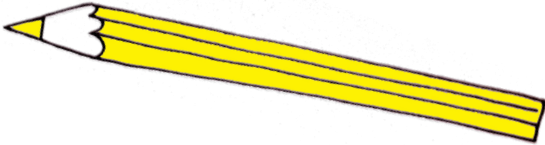
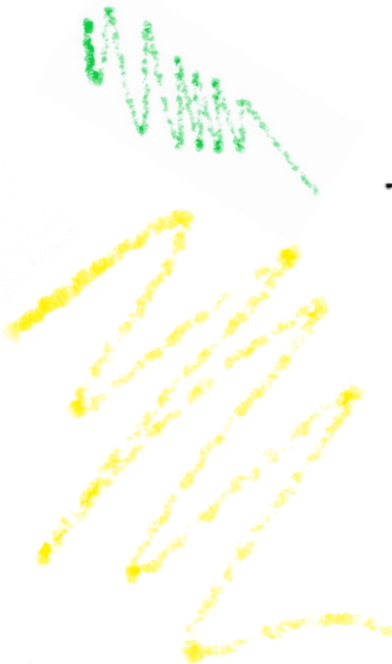
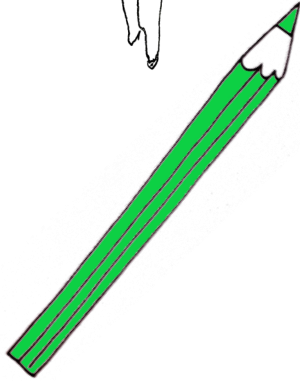
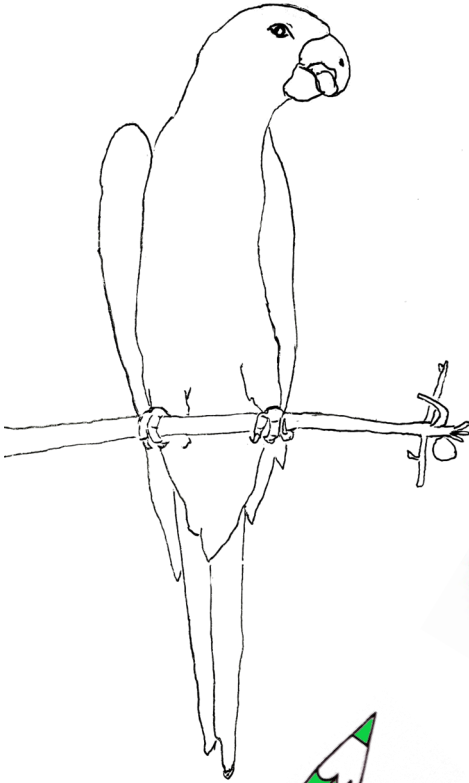


Parrots of the Rupununi Activity Book



Financial support to produce this book was made possible through the United States Fish and Wildlife Service and One Earth Conservation.



We give thanks to all those working with parrot conservation in this region and Guyana: Karasabai Village Council, Karasabai Ecotourism and Conservation Committee, the Parakeet Rangers of Karasabai, the Guyana Tourism Agency, the Ministry of Indigenous People's Affairs, the Environment Protection Agency, Guyana Wildlife Conservation and Management Commission, Nappi Village, Rewa Village, the Center for the Study of Biologic Diversity, University of Georgetown, and Sloth Island Resort. Thanks to Kaiwino Haynes and Dr. Matt Hallett for perspective on the content and text. We specifically thank W. Prince, T. Brasche, P. Nash, and the Wildlife Clubs of the North Rupununi for sharing their method for parrot counting and for "Makusipe Komanto Iseru, Sustaining a Makushi Way of Life", by the Makushi Research Unit, for helping with parrot names in Makushi.

To find out more about the sun parakeet conservation efforts of Karasabai Village, or to visit, please visit: <https://www.facebook.com/keseecolodgekarasabai>

Text by Samantha James.

Drawings on pages 3, 10, 14, 15, 20, 21, 22, 25, by Wendell Donaldson.

Drawings on pages 3, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 19, 20, by Dickson Van Long.

All photos and images are in the public domain unless otherwise stated.

