Large	ML	Pied Crow (<i>Nachi Kwangwala</i>)
Large	L	Helmeted Guinea fowl (<i>Nkhanga</i>)
Very Large	VL	White stork (<i>Sinjachebele</i>)

Scientists also use other methods to classify birds and its called Taxonomy. Classification is done by Kingdom , phylum and Class. Birds are in Kingdom Animalia (i.e. Animals), Phylum Chordata (which is animals with a backbone). The Class for birds is Aves, which is split into 23 orders according to similarities within birds. Thus, similar birds such as pheasants and guinea fowls will fall in one order, while barbets and woodpeckers will fall within another order. The orders are further divided into families and there are 142 families in the class Aves. Within families, there is genus (2057 genus in Aves) and lastly species. There are 9,702 bird species in this world that we know of. In Malawi there are about 653 recorded species.



Blue Waxbill(*Silisili*) is very small



Pied Crow (Nachi Kwangwala) is Medium Large.



House Sparrow(*Mbawa*) is small.



Helmeted Guineafowl (Nkhanga) is Large.



Tropical Boubou(Mwiyo, Mwiyo) is Medium small.



White stork (Sinjachebele) is Very Large.



Plum coloured Starling(Nkhuzikhuzi) is medium size.

Figure 7 Classification of birds according to their size (Images adapted from Birdlife Botswana)

4. How Birds fly?

Birds have hollow bones and feathers which help them to fly. These make the bird light in weight. The feathers provide resistance to the air, they also keep the body warm and dry. In addition the feathers are efficient for incubation of eggs. The colours of feathers also blend with the habitat to act as a camouflage.

Wing feathers are turned at the tips and near edges to varying angles. These feathers help move the bird in flight to the right and left, upwards and downwards. The tail feathers also affect upward and downward movement and act as a brake on landing.

There are three types of flight, soaring, gliding and flapping. When soaring, as you may see with hawks moving over bush fires, they take advantage of rising currents of hot air to soar upwards. Gliding is only in downwards direction. Flapping of wings during flight is done by making figure of eight using movement of wings. Observation will show that the bigger a bird, slower its wings beat and greater is the area of the wings in relation to the size of its body.

A hummingbird beats its feathers up to 80 times per second, flying at speeds of up to 56km/hr. Its heart beats more than 1200 times per minute. This means it needs a lot of food and liquid for energy. It eats up to half its own weight and drinks water eight times its weight each day. Its long tubular tongue licks nectar at 13 times per second. The hummingbird is one of the only birds that can fly backwards.

Did you know that a swan has up to 25,000 feathers?
A hummingbird has the fewest feathers of all birds
about 1000 feathers. But being so small, it has more
feathers per square inch than most other birds.

5. What do Birds Eat?

Different birds eat different types of food ranging from seeds, worms, insects, nectar, meat, berries to plant material such as nectar, tree sap and small shrubs. Birds also need fresh clean water every day. Most birds are not fussy and eat what is seasonally available; when fruits are in season, they eat fruits, when insects are plentiful, they eat insects. Beaks of birds will give you a good idea of what they eat. Hummingbirds have long thin beaks perfect for sipping nectar from flowers. Hummingbirds feed from the nectar in flowering plants and they also eat small insects to get protein. Other birds eat insects such as caterpillars, wasps, and even bees.



Figure 8 Bird feeds on insect (Image source: African Handbook of Birds)

Figure 8 shows a bird feeding on an insect.

Did you know?

Bee-eaters feed on Dragonflies and almost all birds like to eat flying termites. Storks, Kites, Frestrels and Falcons love to eat Locusts. Egrets and Lesser Kestrels feed on Grasshoppers. While Hornbills, eat beetles, when woodpeckers eat beetle larvae. Many birds like the Flycatchers and Swallows like to feed on flies and Drongo eats butterflies. Cuckoos love hairy caterpillars, while Honey Buzzard feeds on wasps.

Birds of prey, like the eagle feed on a range of different animals. They eat insects like grasshoppers, fish, smaller birds like sparrows, squirrels, rabbits, snakes, lizards, dead animals as well as frogs. Therefore they need strong beaks to tear flesh. Have you noticed that the beak of an eagle is strong and curved so it can easily tear flesh? Similarly the Lizard Buzzard feeds on lizards and has curved beaks to tear flesh as shown in Figure 9.

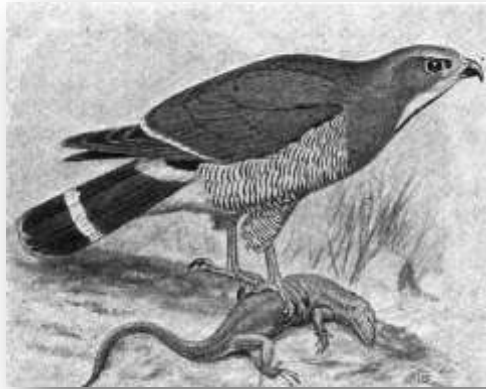


Figure 9 Lizard Buzzard feeding (*Image Source: African Handbook of Birds*)

Birds that love water such as ducks in their natural habitat feed on grasses, aquatic plants, insects, worms, small fish, small frogs and small molluscs. Their beaks have therefore got sacks to sift the sand and mud to filter food.



Figure 10 Pied Kingfisher feeding on a fish

Figure 10 shows a Pied Kingfisher feeding on a fish seated on a branch of a tree.

Activity 1 Match the Bird to its food

This activity has been adapted from Birdlife Seyshelles Pg.21.

In this activity, students will compare different ways birds feed, through first hand observation of birds in the schoolyard. The main differences to consider are beak shape, feet and habits. Birds are adapted, or well-designed for the way they find their food. For example, eagles have a sharp, hooked beak for tearing flesh, and strong, sharp-clawed feet for grabbing their prey. They can be found perched on a wire or branch where they have a good view of lizards and other potential prey. Herons have long legs for wading, and a long, sharp beak for catching fish, and are found in rivers or shallow water. Mynah birds have a general purpose long strong beak for eating a variety of foods, and can be found almost anywhere, especially near where humans live.

Introduction:

- Because they feed on different things and have no teeth, different kinds of birds have different kinds of beaks. Ask the children to think of how birds might deal with different kinds of food:
 - How would they eat small water creatures? (Ducks and geese have wide flat beaks with an edge like a sieve).
 - How would they eat worms and other creatures in the sand or mud?
 - How would they catch fish in the lake? Etc.
- Look at pictures of birds or a video and discuss differences in beak shapes and feet.
- Discuss where different birds go to find their food, and how they get it.

Activity:

- Go out to the school compound or a nearby natural area to observe birds feeding.
- Get the students to work in groups and use a worksheet to record their observations.
- Investigate the area for signs of food available for birds, eg. grass seeds, insects, fruits, fish, etc.
- Spread an upside down umbrella or newspaper under a leafy branch. Shake it and observe how many different insects, seeds, fruits, etc. that fall. Discuss which birds might eat these.

Summary and Extension:

- Back in class, have the groups write up and present their findings.
- Discuss whether the school compound is a good habitat for birds. How could it be improved?
- Design an experiment to find out which foods birds prefer and how they like to feed. Put some rice, bread, fruit and other kinds of foods out for birds. Observe which birds come to eat them. Experiment by putting some food on the ground, some on a table, some in a tree etc. and observe which birds come. Try doing the experiment at different times of day.
- Have the students work in groups to design real or imaginary birds who are adapted to find their food in different ways: Example:
 - Design a bird which hunts at night in the woodland and feeds on lizards and frogs.
 - Design a bird which lives in the arctic and catches fish.
- Visit different habitats to observe different birds feeding, eg. Lake, woodland, grassland, etc.

Worksheet for Bird Feeding:

Print this worksheet out for children to fill when they go on a field visit.

1. Tick where you see birds feeding:

- ☐ On the ground
- ☐ In the bushes
- ☐ In the trees
- ☐ In water
- ☐ Other

2. Tick the foods you observed birds eating, and list the types of birds next to each food.

☐ Seeds

☐ Rice

☐ Berries

☐ Bread

☐ Fruit

☐ Worms

☐ Insects

☐ Other

3. Do all birds like the same foods?

4. What kinds of food are available for wild birds in your study area?

5. Is there enough food for birds and other wildlife? If not, how could you improve the situation?

Activity 2 Make a Bird Feeder

This is an activity children can do in groups.

1. Ask children to collect fruit juice cartons or plastic bottles that are empty.
2. Cut openings on either sides of the carton/bottles
3. Punch two holes and stick a twig through the holes, this will be the perch that birds can sit on
4. Staple the top of the carton/plastic bottle to stop rain water entering it
5. Tie the top with a wire
6. Fill the bottom of can/carton with bird seeds
7. Hang the bird feeder on to a tree branch

6. How to Identify Birds?

Birds are only visible for a short time as they fly and move about making bird watching and identification a little tricky. Here is suggested a list of points to look for to identify birds based on general information of size and shape or other characteristics of the bird. Try to make note of them while the bird is in front of you. It is also helpful to note where (in what part of the habitat) you saw it and what it was doing.

Shape: Is it long and thin like a wagtail?



Or short and plump like a Nkhwali or Spurfowl?

Legs: Does it have short beak and legs like a canary?



Or long and thin like a stork?

Colour: What are its main colours?



Wings: Are the wings long and narrow like a swift?



Or short and rounded like a buzzard?

Tail: Is the tail forked like a drongo?



Or square like a starling?

Field marks: Does it have an eye stripe?



Wing bars.....?



A white rump or tail feathers?



Or a streaked or spotted breast?

Habits : Does it climb trees like a woodpecker?



.....Wag its tail like a wagtail?.....Feed on the ground like a dove?Or in the air like a swallow?

Voice:What is its call or song?

Habitat:Where is it found?



On water?



In fields?



In Bushveld?



Or in Woodland?

(Images adapted from Birdlife Botswana)

Activity 3 Bird watching in the School garden

This exercise will help children learn about habitats of birds. Outdoor activities provide fun and exciting way for children to learn. You can convert an area of the school garden to make it more bird friendly.

Step 1. Assess the garden

Is it large? Is it small? Does it have open areas with lawns? Or does it have vegetation of different levels such as trees, shrubs, groundcover?

Explain to children that a more structured garden with different vegetations will be more attractive to birds. Different birds like different types of habitats, eg. Some birds like trees, others like water, yet others like open areas.

After understanding the need for different types of vegetation for birds, children can join in planting those types of vegetation in the school garden.

Step2. Observation of Birds

Ask the children to look for birds in the garden. Ask questions like :

Can the children spot any nests?

Can they hear any birds singing?

Children can go on a treasure hunt to collect feathers. Ask children to describe the shapes, colours and sizes of birds that they observe.

Evidence of birds can be collected and taken to the classroom for discussion. Evidences will include feathers, nests, bird droppings, eggs etc.

Activity 4 Bird Observation

Children may use the Bird Observation sheet below to record their observations on a field trip.

Choose any bird you like on the field trip and gather as much information from observation as you can. Later find out its common name and scientific name by referring to books or the annex in this book (if field work is near Lake Chilwa).

Student Name:.....

Date:.....

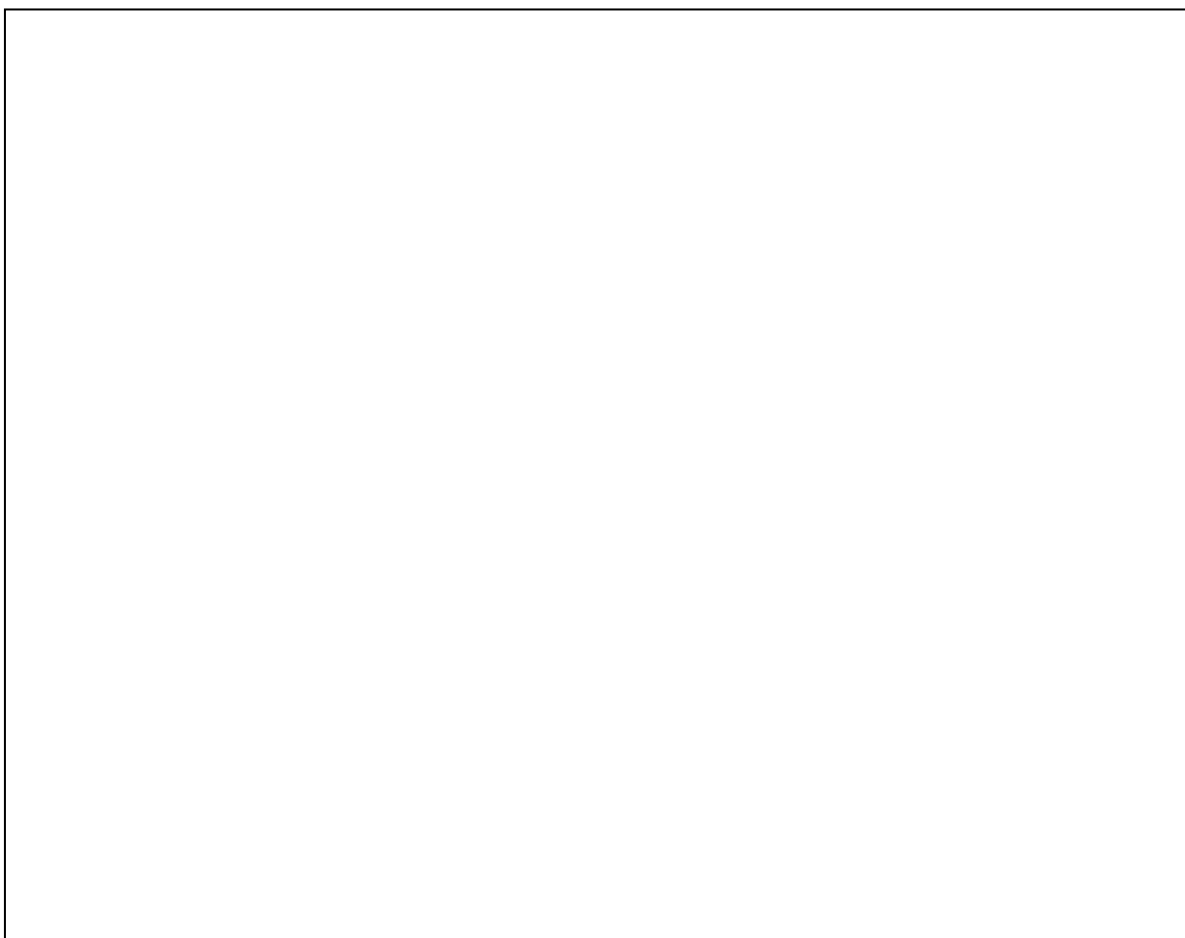
Location:.....

Time:.....

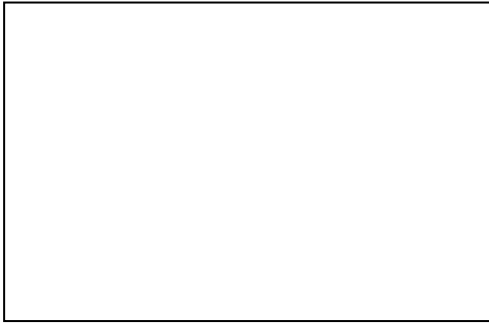
Common name of bird:.....

Scientific name of bird:.....

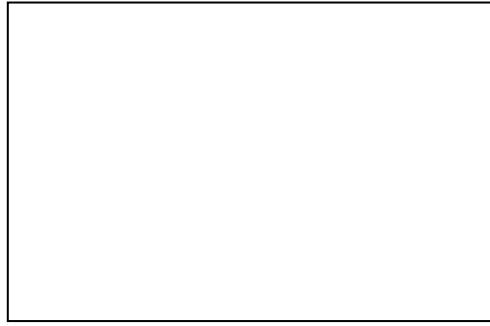
Appearance: Make a sketch of the bird, use colours if possible. Also draw how the bird's tracks or nest looks like.



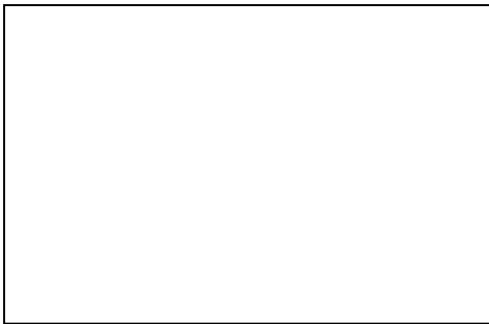
What does the beak look like? Make a sketch.



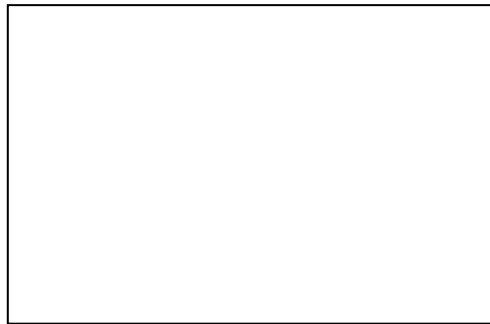
What does the tail look like? Make a sketch.



Sketch the feet of the bird.



Sketch the nest of the bird.



What is the size of the bird?

Tick the appropriate option.

VS S MS M ML L VL

What is the bird feeding on?

Does it have eye stripes?.....

What are its main colours?.....

Was the bird alone or in a group?.....

What was the bird doing while you observed it? Fighting /Roosting /Feeding/ Nesting /Pecking /Preening

.....

Describe the habitat of the bird

7. Nests of Birds

Birds are great builders and build their own nests where they lay eggs and raise their offspring. Nests are made with mud, twigs, feathers and a variety of organic materials. Some birds use cavities in trees as their nest site, others lay their eggs on the ground or even in little tunnels under the ground!

The first step that birds take is to select the location of their nest. In some species both the male and female choose the site together, in other species it is the female alone, yet in others the male does the selection alone.

The second step they undertake is material selection and building. Birds use twigs, feathers, cobwebs and leaves to build their nests. Some of the birds' nests such as the weaver birds are a beautiful sight and they build in colonies, i.e. several birds' nests in one tree. Birds build nests to protect their young from predators, as well as to keep their young warm and sheltered from adverse weather conditions. Some birds spend many weeks building their nests. Birds are so clever that when they build their nest, they orient them in such a manner as to keep them shaded during the hot afternoon and also protected against prevailing winds. They also camouflage the nests so that they blend into the environment and are not easily spotted by predators.



Figure 11 Birds next to their nests (*Image Source: African Handbook of Birds*)



Figure 12 Birds next to their nests (*Image Source: African Handbook of Birds*)

Activity 5 Build a Bird's Nest

This activity will get children out in the field and excited about birds' nests.

Step 1. Get children out in the field to collect twigs, dry leaves, moss and straw.

Step 2. Get a small brown paper bag and crumple its sides to make something of a round shaped container. Its okay if the paper gets ripped, just glue a leaf over it.

Step 3. Use glue and stick twigs and dry leaves all around and inside the brown paper bag.

Step 4. Use white tissue paper and crumple it into small balls that resemble bird's eggs.

Put the birds eggs inside and the bird's nest is ready!

Activity 6 Nests on Nature Table

This activity has been included from Birdlife Botswana's Bird Activity Book, Pg.55.

Find old, unused nests and put them on your nature table. (While some birds build o new nest every year, others use the same nest year after year so be sure that any nests collected are not from a species that reuses its old nests.) Inspect the nests to see what materials were used to construct them and try to determine how they were constructed.

Make a list of the nest building materials used. Look out for:

- Cobwebs
- Cotton
- Droppings
- Feathers
- Grasses (types)
- Hair
- Leaves
- Lichens and moss
- Mud
- Palm leaf strips
- Plastic pieces
- Shell pieces
- Sticks
- Stones
- String
- Wool

Describe how the materials were used in the construction - woven, layered, stuck in, piled on (as done with mud by some species).

Measure the nests and record their length, circumference, and size of entrance holes or the diameter and depth of a cup nest (such as a Paradise Flycatcher builds). Describe any materials found that were used to line the nest. Draw pictures of the various nests and the birds that make them. (Many birds are brightly colored during breeding season, so color your bird pictures carefully.)

8. What are Habitats?

Habitat is where plants, animals and birds live. Examples of different habitats such as woodlands, lakes, wetlands were shown. Habitat is very important for birds, as they need their habitat in order to survive. Therefore it is necessary to conserve habitats in order to safeguard birdlife.

Some of the habitats you may see in Malawi are :

Grasslands and Savannah habitat : This habitat is found in north of Malawi and you can observe it in Nyika National park. Grasslands are characterized mostly by grasses and Savannah is grassland with few scattered trees. The type of birds that live in this habitat include Black Shouldered Kite, Red-capped Lark, Pied Crow and Cattle Egret. These birds feed on grasses and wildflowers found in this habitat. What do you think will happen when humans turn grassland habitats of birds into farms to grow crops, or humans build cities in such areas?

Scrublands: This is characterized by grassland with small shrubs scattered around. You can observe this in Liwonde National Park. Birds such as White-backed Vulture, Martial Eagle and Tropical Boubou are usually found here.

Woodlands: You will find woodlands in Zomba Plateau and Malosa and Machinga to name a few areas. Many birds which feed on woodland insects live in this habitat, some of them being Green Pigeon, Cuckoo, Grey Hornbill and Black-headed Oriole. These birds build their nests on trees and feed from the fruits and insects found in woodlands. What will happen if humans cut down the trees and there is no woodland for birds?

Wetlands and Aquatic habitat: The famous Lake Malawi is the largest lake, followed by Lake Chilwa and there are several wetlands in Malawi that is habitat for water birds. Lakes, rivers and swamps are habitats for birds like Ducks, Storks, Bee-eaters, Herons and Fish Eagles. Lake Chilwa is the home of many different types of birds. You may refer to Annex to see their pictures and descriptions. These birds feed on fish and vegetation found in the waterways. What will happen if humans hunt too many birds?



Figure 13 Grasslands

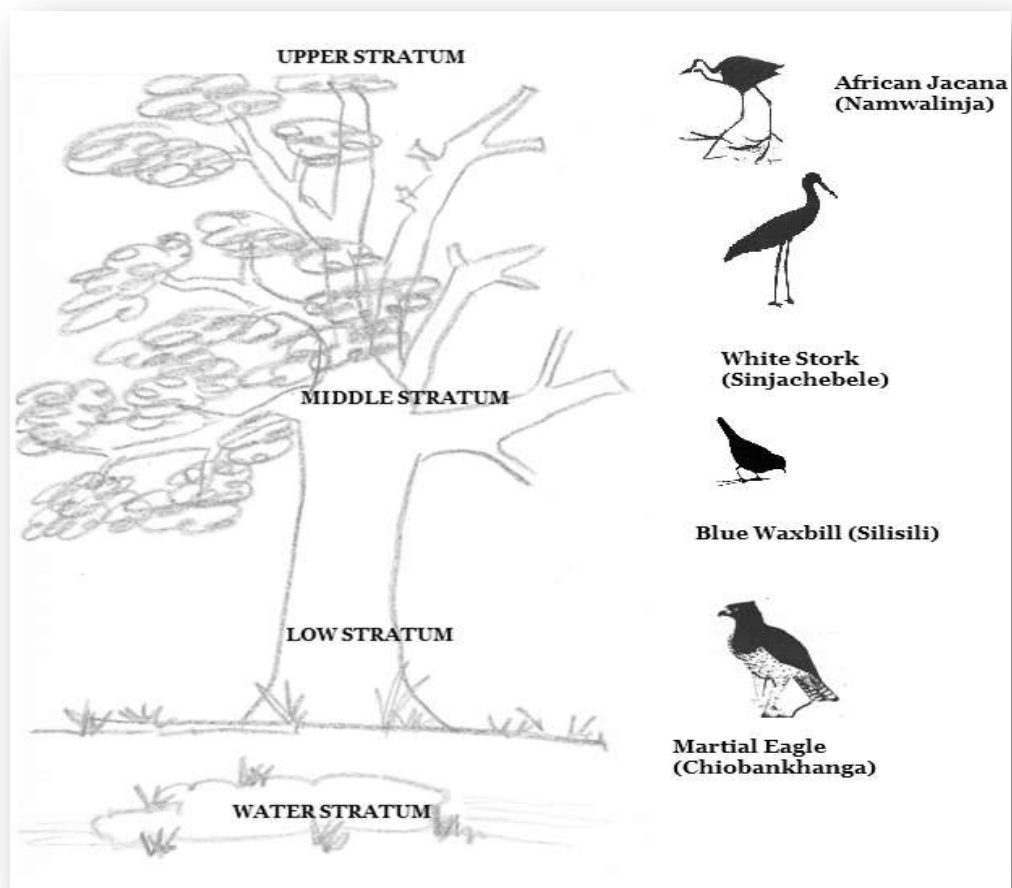


Figure 14 Woodlands



Figure 15 Wetland

Activity 7 Match the birds to their Habitats



Activity 8 Know the Habitat

This activity has been adapted from Birdlife Botswana Pg.94-103 and modified to suit Malawi's situation.

Habitat 1 – Grassland

Ask students the following questions to generate interest amongst them about Grassland habitat:

1. What are the main characteristics of this habitat?
2. Where are they found in Malawi?
3. What activities are done by birds in this habitat?
4. What attracts birds into this habitat?
5. How would the loss of or destruction of this habitat affect birds that use this habitat?
6. What are some of the causes of change to habitats?
7. What can be done to lessen the changes?

Here are list of birds usually found in grasslands of Malawi:

Black Shouldered Kite (*Elanns caerulescens*) known as Nankapakapa (Ch)

Black-bellied Korhaen known as Chidokowi or Chingoye(Ch)

Pied Crow known as Kwangwala(Ch)

Yellow-throated Longclaw (*Maxcronyx crocens*) known as Mwilimwili (Ch)

Pin-tailed Whydah known as Kamkwiche

Black headed Heron known as Kongwe (Ch)

Cattle Egret known as Kakowa (Ch)

Habitat 2 – Savannah and Bushveld

Ask students the following questions to generate interest amongst them about Savannah and Bushveld habitat:

1. What are the main characteristics of this habitat?
2. Where are they found in Malawi?
3. What activities are done by birds in this habitat?
4. What attracts birds into this habitat?
5. How would the loss of or destruction of this habitat affect birds that use this habitat?
6. What are some of the causes of change to habitats?
7. What can be done to lessen the changes?

Here is a list of birds usually found in Savannah and Bushveld in Malawi:

White-backed Vulture known as Mwinmba (Ch)

Bataleur known as Mkhwi (Ch)

Martial Eagle known as Chiombankhanga (Ch)

Red-necked Francolin known as Nkhwali (Ch)

Grey Lourie known as Nkhue

Fiery necked Nightjar known as Namame(Ch)

Cradinal woodpecker known as Gogomphanda (Ch)

Southern Black Tik known as Kalululu (Ch)

Chinspot Batis known as Cikonkolo (Ch)

Tropical Boubou known as Mulicile(Ch)

Habitat 3 – Woodlands Habitat

Ask students the following questions to generate interest amongst them about Woodlands habitat:

1. What are the main characteristics of this habitat?
2. Where are they found in Malawi?
3. What activities are done by birds in this habitat?
4. What attracts birds into this habitat?
5. How would the loss of or destruction of this habitat affect birds that use this habitat?
6. What are some of the causes of change to habitats?
7. What can be done to lessen the changes?

Here is a list of birds usually found in woodlands in Malawi:

Green Pigeon known as Nyimbili (Ch)

Klaas Cuckoo known as Njalatiye (Ch)

Red-chested Cuckoo known as Bwantontha or Mwandontha(Ch)

Red-billed (Green) Wood Hoopoe known as Ncokocoko (Ch)

Trumpeter Hornbill known as Kakamila (Ch)

Grey Hornbill known as Bango or Khope (Ch)

Black-collared Barbet known as Chilegodo (Ch)

Yellow-fronted Tinker Barbet known as Silinkhanga (Ch)

Black-headed Oriole known as Nkwiyo (Ch) from its “twee-oo” call

Henghin’s Robin known as Nanthambwe or Joha (Ch)

Red-headed Weaver known as Conko(Ch)

Paradise Flycatcher known as Kankhalangu (Ch)

Puffback known as Civuwe (Ch T)

Habitat 4 – Farmlands Habitat

Ask students the following questions to generate interest amongst them about farmlands habitat:

1. What are the main characteristics of this habitat?
2. Where are they found in Malawi?
3. What activities are done by birds in this habitat?
4. What attracts birds into this habitat?
5. How would the loss of or destruction of this habitat affect birds that use this habitat?
6. What are some of the causes of change to habitats?
7. What can be done to lessen the changes?

Here is a list of birds usually found in farmlands of Malawi:

Cattle Egret known as Kakowa(Ch)

White Stork known as Sinjachewe (Ch)

Red-necked Francolin known as Nkhwali (Ch)

Burchell's Concal known as Nkhuta (Ch)

Spotted Eagle Owl known as Kadzidzi (Ch)

Cape Turtle Dove known as Njiwa (Ch)

Red-eyed Dove known as Njiwadhiti (Ch)

Red-necked Francolin known as Nkhwali (Ch)

Greater Striped Swallow, Lesser Striped Swallow, Grey-rumped Swallow, European Swallow are all known as Nanzeze (Ch) due to their zig-zag flight

Fork-tailed Drongo known as Nthengu(Ch)

Pied Crow known as Khwangwala(Ch)

Red-billed Quelea known as Mpheta (Ch)

Yellow-eyed Canary known as Chingolopiyo (Ch)

Habitat 5 – Rivers and Streams Habitat

Ask students the following questions to generate interest amongst them about Rivers and Streams habitat:

8. What are the main characteristics of this habitat?
9. Where are they found in Malawi?
10. What activities are done by birds in this habitat?
11. What attracts birds into this habitat?
12. How would the loss of or destruction of this habitat affect birds that use this habitat?

13. What are some of the causes of change to habitats?
14. What can be done to lessen the changes?

Here is a list of birds usually found near rivers and streams in Malawi:

Pied Kingfisher known as Tembo (Ch)

Giant Kingfisher known as Cakaka (T)

Malachite Kingfisher known as Kalikelombe (T)

Blue-cheeked Bee-eater known as Namantheleza (Ch)

Yellow Wagtail known as Chitopila (Ch)

Lesser African Weaver known as Tchete(Ch)

Fire-crowned Bishop known as Tchete(Ch)

Red Bishop is also known as Tchete (Ch)

NOTE: The list of birds found near Lake Chilwa are given in Annex.

9. Food Chain

Watching birds is a wonderful way for children to learn about food chains and food webs in an ecosystem. Every living thing is part of a food chain. Energy from the sun is the start of a food chain; plants use the sun's energy to convert minerals in the soil into green leaves, or vegetables or fruits. This is called photosynthesis. There are many organisms that eat the products from the photosynthesis process and the flow of energy can be seen when you observe who eats what.

Let us take an example of a plant being eaten by worms, which is in turn eaten by a bird. The bird is eaten by a bigger bird of prey. Ultimately when the big bird of prey dies, its body decomposes by bacteria or fungi found in soil and become food for plants. This is an example of a simple food chain. The bird of prey, when it dies decomposes into the soil and becomes nutrients for plants.

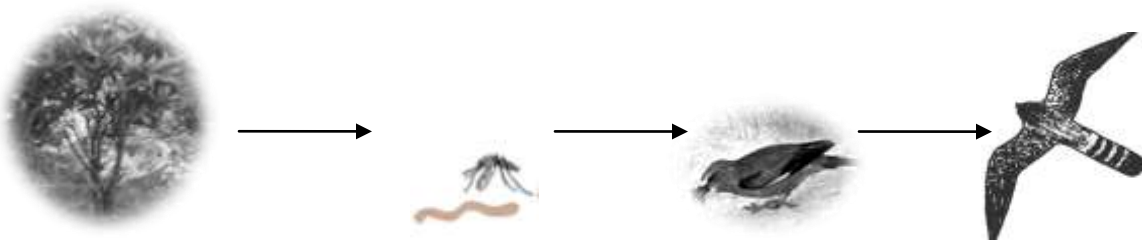


Figure 16 Food Chain

Activity 9 Group Discussion

- Can you imagine what will happen if one link in this chain becomes extinct? Remember we discussed what extinction means under “Birds in Danger”.
- Decomposers like bacteria and fungi may seem tiny and not important. But imagine what will happen if they become extinct? How will this affect the earth?

Activity 10 Food Chain Game

This activity has been adapted from Birdlife Seyshelles Pg.23,24.

Background Information: This active outdoor game will help students to better understand the concept of food chains and pollution in a food chain. You will need a large open area to play this game.

Introduction:

- Explain the rules of the game (see next page)
- Divide the class up into the roles of insect (herbivore), lizard (carnivore), and kestrel (top carnivore).
- Show the children the boundaries of the area where the game will be played.

Activity:

- Play the game once with equal number of insects, lizards and kestrels.
- The game will end quickly like this. Discuss how in nature there normally are many plants, a few herbivores, less carnivores and even fewer top carnivores.
- Play the game again this time with about 20 herbivores, 8 carnivores and 2 top carnivores.
- With older students, discuss whether the game worked better this time and get the students to suggest other improvements, eg. Add one player called “death and disease” who can randomly kill off other players, who then return their plants to the ground.
- Play the game once more, this time make about 25% of the plants a different colour and mix them with the others. Once the game is finished, get the survivors to show how much energy they managed to get and discuss how polluted bits might affect them, eg. Make them sick, kill them, cause their offspring to be deformed, or their eggshells to be thin etc.

Summary:

- Discuss how pollution can get into food chains and affect the health of humans and wildlife.

Extension:

- Think of ways to adapt and improve the game further.
- Investigate real examples of pollution in the food chain.

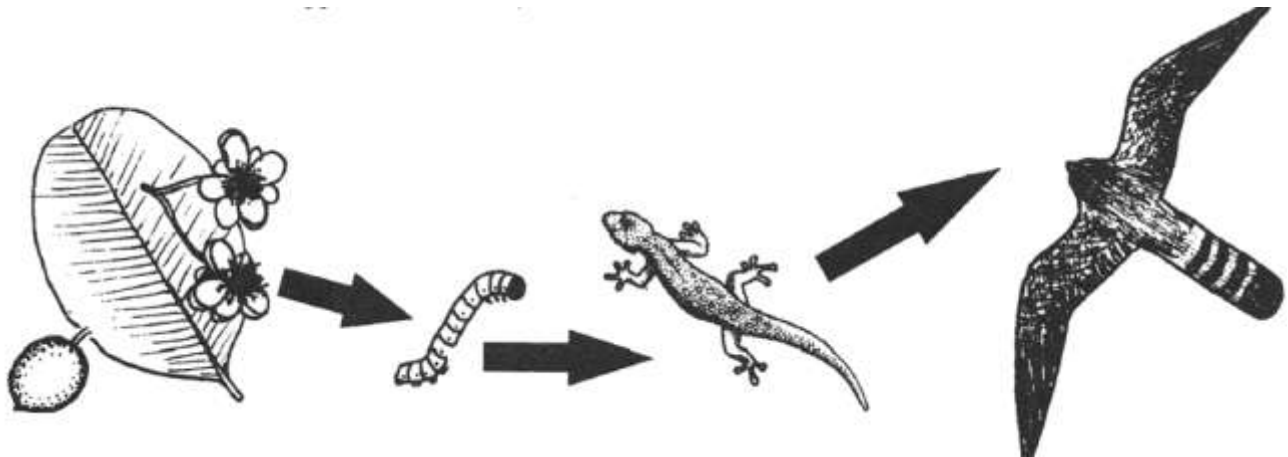


Figure 17 Food Chain (Image Source: Birdlife Seyshelles)

Food Chain Game instructions

The objective of this game is for the children to simulate the different elements of a food chain. It is a fast running game, and you need a good-sized open space to play.

1. You need to divide the children up into three groups: about 20 insects (herbivores), about 8 carnivores (lizards), and 1 or 2 top carnivores (kestrels). Give each of them a plastic bag which will be their "stomach" to store their food. It might be helpful to put different coloured arm bands or tags on the lizards and Kestrels so that they can be recognized, or give them different types of bags for stomachs.
2. The plants will be represented by bits of paper or popcorn, or even by leaves (all one kind is best). Spread the "plants" around the playing area just before you start playing.
3. On the teacher's signal, the insects can run around collecting as many "plants" as possible and stuffing them in their "stomachs".
4. After a minute or so, let the lizards go to catch and "eat" the insects. Any insects that are caught must give the contents of their "stomach" to the lizard, and are out of the game.
5. After another couple of minutes, let the kestrels start chasing the lizards, who are still chasing insects. Again, lizards which are caught must give up their food to the kestrel and are out of the game.
6. Unless the game stops itself (eg all the lizards and insects are eaten), give a signal to stop the game after 5 minutes or so.
7. Gather everyone around and discuss the contents of the survivors' stomachs. Discuss that this represents their energy that the animal has obtained from the other animals or plants he or she has eaten. Discuss whether the survivors have enough energy to stay alive, to reproduce, etc.

Pollution in the Food Chain version:

Make 75% of the "plants" one colour or type of leaf, representing healthy food, and the remaining 25% another colour or type, representing plants that have been polluted. Play the game as above, but at the end when you look at the contents of the survivors' "stomachs", explain that some of the plants were polluted, and how the pollution moved up the food chain. Discuss how the plants and animals might be affected by the pollution.

Pyramid of numbers version:

In order to help children understand the concept of pyramid of numbers, first play the game with equal numbers of insects, lizards and kestrels. The game ends quickly, and none of the animals get enough to eat to survive and reproduce. Explain that in nature there are many plants, less herbivores, and less carnivores as you go up the food chain. Play the game again, this time with about 20 insects, 8 lizards and 1 or 2 kestrels, and see if it works better.

Pyramid of human sculpture:

Get some of the children to make a human pyramid in a grassy area. Get 4 strong children as plants on the bottom on hands and knees. 3 children representing insects should climb on them. 2 children representing lizards balance on top of the insects and then one small child representing the kestrel goes on top. This illustrates the concept of the pyramid of numbers in a food chain.

Activity 11 Web of life game

This game has been adapted from Birdlife Seyshelles Pg. 25.

Background:

A food chain is a useful concept for understanding how energy moves through a living system. However, in a natural community, a single isolated food chain rarely exists!

Most plants are eaten by many different kinds of herbivore: some eating their leaves, some their flowers, fruits, seeds, etc.

Most herbivore eat several different kinds of plants, most carnivores eat different kinds of animals. A real natural community is a complex web made up of many different inter-connected food chains.

Introduction:

- Draw a diagram of a simple food chain on the chalkboard. Eg. Flower nectar- fly- gecko- kestrel.
- Discuss with students if this shows the whole picture. Does the fly eat only nectar from one flower? What about the fly, gecko and kestrel?
- Add connections showing some of the other foods the animals might eat, until you have a diagram which looks more like a web. Introduce the concept of a web as one that better represents the relationships between plants and animals in nature.

Activity:

- Research the connections between plants and animals in an environment : Lake Chilwa, Zomba Plateau etc.
- Get the students to work in groups to make cards with drawings and names of different animals and plants in this ecosystem, and have the students create different food chains and webs with them.
- Use cards to make a wall display illustrating the web.
- Expand the web concept to include links other than food: eg. Animals rely on plants for shelter, nesting materials, plants need animals for pollination or spreading seeds, etc. Also include links such as decomposers eating dead animals or dead leaves, branches etc. The web can now be called the “Web of life” rather than just a simple food web.
- Play the web of life game : Give each of the children a card with the name of a plant or animal in the ecosystem. Get the children to stand in a circle. Starting with one of the children who is a plant, use a ball of string to connect everybody in the circle (the children hold the string as you connect them).

Summary and Extension:

- Discuss the visual impact of the webs you have created, and what might happen if some elements of the web were removed.
- Create a paper mache ecosystem to illustrate the web of life you have researched.
- Compare webs representing different natural communities. What do they have in common? How are they different?
- Visit Lake Chilwa or another special nature reserve to learn more about these natural communities.

10. Bird Behaviour

Bird behaviour refers to what birds do in response to its environmental conditions and changes around it. Birds are intelligent and creative and studying their behaviour is both fun and fascinating. We discussed about the wonders of flying in Chapter 4 and will also talk about bird migration in the next Chapter (13). In this chapter we will look at the other aspects of bird behaviour that you can observe when you go bird watching.

The most common bird behaviour you can observe is “feather care”. Birds take care of their feathers by preening, bathing and sunning.

Preening is when the bird nibbles and strokes its feathers until they are in their correct location. Birds use their beaks for this purpose.

Bathing is done in ponds, in birdbaths or in little puddles. Birds will splash some water on their feathers or spread their wings wide in the water, while others like water birds take a more elaborate bath. Where there is no water, birds use dust to clean themselves.

Sunning is the behaviour of basking in the sun to get warm and also to get rid of parasites (mites and lice) on their body. Birds can just lift their wing to the sun or some birds spread their entire frame to a full sunbathing posture. Birds get vitamin D from the sun just like us humans.

Another behaviour you would have noticed is “singing”. Have you ever wondered why birds sing? It is because they are trying to impress their mates. Songs are usually loud and repetitive and every bird species have their own style of singing. When communicating, birds use “calls”. Calls are used by birds to interact with their family and also to warn other birds of predators. Birds use calls to share information about where to find food and also to be in touch with other birds while flying. Calls are very useful when birds are migrating so the whole flock stays together.

Mobbing is a behaviour that birds engage in to defend their offspring and they do this in the form of emitting alarm sounds. This behaviour attracts many birds and they all make alarm sounds together in order to harass or scare the predator.

Nesting is a behaviour that birds employ to lay eggs and incubate them. Some birds will immediately abandon their nest after the eggs are hatched, while others will raise their offspring in the nest year after year. The availability of materials and the proximity of predators all determine where a bird builds its nests. Some birds weave elaborate nests, while others just lay eggs on the ground without much effort spent in nest building. More on nests can be read in Chapter 8.

Migration is an interesting bird behaviour which requires a full chapter to be dedicated to it. Therefore please see Chapter 11 on migration for more information on this behaviour.

Activity 12 What is the bird doing?

This activity has been adapted from “Birds are brilliant!”, Birdlife Seyshelles.

Print the activity sheet and during a field visit for bird watching, ask children to tick in the little boxes when they find a bird doing any of the behaviours shown.



standing ☐



preening ☐



walking ☐



eating ☐



perching ☐



drinking ☐



flying ☐



bathing ☐



hopping ☐



singing ☐

Activity 13 Listening to birds

This activity has been adapted from Birdlife Botswana, Pg 41.

Listening to birds can be an enjoyable experience. However, one must train one's ears to their calls, as one bird's call is different to another. Take children outside on a bird watching trip and ask them to record in words the sounds of birds they find. Some examples are given below. The names of the birds in Chichewa are given too.

Cape Turtle Dove (*Streptopelia capicola*) known as Njiwa(Ch) makes sound like “work Harder, work Harder”.

Laughing Dove (*Streptopelia senegalenses*) known as Njiwakuwalwa (T) makes sound like “coo-coo-CUK-coo-coo”.

Grey Go-away-bird (Grey Lourie) (*Corythaixoides concolor*) known as Nkhue (Ch) makes sound like “Gwaaay”.

Brown-hooded Kingfisher (*Halcyon albiventris*) known as Kalalangómbe (Ch) makes a “kik-kik-kik-kik-kik-kik”.

Burchell's Coucal (*Centropus superciliosus*) known as Nkuta (Ch) makes a deep bubbling “doo-doo-doo-doo” repeated like the sound of water poured from a bottle.

Red-faced Mousebird (*Urocolius indicus*), called Capopo in Chichewa, makes a sound “tshivovo”.

Little Bee-eater (*Merops pusillus*) known as Fulagombe (Ch), calls “chip,chip, trree-trree-trree”.

Grey Hornbill (*Tockus nasutus*) known as Bango(Ch), whistles “phee-pheoo-phee-pheoo”.

Diderick Cuckoo (*Chrysococcyx caprius*), called Njalatiye in Chichewa says “dee-dee-dee-

deedrik” by the males and “deea-deea-DEEA” by the females.

Red-chested Cuckoo (*Cuculus solitaries*), called Bwantonta (Ch) makes sound “piet-my-frou” by males and “pik-pik-pik-pik” by females which is said to sound like rain drops.

Fork Tailed Drongo (*Dicrurus adsimilis*), known as Nthengu (Ch) makes a “Twank” and is observed to be restless as it moves from one piece of wood to another.

Tropical Boubou (*Laniarius aethiopicus*) is known as Mwiyo or Miyomwiyo (Ch) makes three liquid bell like notes answered by a “hheee”.

Masked Weaver (*Ploceus velatus*) is called Conko (Ch) and makes a sharp “zik-zik”.

Blue Waxbill (*Uraeginthus angolensis*) known as Silisili (Ch) sings like “Weety-weet”.

Black-headed Oriole (*Oriolus larvatus*) is called Nkwiyo (Ch) from its “twee-oo” sound.

Spotted Eagle Owl (*Bubo africanus*) known as Kazizi (Ch) makes a “hh-hoooo” sound by the males and “hm-hhn-hoo” sound in females with their sound rising on the second syllable.

11. Bird Migration

Many birds make annual flights from one continent to another, breeding in one and bringing up their young in another. Such movements are known as Migration. Africa has many such visitors. Approximately 4.5 billion birds migrate to Africa from Europe and Asia as well as North-Western regions of North America. Often, after a round trip of many kilometers, a bird will nest in the same place as it did in the previous year. Birds come to Africa to escape the cold winter in Europe, Asia and North America. They also come to enjoy better food.

In Southern Africa there are three recognizable kinds of migration:

1. **Complete Migration:** This includes those birds which visit Southern Africa during the non-breeding season from Europe and Asia between the end of August and early September to April. They are normally absent during the remainder of the year.
2. **Trans-equatorial migration:** This includes those few species which inhabit Southern Africa at one time of the year and move northwards to the equator and beyond at other seasons.
3. **Local migrations:** this includes those species which move about within Southern Africa. By putting rings on birds legs, they can be traced easily when they migrate. In general, migration is either continental or Africa.

It is important that birds be protected as they come as far away as Europe, Asia and North America.

To study migration of birds, scientists mark birds with temporary plumage dyes, metal and use of electronic devices that will help track the bird and its movement. Satellite transmitters have also been used to track bird migrations.

Activity 14 Make a Migration Calendar

Name of Bird	Average Date of First arrival	Earliest Date of first arrival	Comments/ Observations
Eg. African Jacana	26 September	23 September	

Activity 15 Migration Game

Imagine you are a bird migrating from Europe to Africa in search for good food. Play this game with your friends using dice. The first person who reaches Malawi is the winner.

1 START	2 Its getting cold in Europe you need to get ready to migrate	3 You are fat enough to migrate and begin flying	4 Fly, jump to 10	5 Oops you got stuck in a strong wind, go back to 1	6 Flying	7 Fly away jump to 10
						8 Fly away jump to 12
						9 Hunter shoots you down, go back to 1
16 Conserved area, lots of food, go 3 spaces ahead	15 An Eagles ate me up, go to START	14 Polluted water go back 6 spaces	13 Strong wind and heavy rain, go back 2 spaces	12 Lovely sunlight and many trees in this country go to 15	11 No water to drink in this country, go back 3 spaces	10 Strong wind and heavy rain, go back 5 spaces
17 Draughts in this country, go back 3 spaces						
18 Very cold here, go back 5 spaces	19 An airplane collided with you, go back to START	20 Trees have all been cut down to build a city, go back 3 spaces	21 You build a nest here go forward 1 space	22 tourists disturb your nest, go back 5 spaces	23 A cat in the city chases you go back 3 spaces	
					24 Forest full of trees go to 25	
						25 Congratulations !!! You have reached Malawi!

12. Poems/stories on Birds

Song of The Hummingbird

The rain has stopped
And daylight delays
The night is calm
And anticipates its rays

As morning breaks through
Like a deer through the hedge
She is already found
At a rose petal's edge
Such a simple life
Portrayed in such hurry

Though its all in a day's work
There is no time for her to worry
Gathering nectar for food
Her song she plays loud
Though merely a result to her flight

Her song she plays proud
So the next time you see her
Don't say a single word for you
Will have just missed the
Song of the Humming Bird.

Activity 16 Poem and Story writing competition

Conduct a story writing and poem writing competition at your school. The theme should be birds and how they affect our lives, or any other theme related to birds.

13. Birds in Danger

Birds around the world are under threat of getting extinct. Extinction of a bird species means there will be no bird alive from that species anywhere in the world. Scientists have found that one bird species has been getting extinct every 100 years for the past 500 years. This rate of extinction is said to increase because of many natural and anthropogenic (manmade) reasons. Bird species get extinct from habitats destruction, global warming, unsustainable hunting and alien species invasion. Malawi is known to have 9 endangered species.

Birds are in danger from habitat loss and destruction. Humans need trees cut down to use as firewood and make paper from wood as well as clear land so it can be used as farms to grow crops for food. Humans cut down trees and clear woodlands where birds used to breed and build their nests. So, when the habitats of birds are destroyed they have no place to breed or get food, they get extinct as a result.

Sometimes humans bring in non-native species of animals into an area where birds live. These predators eat up the bird eggs and food available for birds. This can also cause extinction of birds.

Did you know?

Some of the birds which are now extinct in Malawi are given in Table below:

Name	Habitat	Former location in Malawi
Bronze-naped Pigeon <i>Columba delegorgei</i>	Mid-altitude rain forest, feeds on figs.	Thyolo Mountain Forest Reserve, where it was discovered in 1944
Green Barbet race <i>belcheri</i> <i>Stactolaema olivacea</i>	Mid-altitude evergreen rain forest. Depends on figs.	Thyolo Mountain Forest Reserve
Grey-cuckoo Shrike <i>Coracina caesia</i>	Mid-altitude rain forest, also in riparian forest.	Thyolo Mountain Forest Reserve
Spotted Ground-thrush <i>Zoothera guttata</i>	Mid-altitude rain forest	Soche Mountain Forest Reserve Thyolo Mountain Forest Reserve.
Rudd's Apalis <i>Apalis ruddi</i>	Deciduous and semi-evergreen thicket	Lengwe National Park Nchalo
Woodward's Batis <i>Batis fratum</i>	Lowland rain forest	Malawi Hills, Nsanje Lengwe National Park
Oustalet's White-bellied Sunbird <i>Nectarinia oustaleti</i>	Thin miombo woodland	North Zambia / Malawi border south of Chitipa.
Green-headed Oriole <i>Oriolus chlorocephalus</i>	Lowland and mid-altitude rain forest	Thyolo Mountain Forest Reserve
Magpie Shrike <i>Urolestes melanoleucus</i>	Acacia –dominated savanna or patches of thorn thicket.	Nsanje District

Hunting of birds is a livelihood for some, a sport for others. If excessive hunting is done bird numbers may reduce to such an extent that they eventually become extinct.

Global warming and climate change is causing habitats to change. Some places are getting dryer, others wetter and as a result vegetation changes. This has an impact on the food availability of birds. Usually a number of factors contribute to extinction of species and global warming may be one of them.

Table 2 Globally threatened species and their threat level in Malawi (Birdlife International, 2004)

Name	Scientific name	Status/ Threat level	Location
Madagascar Pond-heron	<i>Ardeola idae</i>	EN/ Low	Malagasy migrant. Lilongwe sewage ponds, Lifu (near Salima), Namizimu, Shire River, Liwonde N.P., Hynde Dam, Limbe and other Blantyre Dams, Lengwe N.P. waterholes Elephant Marsh (James landing)
Slaty Egret	<i>Egretta vinaceigula</i>	VU	Lower Shire
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT / High	Lake Chiwondo, Southern Lakeshore, Lake Chilwa, Shire Valley, Lilongwe and Bunda Dams
Maccoa Duck	<i>Oxyura maccoa</i>	NT	Chelinda, Nyika Plateau Kauma sewage works, Lilongwe
Lappet-faced Vulture	<i>Torgos tracheliotos</i>	VU / Medium	Nyika N.P., Vwaza Marsh W.R., Kasungu N.P., Liwonde N.P., Lengwe N.P., Mwabvi W.R., Dzalanyama F.R.
White-headed Vulture	<i>Trigonoceps occipitalis</i>	VU	All National Parks and Wildlife Reserves.
Pallid Harrier	<i>Circus macrouris</i>	NT / Low	Paleartic migrant. Nyika Plateau and any grassland.
Lesser Kestrel	<i>Falco naumanni</i>	VU / Low	Paleartic migrant. Lilongwe, Lake Chilwa floodplain.
Taita Falcon	<i>Falco fasciinucha</i>	NT / Low	Kirk Range. Chipata Mountain.
Corncrake	<i>Crex crex</i>	U / Low	Paleartic migrant. Rank grass.
Wattled Crane	<i>Grus carunculatus</i>	VU / High	Nyika N.P., Vwaza Marsh W.R., Kasungu N.P.
Denham's Bustard	<i>Neotis denhami</i>	NT / Medium	Montane grassland; Nyika and S. Vipya plateaux.
Great Snipe	<i>Gallinago media</i>	NT / Low	Paleartic migrant. Dambos, swamp.
African Skimmer	<i>Rhynchops flavirostris</i>	NT / Medium	Lake Malawi, Shire River, Lake Chilwa, Plateau dams, Lake Kazuni.
Lilian's Lovebird	<i>Agapornis lilianae</i>	NT / Medium	Liwonde National Park
Stierling's Woodpecker	<i>Dendropicos stierlingi</i>	NT / High	Miombo woodland. Dzalanyama Forest Reserve, Namizimu F.R., Mangochi Mountain, Liwonde F.R. (Chiunduzi Hill, Chikala Hill), Neno and Thambani F.R.
Blue Swallow	<i>Hirundo atrocerulea</i>	VU / Low	Wilindi-Matipa Ridge in Misuku Hills, Nyika Plateau, North and South Vipya Plateaux, Kirk Range and Mount Mulanje.
Spotted Ground-thrush	<i>Zoothera guttata</i>	EN / High	Forest. Chikala Hill

Name	Scientific name	Status/ Threat level	Location
Thyolo Alethe	Alethe choloensis	EN / High	Forest. Ruo Gorge, Lujeri Tea Estate, Satemwa Tea Estate, Zomba Plateau, Chikala Hill
Gunning's Akalat	Shephardia gunningi	VU / High	Nkhata Bay lakeshore & S. Viphya escarpment.
Basra Reed-warbler	Acrocephalus griseldis	EN / Low	Paleartic migrant. Nchalo, Lower Shire Valley and Lengwe N.P. Mvuu, Liwonde N.P. north Lake Chilwa
White-winged Apalis	Apalis chariessa	VU / High	Forest. Ruo Gorge, Lujeri Tea Estate, Satemwa Tea Estate, Zomba, Chikala Hill
Yellow-throated Apalis	Apalis thoracica flavigularis	EN / Medium	Mulanje Mountain, Zomba Mountain, Malosa Mountain
Olive-headed Weaver	Ploceus olivaceiceps	NT / High	Mossy miombo woodland. North and South Vipya, Chimaliro F.R., Dzalanyama F.R. and Namizimu F.R., Ntchisi F.R., Liwonde Hills, Malosa F.R., Kirk range south to Thambani F.R.
Locust Finch	Paludipasser locustella	NT / Low	Dambos of central plateau, Namizimu

EN = endangered VU = vulnerable NT = near threatened FR = Forest Range NP = National Park
WR= Wildlife Reserve

Table 2 gives a list of globally threatened birds found in Malawi.

Activity 17 Case Study of Dodo Bird extinction

Answer the questions given at end of Case Study.

In 1598, the island of Mauritius was home to an interesting bird called the Dodo bird which was not found anywhere else in the world. It was a beautiful bird with a curved beak. Unfortunately it was a type of bird that couldn't fly (like the hen). Therefore, it was living only in the island of Mauritius as it couldn't fly to any other country unlike some migratory birds that fly long distances across different countries.

Many sailors came to Mauritius from Europe and in their ships they brought along animals such as rats, cats, dogs and pigs. These animals destroyed the nests of the Dodo bird and humans hunted the bird for sport and food. Within 80 years the numbers of Dodo bird reduced and finally it became extinct.

Questions:

1. Why was the Dodo bird vulnerable to predators and easy to hunt?
2. What could have been done to ensure that the Dodo bird did not get extinct?

Activity 18 Draw a poster

Ask students to draw a poster to explain to people the importance of birds and the threat of extinction.

14. Bird Champions

Birds are truly beautiful and most loved, and here we discuss some of the champions amongst birds.

Fastest Bird and Largest Bird

The fastest bird is the Ostrich and they are also the tallest. They are so fast (70km/hr) that they can even outrun lions, however they cannot fly. Ostriches lay very large eggs which weights up to the weight of two dozen chicken eggs and has strong shells which can even support a man's weight. The largest bird is also the Ostrich. They also have the largest eyes, 2 inches in diameter.



Figure 18 Ostrich (*Image Source: Birdlife Botswana*)

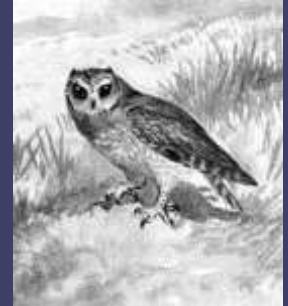
Smallest Bird

The smallest bird is said to be the Bee Hummingbird. It is found in Cuba and weighs only 1.6g and 2.75 inches in length, about as long as your finger.



Figure 19 Bee Hummingbird (*Image Source: Birdlife Botswana*)

Did you know?



An Owl can turn its head 200 degrees. This is because unlike other birds which have eyes on sides of their head, Owls have both eyes in the front of their face, so to look at what is on their sides they turn their heads almost completely to their back.

(Image source: *African Handbook of Birds*)

Fastest flyer

The fastest flying bird is the Peregrine Falcon. They can fly as fast as 200 km/hr, which is faster than what most cars can drive!



Figure 20 Peregrine Falcon (*Image Source: Birdlife Botswana*)

Fastest Swimmer

The fastest swimmer is Gentoo Penguin which is found on the Antarctic Islands. They can swim 40 km per hour.



Figure 21 Penguin (*Image Source: Birdlife Botswana*)

Heaviest Bird

Kori Bustard is the heaviest bird. It weight up to 18kg. They can hunt for prey on the ground, but also eat the gum of acacia trees.

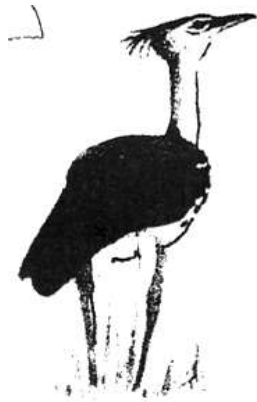


Figure 22 Kori Bustard (Image Source: Birdlife Botswana)

Highest flyer

Ruppell's Vulture can fly so high that it has come into collision with an airplane at 11,000 ft above ground. It is about 1m (as long as an ironing board) and is now considered "near threatened", which means they need to be conserved to increase their numbers. This Vulture was named after the German Explorer Ruppell who discovered it.



Figure 23 Ruppell's Vulture (Image Source: Williams J.G, Arlott N, 1963)

Marathon flyers

Swifts can fly long distances without stopping or resting, sometimes they fly for months! They feed on insects while flying and are believed to even sleep while flying.



Figure 24 Horus Swift (*Image Source: African Handbook of Birds*)

Largest beak

The Australian Pelican has the largest beak up to 47cm long, about as long as its neck. It is found in Australia and Papua New Guinea.



Figure 25 Australian Pelican (Image Source: www.australiagift.com)

15. Bird Watching in Malawi

Malawi has about 653 species of birds and 18 are near endemics. This makes Malawi a special place for bird watching. Figure 26 shows the places where one can bird watch in Malawi.

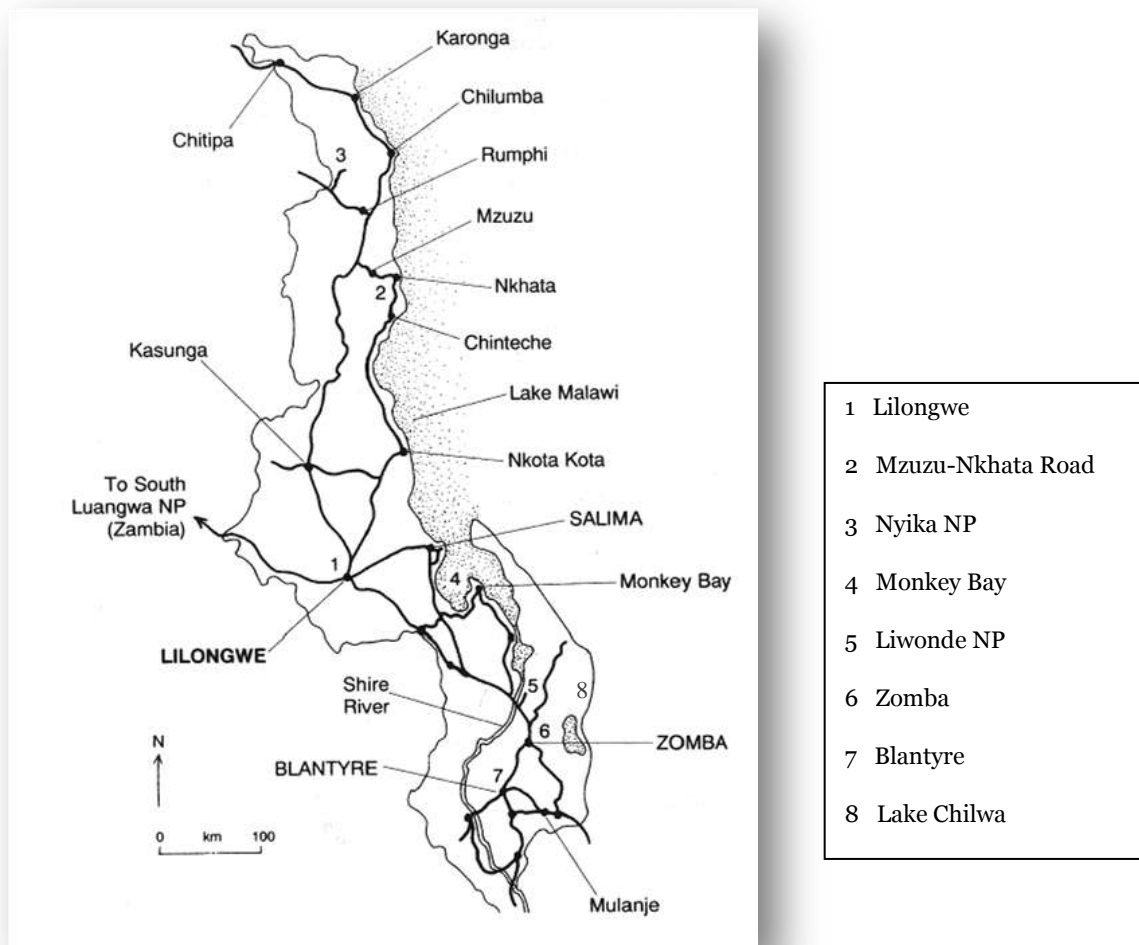


Figure 26 Locations for Bird watching in Malawi (Modified from Wheatley N, 1996)

According to Wheatley,N.(1996), near-endemic birds of Malawi are the following:

- | | |
|--|---|
| 1. Miombo Barbet | 10. Chaplin's Apalis |
| 2. Stierling's Woodpecker | 11. Spot-throat |
| 3. Fuelleborn's Boubou | 12. Lesser Seedcracker |
| 4. White-chested Alethe | 13. Bertrand's and Olive-headed Weavers |
| 5. Babbling Starling | 14. Buff-shouldered Widowbird |
| 6. Sharpe's Akalat | 15. Yellow-browed Seedeater |
| 7. Olive-flanked Robin-Chat | 16. Cholo Alethe |
| 8. Shelley's and Sharpe's Greenbuls | 17. White-winged Apalis |
| 9. Black-lored and Churring Cisticolas | 18. Malawi Batis |

Table 3 below gives a list of threatened birds which have been found in Malawi.

Table 3 Threatened birds in Malawi (From Birdlife International, 2008)

Name	Scientific name	Status	Recorded Location
Maccoa Duck	<i>Oxyura maccoa</i>	NT	Chelinda, Nyika Plateau Kauma sewage works, Lilongwe
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT	Lake Chiwondo, Southern Lakeshore Lake Chilwa, Shire Valley, Lilongwe and Bunda Dams
Madagascar Pond-heron	<i>Ardeola idae</i>	EN	Lilongwe sewage ponds, Lifu (near Salima), Namizimu, Shire River, Liwonde N.P., Hynde Dam, Limbe and other Blantyre Dams, Lengwe N.P. waterholes Elephant Marsh (James landing)
Slaty Egret	<i>Egretta vinaceigula</i>	VU	Lower Shire
Taita Falcon	<i>Falco fasciinucha</i>	NT	Kirk Range Chipata Mountain
Lesser Kestrel	<i>Falco naumanni</i>	VU	Lilongwe, Lake Chilwa floodplain
White-headed Vulture	<i>Trigonoceps occipitalis</i>	VU	All National Parks and Wildlife Reserves.
Lappet-faced Vulture	<i>Torgos tracheliotos</i>	VU	Nyika N.P., Vwaza Marsh W.R., Kasungu N.P., Liwonde N.P., Lengwe N.P., Mwabvi W.R., Dzalanyama F.R.
Pallid Harrier	<i>Circus macrouris</i>	NT	Nyika Plateau and any grassland.
Wattled Crane	<i>Grus carunculatus</i>	VU	Nyika N.P., Vwaza Marsh W.R., Kasungu N.P.
Blue Swallow	<i>Hirundo atrocerulea</i>	VU	Wilindi-Matipa Ridge in Misuku Hills, Nyika Plateau, North and South Vipya Plateaux, Kirk Range and Mount Mulanje.
Yellow-throated Apalis	<i>Apalis flavigularis</i>	EN	Mulanje Mountain, Zomba Mountain, Malosa Mountain
White-winged Apalis	<i>Apalis chariessa</i>	VU	Ruo Gorge, Lujeri Tea Estate, Satemwa Tea Estate, Zomba, Chikala Hill
Basra Reed-warbler	<i>Acrocephalus griseldis</i>	EN	Nchalo, Lower Shire Valley and Lengwe N.P. Mvuu, Liwonde N.P. north L. Chilwa
Spotted Ground-thrush	<i>Zoothera guttata</i>	EN	Chikala Hill
Thyolo Alethe	<i>Alethe choloensis</i>	EN	Ruo Gorge, Lujeri Tea Estate, Satemwa Tea Estate, Zomba Plateau, Chikala Hill

EN = endangered VU = vulnerable NT = near threatened

16. Start a Bird Club in your school

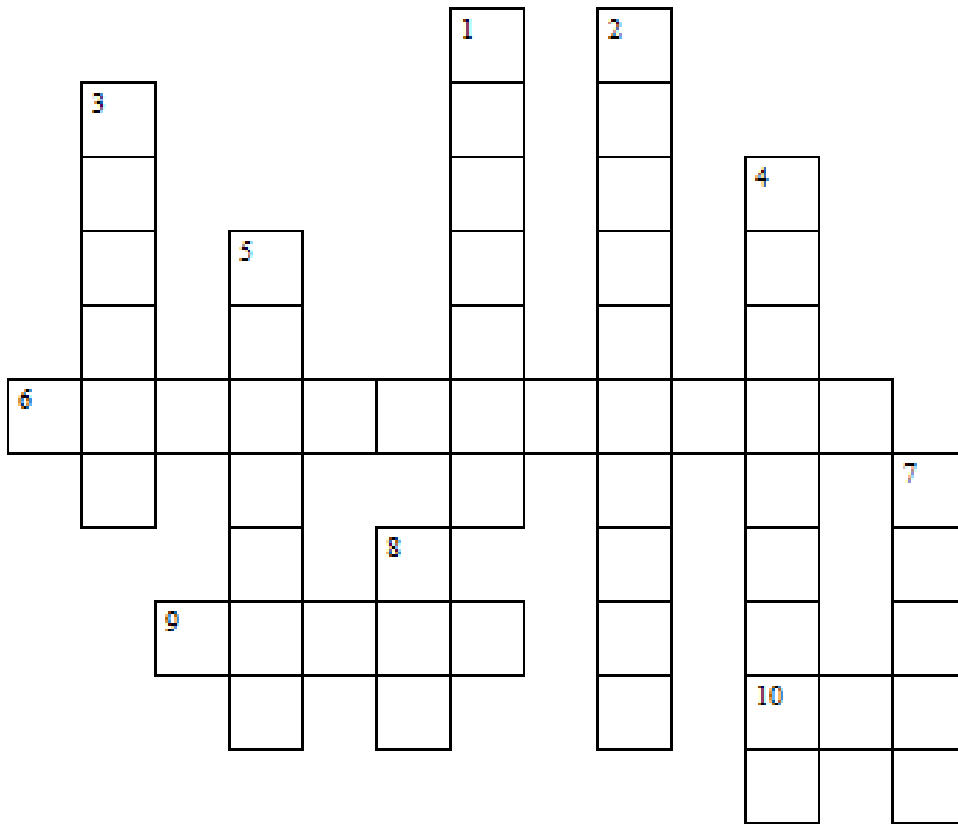
Malawi is a special place for watching birds, so why not start a Bird Club in your school? Members of the club may be students at school as well as community members. Many fun activities including bird watching, building bird feeders and bird baths as well as improving gardens/parks to make them more bird friendly. You may also lay games and hold quizzes for bird lovers and raise funds for your club. Some of the games you can play and quizzes you can do are given in activities below.

Activity 19 Bird word find

Can you find names of eight different types of birds in the puzzle? Answers below¹.

E	P	R	W	R	S	T	Q	R	Y	G
D	A	D	I	L	T	G	O	L	P	O
E	F	G	O	P	O	F	F	G	H	O
S	P	C	L	C	R	O	W	Y	A	S
P	E	Q	N	E	K	Q	Z	H	F	E
A	N	D	H	H	D	J	K	Y	N	W
R	G	U	I	N	E	A	F	O	W	L
R	U	C	L	F	H	N	K	L	S	O
O	I	K	O	X	S	R	S	D	K	P
W	N	B	E	E	E	A	T	E	R	K

¹ Eagle, Sparrow, Guineafowl, Beeeater, Duck, Crow, Penguin, Goose.



Activity 20 Crossword Puzzle 1

DOWN

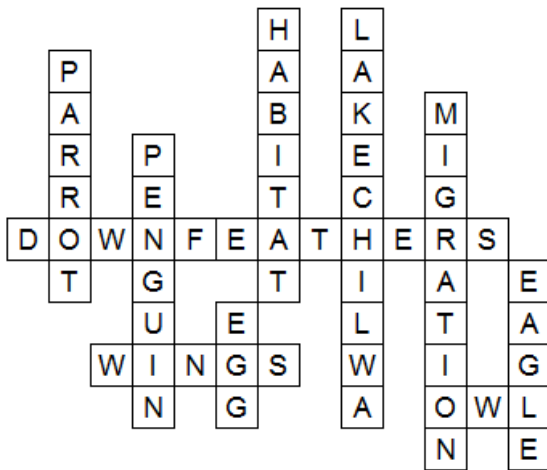
- 1 The neighbourhood of Birds.
- 2 Where in Malawi you can find lots of water birds and is a popular place to hunt for birds.
- 3 Which bird is known for talking like humans?
- 7 This bird likes to eat fish
- 8 What will you find in a bird's nest?
- 5 They are fastest swimmers

- 4 When birds travel large distances

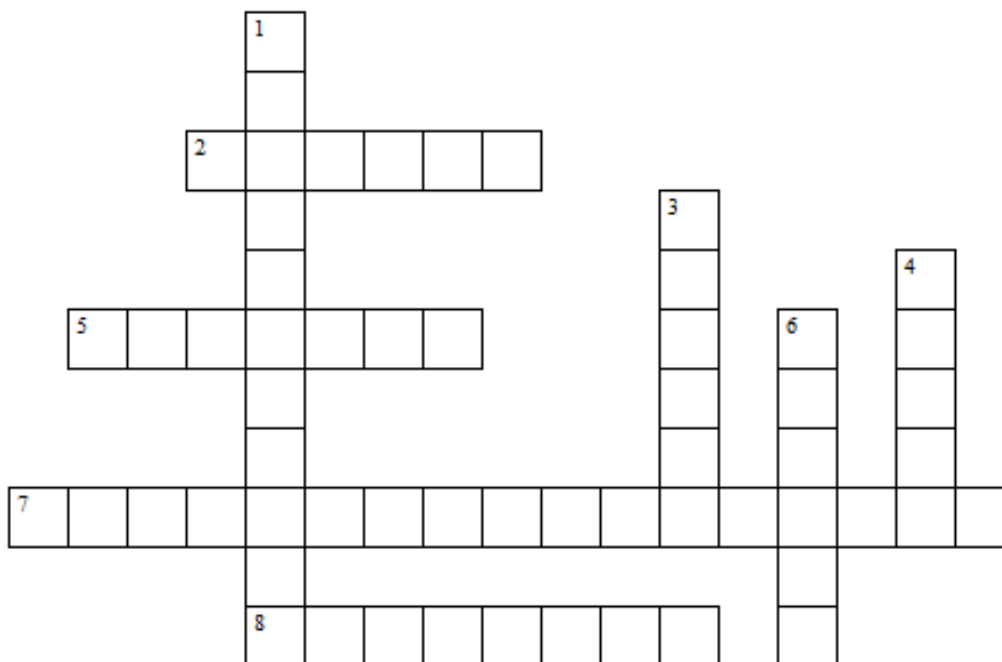
ACROSS

- 6 What type of feathers is very soft and fluffy and keeps a bird warm?
- 9 What helps bird to fly?
- 10 Which bird can turn its head 200 degrees?

Solution to Puzzle 1 :



Activity 21 Crossword Puzzle 2



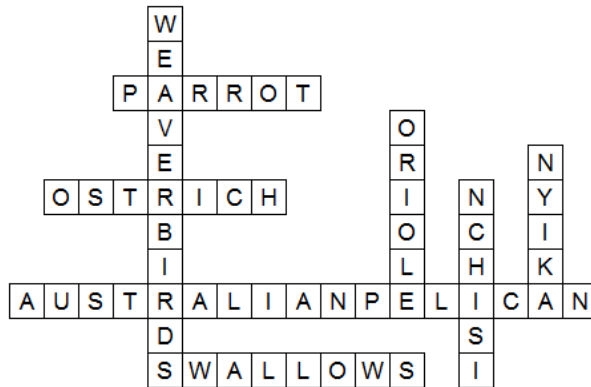
ACROSS

- 2 Bird that talks like us
- 5 Largest Bird
- 7 Bird with longest beak
- 8 Common migratory bird

DOWN

- 1 Birds that make hanging nests
- 3 Birds that when get excited make “chokochoko” sounds.
- 4 National Park near Mzuzu
- 6 District in Central region of Malawi

Solution to Puzzle 2:



Activity 22 Quiz for Bird Club

Question 1 : Do all Birds lay eggs? True False

Question 2: Which is the bird that runs fastest?

Question 3: What do Sunbirds feed on?

Question 4: What characteristic makes birds unique?

- a) They lay eggs
- b) They can fly
- c) They have feathers

Question 5: Birds are warm blooded. True False

Question 6: Penguins are flightless birds. True False

Question 7: Ducks eat fish. True False

Question 8: The largest bird also is the fastest bird. True False

Question 9: Which bird is called “ nature’s cleaners” because they feed on dead animals.

Question 10: Which bird is pink and stands on one leg.

Answers:

1 True

2 Ostrich

3 Nectar from flowers

4 c They have feathers

5 True

6 True

7 True

8 True (Ostrich)

9 Vulture

10 Flamingo

Activity 23 Guessing game

Can you guess?






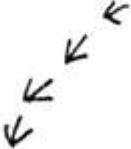









1. I like flying high in the sky. I like catching fish from the lake. I have sharp curved beaks and have good eyesight. My colours are generally black, brown and white.
2. I am large, have long legs and a long neck. I love water and I have long stout beaks. I cannot speak, but I clatter beaks to make noise for communication. I like to migrate.
3. I am large. I have both eyes in the front of my face. I can turn my head 200 degrees.
4. I can fly continuously without stopping for months.
5. My wingspan is as wide as 3.5m, I am white in colour and I love to wander.
6. I am extinct because I am so dumb.
7. I can fly for hours without flapping my wings and I become an adult when I am five years old.
8. I always come back home wherever I go.
9. I crow in the morning and wake everyone up.
10. The men in my family hatch the eggs by supporting the egg on their feet without moving or eating until the eggs are hatched.
11. My fluffy down feathers are great for making pillows.
12. I am the only bird that can fly backwards on purpose and I can flap my wings fastest.

Answers

1. Eagle
2. Stork
3. Owl
4. Swift
5. Wandering Albatross
6. Dodo Bird
7. Eagle
8. Homing Pigeons
9. The rooster
10. Penguin
11. Goose /Duck
12. Hummingbird

Activity 24 Bird Bingo (Source: Birdlife Botswana)

This game has been extracted from Birdlife Botswana's Bird Activity book Pg.53. Make enough copies of the bingo chart for each person to have one. Have them cut apart the squares and rearrange them and paste them on cardboard. (Each will have the same items but arranged in a different order.) Take a walk on the school grounds or on a nature trail and when someone spots something on the card, discuss it in relation to birds and their habitats. Have each person that spotted something first put an X over the thing on his or her board that they spotted. The first person to get a whole line crossed (up, down, diagonally) wins the game.

			
A Dove	A Bird Drinking	Bird Droppings	A Feather
	Free Square		
A Bird Bathing	Free Square	Bird Tracks	A Bird Preening
			
A Nest	A Weaver	Egg or Broken Shell	A Bird Flying
			
A Bird Singing or Calling	Seeds Eaten by Birds	A Sparrow	Insect Eaten by Birds

Activity 25 Memory game

Print the following page containing memory cards on to a thick paper. Cut out the cards shown below. Shuffle them and lay them face down in rows. First person flips over two cards, if they are the same, then the player keeps the cards and takes another turn. If they do not match, flip them back face down and leave them on same spot. Second player repeats. Continue game until all cards are matched. Winner is the person with the most matched cards.



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Image of Australian Pelican Accessed 22 June 2010

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ANNEX

Birds found at Lake Chilwa

(Adapted from Baer A, "Birds of Lake Chirwa", booklet for Bird Hunters Association, Lake Chilwa Project)

Description of Bird

Image

1. **White Pelican** *Pelecanus onocrotalus*

Identification: Size huge(140-178 cm); generally white, tinged pink when breeding; wing tips black; small crest at back of head; forehead feathers converge to point at base of bill; yellow tinge on breast; tail white, legs pink.

Immature: Buff or brownish with some white on back, rump and belly, soon becoming white like adult.

Bare Parts: Iris red to red-brown; bill greyish to yellowish, edges pink. pouch yellow; facial skin pink or purplish (Male) or orange (Female); legs and feet pink or yellow.

Voice: Usually silent: at breeding colonies grunts and moos.

Habitat: Coastal bays, estuaries, lakes, larger pans and dams.

Habits: Solitary or gregarious; forages in coordinated groups. Flies in V-formation; soars effortlessly. Flies up to 200 km from nesting colony to forage.

Status: Locally common.



2. **Pink-backed Pelican** *Pelecanus rufescens*

Identification: Size large (735-152 cm); greyish with pink tinge on back, rump, belly and undertail coverts; crest on head fairly distinct; breast feathers long, pointed and somewhat shaggy; wing tips darker than rest of plumage, but not black as in White Pelican; tail grey; legs yellow. *Immature:* Brownish; head and neck greyish white; belly, rump and back white.

Bare Parts: Iris dark brown, bill greyish, yellowish or pinkish with pink or orange tip and pinkish pouch with yellowish stripes; facial skin greyish pink, black in front of eye; legs and feet orange or yellow.

Voice: Usually silent; on breeding grounds various guttural notes.

Habitat: Coastal bays and estuaries, seldom inland on larger rivers, marshes and floodplains.

Habits: Gregarious, sometimes in company with White Pelicans. Forages singly, not in coordinated groups.

Status: Locally common.



Description of Bird

Image

3. Reed Cormorant *Phalacrocorax africanus*

Identification: Size small(50-55 cm), all dark tail longish; bill and neck short; crest short; in good light broad black tips to scapulars and upperwing coverts visible; eye red; inland habitats.

Immature: Below off white; long tail, short bill and small size distinguish it from White-breasted Cormorant.

Bare Parts: Iris ruby red; bill yellow with black culmen, dark stripes on lower jaw; bare skin of face yellow to red; legs and feet black.

Voice: Usually silent; bleating *hahahaha* at roost; also hissing and cackling at nest.

Habitat: Inland waters of any size, down to tiny dams and ponds.

Habits: Usually solitary when fishing; roosts gregariously, usually in trees or reedbeds in water. Flies high between feeding waters. May perch for long periods on low rocks, stumps or on shoreline. Swims low in water. Flies when alarmed, seldom diving.

Status: Common resident



4. Bittern *Botaurus stellans*

Identification: Size medium (70-80 cm); stocky and thick-necked; rich golden brown with black markings; crown, eyepatch and malar stripe black; bigger than immature Black-crowned Night Heron and lacks white spots. Immature: Like adult.

Bare Parts: Iris yellow to brownish yellow; bill greenish yellow, brown to black on culmen; lores and orbital skin greyish yellow; legs and feet green.

Voice: Harsh squark in flight; deep booming by male in breeding season, slow *up-rumb* or *rumb rumb rumb*, repeated 3-4 times every 1-2 seconds and audible up to 5 km in still air; female may respond with softer booming *wumph*. Calls day and night.

Habitat: Inland waters of any size, down to tiny dams and ponds.

Habits: Usually solitary when fishing; roosts gregariously, usually in trees or reedbeds in water. May perch for long periods on low rocks, stumps or on shoreline. Swims low in water.

Status: Uncommon to rare resident



Description of Bird

Image

5. Little Bittern *Ixobrychus minutus*

Identification: Size small (36 cm); neck long and thick. *Male*: Blackish green on crown and back; buff on wings; neck and sides of wings ashy buff to deep russet brown; foreneck and chest streaked with light brown. *Female*: Back dull brown with paler edges to feathers; otherwise similar to male. *Immature*: Mottled above, streaked below with brown on reddish buff.

Bare Parts: Iris yellow, orange or reddish brown; bill yellow to greenish yellow, darker on culmen; lores yellow (dull red in courtship); legs and feet greenish, yellow on back oftarsus and soles of feet.

Voice: Soft, far-carrying *gogh*; loud *gak*, rapid *gak-gak-gak-gak* or gurgling *ghrrrrr* when nesting; alarm *squawk*.

Habitat: Reedbeds, wooded streams and rivers, rank vegetation around sewage ponds.

Habits: Solitary; partly nocturnal; shy and skulking. When alarmed adopts "bittern posture" with bill pointing vertically; stripes on neck provide good camouflage among reeds and rushes; hard to flush.

Status: Uncommon resident, some local movement.



6. Dwarf Bittern *Ixobrychus sturmii*

Identification: Size small (25cm); above blackish; below pale with heavy black streaks and black line down centre of foreneck; under wing slaty black with narrow buff leading edge; bright yellow legs. Distinguished from Little Bittern by lack of pale area on wing and by heavy dark streaks on underparts.

Immature: Paler and duller than adult, with dorsal feathers tipped buff, giving barred appearance; underparts more russet; legs paler yellow.

Bare Parts: Iris reddish brown to wine-red; bill black to dark green above, yellow below; lores and orbital skin bluish to yellowish green; legs and feet greenish to yellowish brown in front, yellow behind and on toes (sometimes bright orange in courtship).

Voice: Loud *croak* when flushed; deep *hoot-hoot-hoot*.

Habitat: Reedbeds on rivers, streams and ponds; also marshes, floodplains with scattered trees and bushes, and mangroves; dense grassland near flooded pans; ephemeral pans when breeding.

Habits: Solitary or in pairs; partly nocturnal; skulking, but not shy.

Status: Uncommon to rare, but locally common when breeding; breeding migrant to Southern Africa from equatorial Africa, October to April.



Description of Bird

Image

7. **Black-crowned Night Heron** *Nycticorax nycticorax*

Identification: Size medium(58-64cm); build chunky; relatively short-legged; head looks large; crown and back black; wings grey; below white; eye large, red; long white plumes on crown when breeding. *Immature*: Above brown spotted with white; below broadly streaked brown on buff; bill yellow; eyes orange-yellow to red.

Bare parts: Iris crimson; bill greenish black (black when breeding); skin around eye greenish (blueblack when breeding); legs and feet pale yellow (red during courtship).

Voice: Generally silent; when flushed may call *quock*; also various clicking, twanging and rasping (*wik-kraak*) sounds at breeding colony.

Habitat: Marshes, swamps, lakes, rivers, streams with good vegetation cover.

Habits: Remains motionless for long periods while hunting from shoreline or perch above water.

Status: Common; mostly resident, but subject to much local dispersal.



8. **Squacco Heron** *Ardeola ralloides*

Identification: Smallish (about two-thirds size of Cattle Egret); short-necked.

Breeding: Above buff- brown; dark streaky drooping crest; bill darkish yellow or blue with black tip; legs yellow; wings, rump and tail startlingly white in flight, contrasting with brown body. *Nonbreeding*: Darker brown; streaky on foreneck; crest shorter; otherwise similar to breeding adult. *Immature*: Similar to non breeding adult, but duller brown and more streaked below; belly greyish; wings lightly mottled brown.

Bare parts: Iris yellow (deeper when breeding); bill greenish yellow (slate blue when breeding) with black tip; lores yellowish green (blue to green when breeding); legs and feet yellowish green (bright red when breeding).

Voice: Usually silent; harsh squawks and clucks.

Habitat: Mainly inland waters with dense marginal vegetation, especially quiet backwaters, more rarely estuaries.

Habits: Solitary, shy and skulking; very well camouflaged and easily overlooked. Forages by stalking slowly in shallow water, but stands still for long periods.

Status: Common resident.



Description of Bird

Image

9. Cattle Egret *Bubulcus ibis*

Identification: Small, stocky, all white when not breeding; white with pinkish buff plumes on crown, back and breast when breeding; bill stout; neck shortish, not curved into S-shape as in larger white egrets; bill yellow or orange; legs dull brownish or yellow. Immature: Bill, legs and feet black (Little Egret has yellow feet, more slender build and thin bill).

Bare Parts: Iris yellow (red when breeding); bill yellow (red-orange when breeding); lores yellow (purplish pink when breeding); legs and feet olive brown (dull yellow to red when-breeding).

Voice: Harsh croaks of 1-2 syllables, *rik-rak*, *kraa*; deep *staccato thonk*; various chattering calls.

Habitat: By day grasslands, usually with large game mammals or domestic stock; in evening usually around shorelines of inland waters.

Habits: Highly gregarious. Feeds on insects disturbed by grazing mammals in grassland; may perch on mammal's backs. Sometimes fishes in shallow water.

Status: Very common resident; sparser in dry west.



10. Rufous-bellied Heron *Ardeola rufiventris*

Identification: Size small(38-40 cm); very dark. *Male:* Mostly black with dark rufous to maroon wings, belly, rump and tail; much smaller than Black Egret, and distinguishable by yellow bill with black tip; appears all black in flight.

Female: Sooty brown where male is black; wings maroon, belly, rump and tail as in male. *Immature:* Like female, but streaked buff brown on sides of head, neck and upper chest.

Bare Parts: Iris yellow with orange outer ring; bill yellow with black tip (brown above, yellow below when breeding); lores yellow (very pale when breeding); legs and feet bright orange-yellow, sometimes reddish on toes.

Voice: Muffled crowlike *kar*; rasping *kraak*; other harsh churring sounds.

Habitat: Larger rivers with marshy shallows, floodplains, lagoons, reedbeds.

Habits: Solitary; rarely in groups of up to 5 birds. Partly nocturnal. Adopts horizontal posture while feeding; remains motionless for long periods, usually well hidden.

Status: Uncommon to rare resident, local migrant.



Description of Bird

Image

11. Black Egret *Egretta ardesiaca*

Identification: Size medium (46-52 cm); all black or slaty black; bill thin, black; head rather heavily crested at back; throat black; yellow eyes and feet conspicuous; flight swift with quick wingbeats.

Bare Parts: Iris bright yellow; bill black; lores black; legs black; feet yellow (orange to red at start of breeding season).

Voice: Low cluck; harsh scream when defending nest.

Habitat: Edges of inland and estuarine waters, mainly in higher-rainfall regions.

Habits: Solitary or gregarious, sometimes feeding cooperatively in groups of up to 50 birds. When feeding forms canopy over head by quickly spreading wings forwards to overlap in front of bird; foot then stirs bottom while bill jabbed into water to catch prey. Holds canopy pose for about 2-3 seconds, then returns to normal before repeating performance.

Status: Common resident.



12. Great White Egret *Egretta alba*

Identification: Size large (85-92 cm); all white; neck very long, curved, bulged distinctively below in flight; dark line below eye extends to at least 1 cm behind eye (in Yellow-billed Egret, dark line ends at level of eye); yellow bill of non breeding adult much longer and slimmer than that of Yellow-billed Egret; legs all black (yellow at top of tibiotarsus in Yellow-billed Egret). *Immature*: Like non breeding adult.

Bare Parts: Iris pale yellow (bright red when breeding); bill yellow (black when breeding); lores and eye ring olive green (emerald green when breeding); narrow line from gape to below and behind eye black; legs and feet black.

Breeding coloration kept for only short period at start of breeding season.

Voice: Raucous croaks, deeper than those of other egrets.

Habitat: Shores of inland (rarely marine) waters.

Habits: Usually shy and solitary. When foraging, holds neck stretched forward at angle; feeds in fairly deep water, standing still for long periods or stalking slowly.

Status: Common.



Description of Bird

Image

13. Yellow-billed Egret *Egretta intermedia*

Identification: Size medium(65-72 cm), all white ;bill yellow; neck and bill shorter and thicker than those of Great White Egret, but hard to distinguish in field; black line from gape ends at posterior level of eye (does not extend beyond it as in Great White Egret); legs greenish yellow above tarsal joint (all black in Great White Egret), but hard to see in field. Distinguished from Cattle Egret by black lower legs, lack of buff in plumage, and longer neck. *Immature:* Like non breeding adult

Bare Parts: Iris yellow (ruby red when breeding); bill deep yellow (red with orange tip when breeding); lores and eyering yellow (bright green when breeding); legs yellow on tibiotarsus (red when breeding), black on tarsus; feet black. Breeding coloration kept for only short period at start of breeding season.

Voice: Hoarse buzzing notes, staccato chatter and reedy *whoeee-whoeee*; usually silent away from nest.

Habitat: Edges of inland waters, estuaries and lagoons; also grassland near water.

Habits: Often solitary, sometimes in loose flocks of 15-20 birds. Shy and wary. Feeds by wading slowly in water or walking over grassy pasture.

Status: Common resident and nomad.



14. Little Egret *Egretta Garzetta*

Identification: Size smallish (55-65 cm); all white; build slender; slim all-black bill; and black legs with yellow feet diagnostic; no dark line from gape.

Immature: Like non breeding adult.

Bare Parts: Iris yellow (orange to red when breeding); bill black; lores greyish green (orange to purplish when breeding); legs black (orange to red when breeding); feet yellow. Breeding coloration kept for only short period at start of breeding season.

Voice: Grating *kraak* at take-off; various other gargling and chattering notes.

Habitat: Shores of inland and marine waters.

Habits: Usually solitary when feeding, but may gather in hundreds at good food supply. Active hunter, darting, twisting and turning to catch prey; sometimes stands and waits for prey. May disturb prey by shuffling one foot in pool bottom.

Status: Fairly common; mostly resident



Description of Bird

Image

15. Grey Heron *Ardea cinerea*

Identification: Size large (90-100 cm); neck white; bill yellow; black stripe above eye, ends in lax black crest; black streaks on foreneck only; black patch at shoulder; under wing uniform grey (markedly black-and-white in Black-headed Heron). *Immature*: Paler grey than adult; crown and hindneck grey; no black above eye or on shoulder; bill brown above, yellow below; differs from Immature Black-headed Heron by lack of black on head.

Bare Parts: Iris, bill and lores yellow (orange to vermillion at start of breeding); legs and feet brown with yellow at back (red at start of breeding).

Voice: Loud, strident *croak*, *fnank* or *kraak*, especially on take-off.

Habitat: Mostly shallow inland waters; sometimes open grassland near water.

Habits: Commonly seen wading in shallow water; may swim in deeper water; stands for long periods waiting for food; rarely dives for fish from perch up to 2 metres above water, submerging completely; may feed at night. Usually solitary.

Status: Common.



16. Black-headed Heron *Ardea melanocephala*

Identification: Size fairly large (85-92 cm); build slender; head black above, white below; neck long, black on hindneck, white on foreneck; bill dark; legs black; in flight underwing white in front, black behind (two-tone, unlike even grey underwing of Grey Heron). *Immature*: Dull grey instead of black on head and neck; below rusty to bluffy on neck, dirty white on belly.

Bare Parts: Iris yellow; bill black above, yellow to greenish below and at base; lores yellow and green; legs and feet black.

Voice: Various croaks, squawks, growls and gurgles.

Habitat: Open grassland, fallow fields, edges of inland waters, forest clearings.

Habits: Solitary when feeding, either standing and waiting for prey, or stalking slowly.

Status: Common resident.



Description of Bird

Image

17. Goliath Heron *Ardea goliath*

Identification: Size very large; mainly slate and chestnut; bill very large; legs tend to sag below horizontal in flight. Immature: Browner above, more buffy rufous below, mottled.

Bare Parts: Iris yellow; bill black above, horn below; lores and eyering greenish yellow; legs and feet black.

Voice: Deep racous *kowoorrk-kowoorrk-woorrk-work-work*; hippopotamus-like *mmmmm-haw-haw-haw-haw*; other harsh grunts and organlike notes.

Habitat: Larger shallow inland waters and estuaries.

Habits: Solitary. Stands in water for long periods waiting for prey. Rather shy.

Status: Locally common



18. Purple Heron *Ardea purpurea*

Identification: Medium-sized; slender build; bill very slim; above brownish grey with black crown and rufous neck, striped black at sides; below rufous and black; legs and bill look yellowish in the field; in flight neck has distinct downward bulge. *Immature*: Browner than adult, mottled and streaked; crown rufous; stripes on neck faint or absent.

Bare Parts: Iris yellow; bill buffy brown above with yellow base, buffy horn below with yellow tip; legs and feet dark brown with yellow behind tarsus and on soles of feet.

Voice: Harsh kwaak or kreek on take-off; various other guttural croaks, clacks and whoops.

Habitat: Inland and estuarine waters with dense reed beds and other aquatic vegetation.

Habits: Solitary feeder, wading or standing in marshy places, often with bill and neck held horizontally. Shy and seldom seen until it takes off, usually with squawk.

Status: Locally common.



Description of Bird

Image

19. Hamerkop *Scopus umbretta*

Identification: Size medium (48-56cm). Plain dark brown; large bill and crest give hammerhead effect (hence Hamerkop); legs moderately long; flight buoyant on large wings, somewhat jerky with flaps and glides.

Bare Parts: Iris brown; bill, legs and feet black.

Voice: Usually silent when solitary, vocal in groups; loud, somewhat nasal yelping and trumpeting of varying tempo; yip-purrr, yik-yik-yik-purr-yik-yik, sometimes chorus.

Habitat: Most inland waters.

Habits: Usually solitary. Diurnal. Forages by wading in or around shallow water; may probe in mud with bill; may forage by flying slowly over water and snatching food from surface.

Status: Common resident.



20. White Stork *Ciconia ciconia*

Identification: Size large; body and tail white; wings black; bill and legs red; bill straight and pointed at tip. Yellow-billed Stork has yellow bill down curved at tip, bare red face, black tail and pink tinge to body plumage. Immature: Bill and legs dull red; wings dark brown.

Bare Parts: Iris brown; bill bright red; gular skin black; legs and feet bright red.

Voice: Weak hiss; bill-clattering at nest.

Habitat: Highveld grasslands, mountain meadows, cultivated lands, marshes.

Habits: Usually gregarious in loose flocks of a few birds to several hundred; larger numbers concentrate at good food supplies, such as locust plagues.

Forages by walking slowly across veld or wading in shallow grassy marshland.

Status: Mostly nonbreeding Palearctic migrant, October to April.



Description of Bird

Image

21. Black Stork *Ciconia nigra*

Identification: Size large; glossy brownish black with white on belly and undertail; bill and legs red. Immature: More sooty brown than adult; bill yellowish with orange tip; legs yellowish green.
Bare Parts: Iris dark brown; bill bright red, yellowish at base; gular and orbital skin red; legs and feet red.
Voice: Generally silent. Various tremulous whistles and croaks; also bill clattering.
Habitat: Feeds in or around marshes, dams, rivers and estuaries; breeds in mountainous regions.
Habits: Solitary or in pairs or small groups (rarely as many as 15 birds together); gregarious only when not breeding. Forages by walking slowly, usually in shallow water, and stabbing at prey.
Status: Uncommon to rare.



22. Open Billed Stork *Anastomus lamelligerus*

Identification: Size large, brownish black all over, except for browner upper wing; feathers on mantle, neck and chest glossed greenish; ventral feathers each end in long (up to 40 mm) flat plastic like filament; bill large with distinct gap between upper and lower jaw. Immature: blackish brown without iridescence; feathers tipped creamy white to give spotted effect; bill almost straight with little or no gap.
Bare Parts: Iris brown with yellow inner ring; bill brownish, paler at base; lores and skin around eye blue to blackish; legs and feet black.
Voice: Loud raucous croaks or honks, honrh-horrrh.
Habitat: Larger inland waters; marshes, swamps, floodplains, river shallows, pools, lakes.
Habits: Feeds solitarily; otherwise gregarious. Forages by wading in quiet water and among floating plants; also forages away from water, probing into damp compacted soil for snails. Spends much of day standing still on shoreline.
Status: Locally common, intra-African migrant.



Description of Bird

Image

23. Yellow-billed Stork *Mycteria ibis*

Identification: Size large; mainly pinkish white with black wings and tail; bill yellow, blunt and decurved at tip; bare face red. White Stork has pure white body, white tail, straight red bill and feathered face.

Immature: Greyish brown with dull greyish yellow bill, dull orange face and brownish legs (adult plumage attained only at 3 years)

Bare parts: Iris greyish brown; bill golden yellow; face red, narrowly bordered orange; legs red to pinkish, waxy orange proximally.

Voice: Usually silent; at nest squeaky whines and screams; also bill-clattering.

Habitat: Mainly inland waters; rivers, dams, pans, floodplains, marshes, less often estuaries.

Habits: Usually gregarious in small parties; rarely solitary. Forages by walking slowly in shallow water with bill immersed and held slightly open, foot-stirring to disturb prey which is caught by feel, even in turbid water. Spends much of daytime standing quietly on shoreline.

Status: Mainly nonbreeding intra-African migrant in South Africa, October to April; uncommon to locally common.



24. Sacred Ibis *Threskiornis aethiopicus*

Identification: Size large; mainly white with black head, neck and plumelike feathers on back when wings folded; bill long, decurved; in flight wings white with black trailing edge; line of red skin on underwing.

Immature: Similar to adult, but with some whitish feathering on neck.

Bare parts: Iris brown (ringed with red when breeding); head and neck naked, black; bill black, tip horn; legs and feet black with red tinge.

Voice: Usually silent; at nest harsh croaks, moans, squeals and wheezing sounds.

Habitat: Very varied; inland waters, cultivated lands, sewage works, playing fields, open grassveld, rubbish dumps, coastal lagoons, tidal flats, offshore islands.

Habits: Gregarious; flocks may number hundreds of birds. Scavenges around farmyards, dairies, piggeries, abattoirs, seabird breeding colonies; forages also in other habitats, taking live prey, often by probing in mud, walking slowly with deliberate steps.

Status: Common to very common resident.



Description of Bird

Image

25. Glossy Ibis *Plegadis falcinellus*

Identification: Size medium; all dark with slender decurved bill; at close range looks chestnut with purplish gloss; back and wings metallic green; non breeding plumage greener, but greyish below.

Immature: Like sooty non-breeding adult; brown below.

Bare parts: Iris brown; bill olive brown; naked face purplish black (light blue at start of breeding) bordered by narrow white line along forehead and cheeks; legs and feet olive brown.

Voice: Usually silent; croaking graa-graa-graa in flight; gull-like keeaw-klaup-klaup; guttural kwuk-kwuk-kwuk at nest.

Habitat: Shallow inland waters and neighbouring wet grasslands.

Habits: Solitary or gregarious in flocks of up to over 40 birds. Forages by probing in mud while walking slowly.

Status: Locally common



26. African Spoonbill *Platalea alba*

Identification: Size large; all white; bill long, straight, spoon-shaped, reddish, conspicuous bare red face and long red legs. *Immature*: Streakish blackish on head; tips of primaries and underwing coverts blackish; bill dull yellowish horn; legs blackish.

Bare Parts: Iris white, pale blue or pale grey; bill grey above with red edges, black below with yellow edges and spots; naked face red, shading to yellow on chin and throat; legs and feet pink or red.

Voice: Usually silent; various guttural croaks, grunts and quacks, sometimes in flight; 2 birds may duet with alternating moans at about 2-second intervals; may clatter bill softly.

Habitat: Shallow inland waters (dams, marshes).

Habits: Solitary or gregarious. Forages by wading slowly, bill partly or wholly submerged and sweeping from side to side; also probes in mud. Rather shy. Spends long periods standing still on one leg with head tucked into back feathers.

Status: Locally common; nomadic, possibly migratory; Transvaal bird recovered Zambia



Description of Bird

Image

27. Greater Flamingo *Phoenicopterus ruber*

Identification: Size very large; very tall, long-legged and long-necked; gen Flamingo looks pinker); bill bent in middle, pink with black tip (bill of Lesser Flamingo looks all dark at distance); very conspicuous flame red wing in flight (trace of red visible on folded wing); flight feathers black.

Immature: Greyish where adult pink; lacks red on wings; bill grey with black tip.

Bare Parts: Iris pale yellow; bill pink, distal third black; lores and ring around eye pink; legs and feet bright coral pink.

Voice: Gooselike double honk-honk, often in chorus; alarm nasal kngaaa; chuckling kuk-kuk and gmnls when feeding.

Habitat: Large bodies of shallow water, both inland and coastal; saline and brackish waters preferred.

Habits: Highly gregarious, flocks often numbering hundreds of birds. Feeds by wading with bill upside down in water filtering out small organisms; may stir mud with foot; swims well in deeper water.

Status: Locally abundant; highly nomadic; partly migratory moving N in winter.



28. Lesser Flamingo *Phoenicopterus minor*

Identification: Size large (smaller and pinker than Greater Flamingo); bill dark red, pink in greater Flamingo), looks almost black at distance; wings red-and-black in flight. Immature: Grey with dark streaks and no red on wings; bill and legs grey.

Bare Parts: Iris red, orange or yellow; bill dark red, tip black; lores and eyering dark red; legs and feet bright red.

Voice: High-pitched, kwiftik; bleating murmur, murr-err, murr-err at rest; shrill quie-ow.

Habitat: Larger brackish or saline inland and coastal waters.

Habits: Highly gregarious in flocks of hundreds or thousands; often mixed with Greater Flamingos. Forages in calm water, walking or swimming with head swinging from side to side, filtering food from surface of water with bill upside-down.

Status: Locally abundant; highly nomadic.



Description of Bird

Image

29. Fulvous Duck *Dendrocygna bicolor*

Identification: Size medium; rich golden brown with dark brown back; cream stripes on flanks; no white on face; black stripe down back of neck; rump black; uppertail coverts obvious in flight as white V; wings all dark; feet extend beyond tail in flight.

Bare Parts: Iris brown; bill, legs and feet slaty grey.

Voice: Both sexes have harsh 2-syllabled wheezy whistle tsu-ee, usually in flight alarm note resonant zeee,

Habitat: Larger inland waters; pans, floodplains, sewage ponds, dams, preferably with surface vegetation.

Habits: Gregarious, sometimes flocking with White-faced Ducks. Spends much of day loafing in large groups on shoreline or water. Shy and wary. Feeds mainly by diving; also dabbles or up-ends in shallow marshy water.

Status: Locally common but less abundant than white-faced duck.



30. White faced duck *Dendrocygna viduata*

Identification: Size medium; mainly brown with longish dark neck and conspicuous white face (usually stained brownish in dirty water); no white in wing; feet extend beyond tail in flight; barring on flanks visible at close range.

Immature: Similar but face light brown.

Bare Parts: Iris brown; bill black with transverse blue grey barn ear tip; legs and feet bluish grey.

Voice: Both sexes have characteristic 3-syllabled whistle swee-swee-sweeu falling slightly in pitch, usually in flight; alarm note single sweee.

Habitat: Larger inland waters; rivers, lakes, dams, pans, sewage ponds, floodplains, usually with some aquatic vegetation.

Habits: Gregarious, sometimes in flocks of hundreds or thousands; usually in pairs or family parties when breeding. On land stands upright on longish legs. Swims high in water with neck erect. Dabbles or up-ends for food; often dives; often forages at night.

Status: Common resident.



Description of Bird

Image

31. Egyptian Goose *Alopochen aegyptiaca*

Identification: Size large; gooselike; brown above, greyish below; dark brown patch around eye and on centre of breast; dark brown collar on neck; undertail coverts bright yellow ochre; in flight wings -white with black primaries and green trailing edge. Immature.' Duller than adult; eye patch small; usually no breast patch.

Bare Parts: Iris orange, reddish brown or red; bill pink margined with dark brown at edges, base and around nostrils, maroon on cutting edge; legs and feet pinkish red.

Voice: Hoarse haaa by hissing (like airbrakes of bus); rapid honking ka-ka-ka-ka-ka just before take-off. Calls with neck stretched forwards.

Habitat: Most inland waters: rivers, dams, floodplains, pans, marshes; also estuaries, coastal lakes, cultivated fields.

Habits: Highly gregarious when not breeding; otherwise mainly in pairs.

Swims high in water; spends much of day loafing on shoreline or sandbank.

Flies early morning and evening to farmlands and grasslands to graze returning to water to roost on shoreline or in trees by day and after nightfall.

Status: Very common resident.



32. Spur-winged Goose *Plectropterus gambensis*

Identification: Size very large; boldly pied, mainly black with variable amount of white on face and belly; forehead, bill and legs red; bare facial; skin extends to behind eye.

Immature: Feathered on face body feathers browner; white areas less extensive.

Bare Parts: Iris dark brown; bill and bare facial skin deep pinkish red, tip white; legs and feet pinkish red.

Voice: Quiet, high-pitched, rather wheezy cherwit in flight and when alarmed; female usually silent, but has high-pitched, rapid chi-chi-chi-chi when alarmed.

Habitat: Mainly larger inland waters; floodplains, pans, dams, sewage ponds.

Habits: Highly gregarious when not breeding, especially during moult. Usually in pairs on smaller bodies of water when breeding. Shy and wary. Rests on shorelines and sandbanks; forages in flooded grasslands, pastures, cultivated fields in early morning, evening or at night.

Status: Common to very common; resident.



Description of Bird

Image

33. Knob-billed Duck *Sarkidiornis melanotos*

Identification: Size fairly large. Male: Much larger than female; back and wings black with purplish iridescence; below white; undertail yellow; head yellowish when breeding, otherwise white, speckled black; underwing black; large laterally compressed black knob on top of bill (reduced when not breeding). Female: Head and undertail white; otherwise similar to male, but smaller; lacks knob on bill.

Immature: More speckled on sides of chest and flanks.

Bare Parts: Iris brown; bill (and knob in male) black to slaty; legs and feet lead grey to greyish brown.

Voice: Usually silent; in display makes weak hissing and wheezing sounds; harsh guk-guk threat notes; calls chuk-chuk and soft melodious karoo-oo to; short krruk krruk krruk.

Habitat: Floodplains, pans, shallow marshes with emergent and surface vegetation.

Habits: Highly gregarious when not breeding; otherwise in pairs or groups of about 5 birds. Loafs for much of day on shorelines and islets; often perches in trees; feeds early and later hours by dabbling in shallows or by stripping grass seeds. Rather shy.

Status: Locally common with some long-distance seasonal movements.



34. Pygmy Goose *Nettapus auritus*

Identification: Small size; dark green above, rusty orange below; head green and white with large green patches on sides of neck in male; bill of male bright yellow; speculum pure white.

Immature: Like adult female.

Bare Parts: Iris brown; bill bright yellow with black tip (duller in female, greenish at sides, buff on lower jaw, no black on tip); legs and feet grey.

Voice: has soft whistled choo-choo-pee-wee; also repeated 2-syllabled whistled tsu-tswi. Has weak quack; also rather sharp twittering whistle.

Habitat: Clear waters with emergent and floating vegetation; floodplains, pans, pools, quieter river backwaters; also estuaries.

Habits: Usually in pairs or small groups. Highly aquatic, but may perch on logs and trees. Easily overlooked when sitting quietly in water among emergent plants or overhanging branches. Forages by diving or at surface of water.

Status: Uncommon to rare resident but nomadic.



Description of Bird

Image

35. Red-billed Teal *Anas erythrorhyncha*

Identification: Size medium; head dark above, pale below; bill bright pink; upperparts brown; underparts buff, mottled or barred; speculum light creamy beige.

Immature: Spotted below; rectrices notched.

Bare Parts: Iris hazel; bill carmine pink with brown culmen and tip; legs and feet slate-grey.

Voice: Has soft swizzling whizzzt; guttural krreak.

Habitat: Most inland waters; dams, pans, sewage ponds, floodplains.

Habitat: In pairs when breeding; otherwise in flocks of hundreds or thousands of birds. Feeds by immersing head or bill, or by up-ending; grazes aquatic plants.

Status: Common over most of range



36. Hottentot Teal *Anas hottentota*

Identification: Size small; head dark above, light below; bill blue; breast and back spotted; speculum green with broad white trailing edge.

Bare Parts: Iris blackish brown; bill light blue-grey, blackish on culmen and tip, darker on lower jaw; legs and feet blue-grey.

Voice: Resonant tze-tze-tze alarm and take off call; ticking notes by courting.

Habitat: Quiet inland waters with emergent and surface vegetation; marshes, floodplains.

Habits: Quiet and unobtrusive, in pairs or small groups. Often sits quietly on water near overhanging plants or loafs on shoreline. Forages by filter-feeding with bill or head immersed and by up-ending.

Status: Uncommon to locally common resident.



Description of Bird

Image

37. Southern Pochard *Netta erythrophthalma*

Identification: Size medium. Male: Glossy brown, paler below, blackish on head and neck, eye red, bill bluish. Female: Paler brown with white crescent behind eye to sides of neck, and white patch around base of bill; white bar along upperwing in flight in both sexes; high forehead and thin neck characteristic in flight. Immature: Like adult female but paler.

Bare parts: Iris vermillion (red-brown in female); bill pale blue-grey with black tip (dark slate grey with blackish tip in female); legs and feet dull grey with black webs.

Voice: Usually silent; calls soft purring preee...prerr.. in flight; also ratchet like whreeooooorrr; has nasal krrrrrow in flight, falling in pitch; threat is growling quarrrrk.

Habitat: Deeper inland waters; dams; prefers clear water.

Habits: Gregarious in flocks of up to thousands of birds. Highly aquatic, seldom seen on land. Feeds day or night, usually by diving; also up-ends or forages at water's edge with bill or head submerged. Rather shy.

Status: Common to very common; undergoes seasonal movements.



38. White-backed Duck *Thalassornis leuconotus*

Identification: Size medium to smallish; generally mottled brown; conspicuous white patch near base of bill; in flight back shows white, feet extend beyond tail; swims low in water with hump-backed appearance; wings all dark.

Bare Parts: Iris dark brown; bill slaty black, speckled green and yellow muck of lower jaw and cutting edge of upper jaw dull yellow; legs and feet grey to brown.

Voice: Rather silent; quiet musical 2-syllabled whistle curwee curwee; at nest soft trilling flute-like whistle.

Habitat: Quite inland waters, usually clear and deep, with emergent marginal vegetation and floating rafts of waterlilies and other aquatic plants.

Habits: Usually in pairs or small groups of up to 10 birds. Highly aquatic; spends most of its time on water; quiet, unobstrusive and often hard to see as it floats low among water plants. Flies reluctantly, taking off with long pattering run; once airborne flies strongly with large feet trailing behind. Dives well, foraging under water.

Status: Locally common.



Description of Bird

Image

39. Grev-Crowned Crane *Balearica resulorum*

Identification: Size very large; spiky straw-coloured crest, grey body and large white wing patch distinctive, especially in flight; head mainly velvety black with white cheeks and red wattles. Immature: Has shorter crest; head flecked buff; upperparts tipped rusty; cheeks feathered buff; no gular wattles.

Bare Parts: Iris whitish or pale grey; bill, legs and feet black; cheek patch white; gular wattles red.

Voice: Highly characteristic 2-syllabled trumpeting maHEM, second note higher and louder than first; often calls in flight; also deep booming call when breeding.

Habitat: Marshes, vleis, moist grasslands, cultivated fields.

Habits: Gregarious unless breeding; flocks may number 30-150 birds. Tame when not molested. Often performs dancing displays in pairs or groups.

Status: Locally common.



40. Black Crane *Amaurornis flavirostris*

Identification: Medium to smallish size; all black with bright greenish yellow bill and red legs. Immature: More olive above than adult; throat whitish; below dark grey.

Bare Parts: Iris red; bill greenish lemon yellow; legs and feet bright red (breeding) to dull red (nonbreeding).

Voice: High-pitched clucking notes, followed by deep growling bullfroglike note, k-k-k-k-nrung, sometimes in duet or several birds together, repeating phrase 2-3 times; also rnt-rnt-rru-rru, speeding up as call progresses; clucks while foraging; high-pitched metallic chuk alarm note.

Habitat: Marshes, reedy watercourses and lake fringes, weedy ponds, river backwaters.

Habits: Solitary, in pairs or small groups; often comes out into open, walking over floating water plants, jerking head and flicking tail. Often perches in reeds, or on low bushes. Very active after rain; sometimes vocal at night.

Status: Common resident.



Description of Bird

Image

41. Lesser Moorhen *Gallinula angulata*

Identification: Size medium; similar to Common Moorhen but bill nearly all yellow; only culmen and frontal shield red; shield pointed behind (rounded in Moorhen). Immature: Above dark brown, more russet on crown and hindneck (greyish olive brown in immature Moorhen); upperwing coverts edged buff (no buffed wing in immature Moorhen); below light brown, paler greyish in centre; cheeks and throat white; frontal shield orange-red.

Bare Parts: Iris red; bill yellow, culmen scarlet; frontal shield scarlet; legs and feet orange to yellowish green.

Voice: Muted dodo do like muffled pump.

Habitat: Seasonally flooded grassland, reedbeds, waterside vegetation.

Habits: Solitary and secretive, seldom venturing into open. Otherwise similar to habits of Moorhen.

Status: Locally common resident and intra-African migrant.



42. Common Moorhen *Gallinula chloropus*

Identification: Size medium; slaty black all over, except for white undertail and white streaks on flanks; red shield and bill with yellow tip diagnostic.

Immature: Above dark brown; below buff, paler in centre of belly; iris greyish brown; bill and frontal shield greenish brown; legs and feet greenish, garter yellow

Bare Parts: Iris red; bill red, tip greenish yellow; frontal shield red; legs and feet yellowish green, garter above tarsal joint red.

Voice: High-pitched croaking krrruk; staccato killik or rapid kik-kik-kik; murmuring kook.

Habitat: Reedbeds, marshes, marginal vegetation of lakes, rivers, pans and sewage ponds.

Habits: Solitary or in small family groups. Spends most of day swimming in open water, wading in shallows or walking over nearby wet grasslands; flicks tail when alarmed. Clambers about reeds.

Status: Common resident



Description of Bird

Image

43. Purple Gallinule *Porphyrio madagascariensis*

Identification: Size large; mainly deep blue, greenish on back; huge bright red bill and frontal shield diagnostic; white undertail conspicuous. Immature: Brownish, face and underparts buff; bill and frontal shield blackish.

Bare Parts: Iris red; bill and frontal shield bright red; legs and feet pinkish red.

Voice: Various loud shrieks, groans, cackles, grunts, cackles and explosive bubbling calls.

Habitat: Reedy swamps and marshes; prefers rushes and sedges to reeds but occurs in all three.

Habits: Solitary or in small groups. Usually shy, keeping to dense vegetation; sometimes forages in open shallows; may hold food in foot while feeding; walks with high-stepping gait, tail raised and flicking; clambers about vegetation with large red feet.

Status: Common resident.



44. Allen's Gallinule *Porphyryla alleni*

Identification: Size medium (much smaller than Purple Gallinule); above dark blue; undertail white; iris, bill and legs red; frontal shield green, blue or brown (red in Purple Gallinule). Immature: Above brown, edged with buff; below buff

Bare Parts: Iris coral red (breeding) or brown (nonbreeding); bill dark red; frontal shield brown (nonbreeding), bright blue (breeding) or apple green (breeding); legs and feet red.

Voice: Most frequent call 6-8 rapid clicks, dik-dik-dik-dik,...; froglike tolling gurrr.

Habitat: Marshes, especially seasonal floodplains and pans.

Habits: Usually solitary; shy skulker. Clambers about in reeds, feeding on flowers; may hold food in foot while feeding; forages also on floating water plants in open. Swims reluctantly.

Status: Locally common



Description of Bird

Image

45. Red-knobbed Coot *Fulica cristata*

Identification: Size largish; all black with white bill and frontal shield, backed by two dark red knobs. Immature: Above ashy brown to greyish; below whitish grey; frontal shield smaller than that of adult.

Bare Parts: Iris red (breeding) to red-brown (nonbreeding); bill and frontal shield white, tinged greyish at sides; knobs above shield deep red to maroon; legs and feet olive to dark green (breeding) to dull slate (nonbreeding).

Voice: Resonant klukuk or kluk; breathy vvvvm; snorting cholf alarm call.

Habitat: Almost any inland waters; less commonly on rivers and coastal lagoons.

Habits: Usually in pairs or large flocks of over 1000 birds. Spends most of time swimming in open water. Forages in water from surface or by diving; also grazes on shoreline, running to water when disturbed. May stand on shoreline to preen.

Status: Common



46. African Jacana *Actonihornis africanus*

Identification: Size medium to small; long legged, with very long toes; body rich chestnut; hindneck black; foreneck white (conspicuous at distance) grading into golden yellow on breast; bill and frontal shield pale bluish.

Immature: Similar to adult Lesser Jacana, but much bigger; above light brown, below white; breast washed golden; flanks brown; frontal shield small; crown and hindneck blackish brown; black line through eye; buff eyebrow (eyebrow of adult Lesser Jacana white, forehead buff).

Bare Parts: Iris dark brown; bill and frontal shield pale grey-blue; legs and toes slate grey.

Voice: Husky whirling screech, kyowrrr or shorter grating creep-creep-creep; loud high-pitched trumpeting weep-weep-weep-weep repeated quickly.

Habitat: Lagoons, lakes, pans, river backwaters; usually with fringing vegetation and floating water lilies, and other water plants.

Habits: Usually in small loose groups; sometimes solitary or in pairs. Walks or runs quickly over floating plants, pecking at surface, or turning up edges of leaves for food. Highly vocal.

Status: Common to abundant resident.



Description of Bird

Image

47. Lesser Jacana *Microparra capensis*

Identification: Size small; similar to immature African Jacana but smaller; above dark brown, mantle and crown rufous, crown sometimes edged black, especially in males; eyebrow white; forehead buff; black line through eye; below white (no golden wash on breast as in immature African Jacana); in flight white band on wing conspicuous (no white in wing of African Jacana); underwing black, conspicuous when wings held open on landing. Immature: Like adult, but crown blackish; nape golden brown; upperparts fringed buff; rump and uppertail coverts black, fringed buff; tail dark brown, marked with buff and rufous.

Bare Parts: Iris hazel; bill dull greenish to brown; legs and feet olive green to greenish brown.

Voice: Mellow rapid poop-poop-poop; quiet peevish ksh ksh; chattering titi-ti-; rapid hwi-hwi-hwi alarm call.

Habitat: Shallow lagoons, dams, lakes, with emergent and floating vegetation.

Habits: Solitary or in small loose groups; shy and retiring; easily overlooked.

When alarmed bobs head. Forages by walking on emergent plants or by swimming as it pecks at water surface; may climb plant stems to reach prey.

Sometimes flicks tail downward while foraging.

Status: Uncommon and localized resident.



48. Greater Painted Snipe

Identification: Size medium; bill long and somewhat decurved at tip; head, back and chest greenish brown or greyish (more richly; mask around eye white, extending behind eye; below white, extending up around bend of folded wing; legs longish; in flight 4 golden stripes conspicuous down back; wings dark, spotted golden buff. Immature: Like adult.

Bare Parts: Iris dark brown; bill purplish brown to horn, base pinkish; legs and feet greenish grey to dull slate blue.

Voice: Has metallic drawn-out whistle, wh-ooook or wuk-oo, like sound of air blown across large mouthed bottle; about 1 note/second in runs of 20-80 notes, usually at night; also calls single notes while flying 3-4 m above marsh; has squeaky note.

Habitat: Marshes, swamps, edges of lakes, dams, ponds and streams, with marginal vegetation.

Habits: Solitary or in pairs. Shy and skulking, somewhat rail-like; freezes when disturbed; easily overlooked. When flushed flies short distance with dangling legs, then pitches into vegetation; wings rounded; bobs head and tail on landing.

Status: Uncommon resident; somewhat nomadic according to rainfall.



Description of Bird

Image

49. Long-toed Lapwing *Vanellus crassirostris*

Identification: Size medium; forecrown, face and throat white; hindcrown, hindneck and broad chest band black; rest of underparts white; rest of upperparts brown; broad white leading edge to wing; in flight wing all white except for 3 black outer primaries (looks somewhat egret like).

Bare Parts: Iris red; eye-ring purplish pink; bill purplish pink, tip black; legs and feet dull red, blackish in front.

Voice: Loud plaintive wheet; in flight loud clicking kik-k-k-k, kik-k-k-k.

Habitat: Permanent water with floating vegetation, especially waterlilies.

Habits: Solitary or in pairs or small family groups. Shy and wary except when breeding. Walks jacana-like on floating water plants, hence long toes to distribute weight.

Status: Locally common.



50. Ringed Plover *Charadrius hiaticula*

Identification: Size small; orange-yellow legs diagnostic; crown and back greyish brown; forehead white, broadly outlined black, joining black line through eye and around nape; broad black breast band runs around -- back of neck; rest of underparts and collar around neck white; in flight conspicuous white bar on secondaries; tail dark with white outer feathers and tip.

Immature: Dark brown where adult black; breastband sometimes incomplete in centre; bill blackish, faintly yellow at base; legs dull orange-yellow.

Bare Parts: Iris brown; bill orange-yellow, tip black; legs and feet bright orange-yellow.

Voice: 2-syllabled liquid piping twi-u or single kwik; raspy zik-zik-zik.

Habitat: Sandy, muddy and rocky shores of marine, estuarine and inland waters; also dry pans and airfields.

Habits: Solitary or in small loose groups. Forages on mud or sandbanks, seldom wades; runs fast on almost invisible legs, stopping suddenly to peck or probe at substrate; bobs head when alarmed.

Status: Common nonbreeding Palearctic migrant, September to April.



Description of Bird

Image

51. Three-banded Plover *Charadrius tricollaris*

Identification: Size small; two black breast bands, separated by white band, diagnostic; above brownish grey; face grey, separated from dark crown by white stripe from forehead to hindneck; rest of underparts white; very narrow white wingbar in flight; tail bordered with white.

Bare Parts: Iris hazel to light yellowish brown; eyering red; bill red, tip black; legs and feet pinkish grey.

Voice: Penetrating piping pi-peep or peep in flight and when alarmed; churring chizzle chizzeln intraspecific display.

Habitat: Firm shorelines of lakes, dams, pans, rivers, marshes; less commonly on rocky seashore.

Habits: Usually in pairs when breeding; otherwise in loose flocks of up to about 40 birds. Movements quick and jerky; runs in short spurts, stops to peck at substrate or to probe in mud with rapid jabs; stands with body slightly tilted forward; bobs head and body when alarmed. Easily overlooked when standing still.

Status: Common resident; nomadic on temporary inland waters.



52. Killitz's Plover *Charadrius pecuarius*

Identification: Size small; above light brown, sometimes mottled with rufous; forehead white, bordered black on forecrown to eye; white stripe from top of eye to hindneck; broad black stripe from base of bill through eye to side of neck and across mantle; below white, washed rich yellowish buff across breast.

Immature: Lacks black forecrown and bold lines on face; upperparts finely speckled dusky; underparts whiter; has complete pale band around hindneck like adult.

Bare Parts: Iris dark brown; bill black; legs and feet black to grey.

Voice: Rich piping tip-peep in flight; trilling trrr-rit-rit-rit-rit; alarm chnrt.

Habitat: Wide open shorelines of inland waters, especially shallow saline waters; also short grass on airfields, playing fields, dry pans; less commonly on seashore.

Habits: Solitary in pairs, or in loose groups flocks of up to 100 birds when not breeding. Flies fast with characteristic call. Easily overlooked unless running.

Status: Largely migratory April to December.



Description of Bird

Image

53. Common Greenshank *Tringa nebularia*

Identification: Size medium; long legged and long billed; bill stouter than that of Marsh Sandpiper often 2-toned dark and light, and slightly upturned (especially lowerjaw); above mottled grey; face whitish, with dark line from bill to eye (no dark line in Marsh Sandpiper); below white, slightly streaked at sides of chest; legs greenish; in flight no wingbar; lower back and rump extensively white; barring on tail and lower rump; calls on takeoff.

Bare Parts: Iris brown; bill black, base paler; legs and feet greenish grey to yellowish green.

Voice: Loud ringing tew-tewiew (3-5 notes) on take-off; clearer and more penetrating than take-off calls of most *Tringa* species.

Habitat: Dams, pans, swamps, seashores (both rocky and sandy), estuaries.

Habits: Usually solitary; sometimes in small loose groups; occasionally in flocks of up to 150 birds. Forages in shallow water, gathering into groups where fish fiy abundant; wades quickly, darting bill forward to catch prey or to probe substrate. Bobs when alarmed; shy and wary taking flight readily.

Status: Common nonbreeding Palearctic migrant, late July to early May.



54. Marsh Sandpiper *Tringa stagnatilis*

Identification: Size smallish to medium; very long legged and slenderly built; bill long, very thin, straight and tapering to tip (bill of Greenshank stouter and slightly upcurved); generally pale; back greyish, faintly mottled darker; underparts, face and eyebrow white, no dark line from bill to eye (lores blackish in Greenshank); in flight no white wingbar; lower back, rump and tail white, tail barred darker (barring onto rump in Greenshank, and white on back more extensive); legs project well beyond tail in flight (more so than in Greenshank).

Bare Parts: Iris brown; bill black; legs and feet light greenish grey, olive green or dull sage green.

Voice: Loud whistled tew-tew-tew-tew or sbrill piping che-weep on take-off, quieter and faster than call of Greenshank; flock in flight produces twittering effect; song wit-peeo.

Habitat: Shallow inland waters with muddy substrate, tidal mudflats, estuaries, salt pans.

Habits: Usually solitary; sometimes in small flocks; rarely larger flocks of up to 100 birds.

Movements quick and lively; pecks at surface of soft mud for food, turning quickly from side to side in semicircles as it moves forward; also wades in slightly deeper water and feeds with head submerged.

Status: Fairly common nonbreeding Palearctic migrant, August to April.



Description of Bird

Image

55. Wood Sandpiper *Tringa glariola*

Identification: Size smallish; above olive brown, clearly spotted with white (diagnostic) bill about as long as head; below whitish, lightly streaked greyish brown on chest and throat; eyebrow distinctly white; legs usually dull greenish (paler in Greenshank); in flight no wingbar; rump conspicuously white; tail white with dark bars; underwing greyish (blackish in Green Sandpiper).

Bare Parts: Iris brown; bill dark horn, base greenish; legs and feet greenish grey, olive green or yellowish green.

Voice: Loud, rather ringing call of 3-6 notes twee-twee-twee on take-off and in flight, less resonant than that of Greenshank; also sharp chip-chip-chip on ground, about 2-3 notes/second.

Habitat: Pools, streams, rivers, flooded grasslands, estuaries; prefers slightly marshy shorelines.

Habits: Solitary or in small loose groups, rarely up to 50 birds. Stands still to avoid detection; easily overlooked; sometimes hides under drooping vegetation; when flushed rises suddenly with 3-note whistle, not always flying far before settling and bobbing body briefly. Forages on floating vegetation, - on shoreline or in flooded grassy meadows, pecking food from surface; less often wades up to belly in deeper water, probing in bottom ooze.

Status: Common nonbreeding Palearctic migrant, August to May.



56. Green Sandpiper *Tringa ochropus*

Identification: Size smallish; similar to Wood Sandpiper, but less boldly spotted with buff(not white) above; back darker, more greenish brown than in Wood Sandpiper; looks almost blackish in field; eyebrow and underparts white, neck slightly streaked brownish; bill longish; in flight white rump conspicuous; no wingbar; underwing coverts blackish (greyish in Wood Sandpiper); tail mainly white with few dark bars near tip (more finely and extensively barred in Wood Sandpiper).

Bare Parts: Iris brown, bill dark horn, base paler; legs and feet olive green.

Voice: Loud high-pitched hipple note weet-EEE-weet or tler-EEEE-wee; sharp wit-wit-wit.

Habitat: Short swampy vegetation, woodland streams and shaded ponds.

Habits: Solitary. Forages at water's edge, running about probing into mud; bobs excessively when disturbed, before rising sharply with snipelike flight, giving 3-note call.

Status: Fairly common Palearctic migrant, August to April.



Description of Bird

Image

57. Common Sandpiper *Actitis hypoleucos*

Identification: Size smallish; looks uniform darkish bronzy brown above and on sides of chest; underparts white, extending around bend of wing as white crescent; eyebrow white; bill about as long as head; in flight white wingbar conspicuous (wing uniformly dark in Green and Wood Sandpipers); no white on rump as in Green and Wood Sandpipers; flight highly characteristic with rapid flickering wingbeats in short bursts below shoulder level on downcurved wings, usually low over water; bobs body constantly while feeding.

Bare Parts: Iris brown; bill brown, base greenish; legs and feet greenish grey.

Voice: High-pitched whistled tsee-see-see, usually on take-off.

Habitat: Almost any shoreline, from seacoast to estuaries, dams, pans, rivers, streams, lakes, sewage ponds, marshes.

Habits: Usually solitary, but roosts in small groups of up to 30 birds on coast; roosts on ground near water, usually in small depression. Movements quick and jerky; body usually tilted forward at angle when walking. Forages by pecking at surface of mud or water and by probing in mud or mammal dung with bill; may take leeches off hippos.

Status: Common nonbreeding Palearctic migrant, August to May.



58. Great Snipe *Gallinago media*

Identification: Size medium; bill straight, about twice length of head; above mottled brown and white; whitish spots on wing conspicuous; underparts buff marked with dark chevrons, including centre of belly; head striped buff and brown; in flight much white in outer tail feathers.

Bare Parts: Iris dark brown; bill horn brown; legs and feet greyish or yellowish green.

Voice: Rarely low guttural croak when flushed.

Habitat: Moist grassland, streams.

Habits: Usually solitary or in pairs. Usually rises silently when flushed, flying straight without zigzagging.

Status: Uncommon nonbreeding Palearctic migrant, October to April.



Description of Bird

Image

59. Curlew Sandpiper *Calidris ferruginea*

Identification: Size small; bill longish, decurved at tip; posture somewhat hunched. Nonbreeding: Above mottled brownish grey; eyebrow white; below white, sparsely streaked grey on breast in flight white wing bar conspicuous; rump white (no dark centre line as in most other *Calidris* species); tail dark. Breeding: Above dark brown, mottled with chest and buff; below deep reddish chestnut; white around bill and over eye; some birds acquire this plumage in late summer.

Bare Parts: Iris dark brown; bill black; legs and feet greyish to olive brown.

Voice: Whistled chirrip; sharp chit-chit when in flocks; wheezy choo-eeee when breeding.

Habitat: Seashore, inland pans, dams.

Habits: Highly gregarious; flocks may number 2000 birds. Forages on mud or sand around open water, or among weed and mussel beds on rocky shores, walking quickly and probing with bill into substrate. When disturbed, resting birds often stretch wings over back before walking away, or hopping away on one leg.

Status: Very common non breeding Palearctic migrant, August to April.



60. Little Stint *Calidris minuta*

Identification: Size very small (smallest wader in S Africa); bill rather short, stout and straight.

Nonbreeding: Above mottled greyish brown or dusky, with pale V on brownish-washed mantle; below white; trace of greyish shading at sides of breast; eyebrow white; in flight narrow white wingbar; rump narrowly white at sides, broadly blackish in centre. Breeding: Dorsal feathers edged rufous; foreneck and upper breast indistinctly spotted brown, and washed with dull rufous.

Bare Parts: Iris darkbrown; bill, legs and feet black.

Voice: Soft musical tsit-tsit-tsit or low trrr in flight; flock produces twittering chorus.

Habitat: Open muddy shores of estuaries, tidal flats, lakes, pans, dams and sewage ponds.

Habits: Gregarious, usually foraging in flocks of few to several hundred birds, probing rapidly with bill into soft mud and running actively about; often associates with other wader species.

Status: Common non breeding Palearctic migrant, September to April.



Description of Bird

Image

61. Ruff *Philomachus pugnax*

Identification: Size medium; posture hunched, orange-tinged legs usually diagnostic; bill dark, short, straight and fairly stout at base.

Nonbreeding: Above heavily mottled blackish and buffy white, giving scaly appearance; below white, slightly mottled on flanks; white area at base of bill usually highly characteristic but somewhat variable; in flight rump white with dark centre line; tail dark; narrow white wingbar not always visible; usually silent. Becoming rufous stripe onto back; rufous wash on foreneck and sides of chest.

Bare Parts: Iris brown; bill dark brown, base tinged orange; legs and feet highly variable.

Voice: Usually silent when not breeding; low gallinule-like wurk and chek-chek-chek.

Habitat: Ponds, salt pans, shallow lakes, lagoons.

Habits: Forages on floating plants or on shoreline, running on flexed legs, stabbing quickly at prey from side to side with bouncy lunging motion, or sweeping from side to side with bill. Flight fast and direct, sometimes erratic.

Status: Common Palearctic migrant, August to May.



62. Black winged Stilt *Himantopus himantopus*

Identification: Size medium; slender build; legs very long, red; bill long, slender straight mostly white; back and wings black. Immature: greyish nape and hind neck.

Bare Parts: Iris ruby red; bill black legs and feet red.

Voice: Puppy like yapping yip-yip-yip, loud and penetrating; shrill chek-chek-chek alarm call.

Habitat: Shallow waters of estuaries, pans, dams, sewage ponds, and marshes.

Habits: Solitary or gregarious; occasionally in large flocks of up to 500 birds.

Forages by wading quickly with high-stepping gait in shallow water sweeping bill over surface and pecking at food; may submerge head and neck.

Status: Locally common resident; highly nomadic.



Description of Bird

Image

63. Temminck's Courser *Cursorius temminckii*

Identification: Size small; crown rufous; rest of upperparts and breast light brown, merging to rufous on upper belly, bordered below by large dark brown patch extending between. Immature: Streaked blackish on crown; eyebrow buff; brown feathers mottled with buff and black; belly patch smaller than in adult.

Bare Parts: Iris dark brown; bill greyish black, base yellowish horn; legs and feet greyish white.

Voice: Grating metallic pup-pup-prrr, pup-pup-prrr in flight, like sound of rusty hinge.

Habitat: Bare short grassland in savanna or bushveld, edges airfields, overgrazed areas, burnt grassveld, ploughed or fallow lands, bare granite whalebacks.

Habits: Usually in pairs or small groups; appears within a few days after veld burnt. Forages by alternate runs and pecks at ground. When alarmed raises and lowers body by straightening and bending legs, keeping head still.

Status: Locally common nomad and intra-African migrant.



64. Collared Pratincole *Glareola pratincola*

Identification: Size medium, looks like smallish tern or large swallow, long wings obvious at rest and in flight; above dull brown; below whitish, washed ochre and brown on breast; throat yellow-ochre, narrowly bordered black; thin black line from gape visible at close quarters; in flight dark red axillaries in underwing visible in good light; rump white; tail forked. Immature: Lightly mottled above and below with buff; black collar absent.

Bare Parts: Iris dark brown; bill black, base red; legs and feet greyish black.

Voice: Loud sharp ternlike chippering pirri pirree pirrip pip repeated several times in flight; pree and chik alarm calls; RLT-ittitit-ittit in greeting display.

Habitat: Open ground, burnt grass; usually near estuaries, pans and coastal lakes; also along larger rivers.

Habits: Gregarious at all times, sometimes in flocks of hundreds of birds.

Flight buoyant, ternlike; forages in flight or by running about on ground. Bobs head in alarm; flies about calling loudly at breeding colony; after landing holds wings briefly open, showing reddish underwing.

Status: Locally common intra-African migrant, April to November.



Description of Bird

Image

65. Grev-headed Gull *Larus cirrocephalus*

Identification: Size medium. Breeding: White with grey head, back and upperwing; wingtip black with white spots; bill and legs red. Nonbreeding: Similar, but lacks grey on head; eye whitish. Immature: Mottled ashy brown on back and crown; ear coverts brownish; black sub terminal bar on tail; underparts white; bill pinkish, tip dark; legs and feet dull red to brown. Bare Parts: Iris yellowish white; eye ring, bill, legs and feet crimson (legs and feet dark red when not breeding).

Voice: Harsh raucous kaaa; staccato ka-ka-ka-ka or kmlp.

Habitat: Larger dams, pans, estuaries, coastal lakes, seashore.

Habits: Gregarious; nonbreeding flocks 5-20 birds; breeding flocks may number hundreds. Forages in loose flocks over water and on shore. Very noisy at breeding colonies.

Status: Locally common.



66. Lesser Black-backed Gull *Larus fuscus*

Identification: Size medium to large; mainly white; wings and back black; legs bright yellow or greenish yellow. Immature: Coarsely mottled brown; head paler; tail with broad black band and very narrow white tip; legs pinkish brown; bill blackish at first, later pale greyish with black tip.

Bare Parts: Iris pale cream to white; eye ring red to orange; bill yellow with red patch near tip of lower jaw; legs and feet yellow.

Voice: Harsh mewing; deep kokokokok.

Habitat: Inland and coastal waters.

Habits: Usually gregarious; often solitary. Scavenges from surface of water in flight, or settles on water to pick up offal; also wades in surf to catch crabs and scraps; may pirate food from other seabirds; rarely swoops down for fish.

Status: Uncommon nonbreeding Palearctic migrant, October to March.



Description of Bird

Image

67. Whiskered Tern *Chlidonias hybrida*

Identification: Size smallish; nonbreeding birds similar to nonbreeding White-winged Terns; tail squarish or slightly forked, greyer than that of White-winged Tern. Nonbreeding: Forehead, underparts and underwing white; crown speckled black on white, merging to black nape (no dark patch behind eye as in White-winged Terns); rest of upperparts light grey. Breeding: Whole body lead grey, except for black forehead and crown separated from grey underparts by conspicuous white cheek stripe from bill to sides of neck; underwing and undertail white. Immature: Above mottled; otherwise similar to nonbreeding adult.

Bare Parts: Iris brown to red-brown; bill red (breeding) or black (non breeding); legs and feet red.

Voice: Harsh rasping kreek kreek.

Habitat: Inland waters; pans, reedy dams, flooded pastures.

Habits: Usually gregarious in small flocks. Dips to surface of water for food; sometimes plunges into water, or hawks insects in flight; flies fairly low back and forth over water.

Status: Fairly common resident and Palearctic migrant.



68. White-winged Tern *Chlidonias leucopterus*

Identification: Size smallish; similar to Whiskered Terns in nonbreeding plumage; tail almost square, barely forked. Nonbreeding: Forecrown, underparts and sides of neck white; hindcrown speckled with black; large black patch behind eye (black streak to nape in Whiskered Tern), small black patch in front of eye; rest of upperparts grey, slightly mottled on wing coverts; in flight underwing and tail white. Breeding: Underparts, head and underwing coverts jet-black tail, upperwing and regimens white, contrasting with black of body and underwing; rest of upperparts grey. Immature: Similar to non breeding adult, but back darker brownish grey.

Bare Parts: Iris dark brown; bill black (nonbreeding) or crimson (breeding); legs and feet vermillion.

Voice: Raucous bnzzing zrrk-zrrk-znk; rapid kik-kik-kik; gutlrral kerr.

Habitat: Inland and coastal lakes, dams, pans, marshes, sewage ponds, estuaries.

Habits: Solitary or gregarious, flocks sometimes numbering up to 2000 birds. Flies slowly into wind over open water, swooping for food; also hawks insects in flight, sometimes over dry land far from water. Rests on mats of floating vegetation, posts or stumps; roosts in dead trees in water.

Status: Common Palearctic migrant, August to April.



Description of Bird

69. African Skimmer *Rynchops flavirostris*

Identification: Size medium to large; long-winged, ternlike; bill bright orange-red, lower jaw much longer than upper; upper parts brownish black (whitish collar on hindneck when not breeding); underparts, sides of face, forehead and tips of secondaries white; tail whitish, deeply forked.

Immature: Streaked on forehead; upperparts mottled with buff; bill yellow tip black. Chick: Ternlike; lowerjaw not longer than upper.

Bare Parts: Iris brown; bill orange-red above, orange below, merging to yellow at tip; legs and feet vermillion.

Voice: Loud sharp kik-kik-kik.

Habitat: Larger rivers, lakes, pans, coastal lagoons.

Habits: Gregarious in flocks of up to 20 or more birds. Usually wary and unapproachable, but may be approached closely by boat. Flocks rest on sandbanks, facing into wind. Flies fast with and lower jaw just dipped below surface of water, cutting narrow wake, then returning along same course; snaps bill closed as food swept up; forages day and night, usually when water calm.

Status: Locally common resident and local migrant.

Image



Bird Activity Book has information for Wildlife Clubs of primary schools in Malawi to be used as both a guide for teaching and a workbook for students. It contains 25 activities for different levels which will be of interest to both teachers and school children to learn more about birds of Malawi. Bird watching in schools will now become both interesting and informative.



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