Scarlet-shouldered parrotlet; Vince Smith from London, United Kingdom / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Cobalt-winged parakeet: Gary L. Clark / CC BY-SA (<https://creativecommons.org/licenses/by-sa/4.0>). Golden-winged parakeet: Charles J Sharp / CC BY-SA (<https://creativecommons.org/licenses/by-sa/4.0>). Caica parrot: Hector Bottai / CC BY-SA (<https://creativecommons.org/licenses/by-sa/4.0>). Blue-headed parrot: Félix Uribe / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Festive parrot: Christopher G from Tulsa Oklahoma, USA / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Blue-checked parrot: Amazona dufresniana -two_captive-8a.jpg: TJ Lin / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Yellow-crowned parrot: Félix Uribe / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Mealy parrot: Art G. from Willow Grove, PA, USA / CC BY (<https://creativecommons.org/licenses/by/2.0>). Orange-winged parrot: Félix Uribe / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Dusky-billed parrotlet: Hector Bottai / CC BY-SA (<https://creativecommons.org/licenses/by-sa/3.0>). Green-rumped parrotlet: Jam.mohd / CC BY-SA (<https://creativecommons.org/licenses/by-sa/4.0>). Black-headed parrot: SandyCole (mailto:sandyc@dicksandy.org) / CC BY-SA (<https://creativecommons.org/licenses/by-sa/3.0>). Red-fan parrot: Sham Edmond / CC BY (<https://creativecommons.org/licenses/by/2.0>). Red-bellied macaw: A C Moraes / CC BY (<https://creativecommons.org/licenses/by/2.0>). Blue and yellow macaw: I, Luc Viatour / CC BY (<https://creativecommons.org/licenses/by/2.0>). Red and green macaw: Tony Hisgett / CC BY (<https://creativecommons.org/licenses/by/2.0>). Chestnut-fronted macaw: Sandysphotos2009 / CC BY (<https://creativecommons.org/licenses/by/2.0>). Red-shouldered macaw: Sham Edmond / CC BY (<https://creativecommons.org/licenses/by/2.0>). White-eyed parakeet: Félix Uribe / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>). Brown-throated parakeet: Félix Uribe / CC BY-SA (<https://creativecommons.org/licenses/by-sa/2.0>).

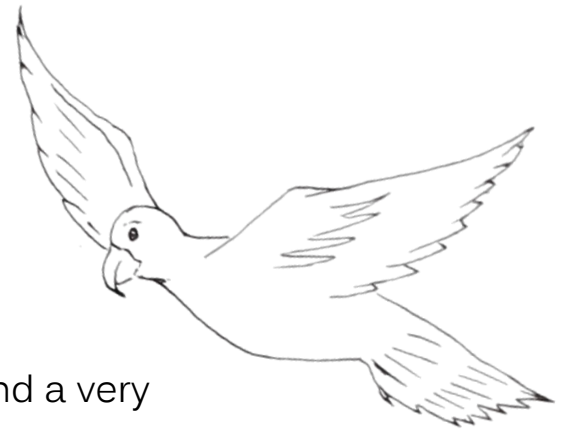
Published by One Earth Conservation
Edition 1, June 2020
www.oneearthconservation.org
info@oneearthconservation.org
One Earth Conservation, 2020



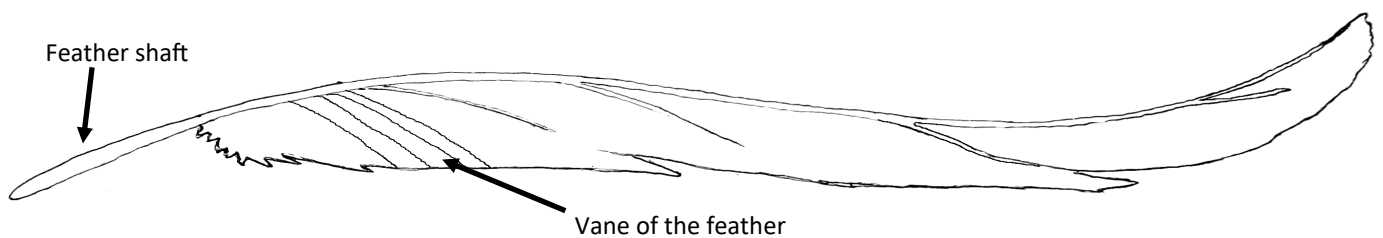
© 2020 by One Earth Conservation. This "Parrots of the Rupununi Activity Guide" is made available under a Creative Commons Attribution - Non-Commercial - No Derivatives 4.0 License. For more information, please visit <https://creativecommons.org/licenses/>.



Birds are animals with a backbone and they are specially **adapted** for flight.



Birds have two wings, a tail and are covered with feathers. They have a light, but strong skeleton, and a very efficient **respiratory system**.



Feathers are made out of **keratin**, the same material as your hair and fingernails.

Feathers can be tiny or large, and can be different colours.

To keep feathers in good condition for flying, birds must **preen** their feathers to clean, oil, and reshape them.

Birds also scratch, bathe and sun their feathers to clean them and get rid of bugs. Every year or so, they **molt**, or change their feathers.



Find a feather and look at it closely. One side is shiny, this is from the oil from the bird's body and helps keep the bird warm and dry!

There are many different **species** of parrot in Guyana. Macaws, parakeets and parrotlets are different types of parrots.

Parrots have a large head, short neck, and a strong, beak, tough enough to crack seeds and nuts.



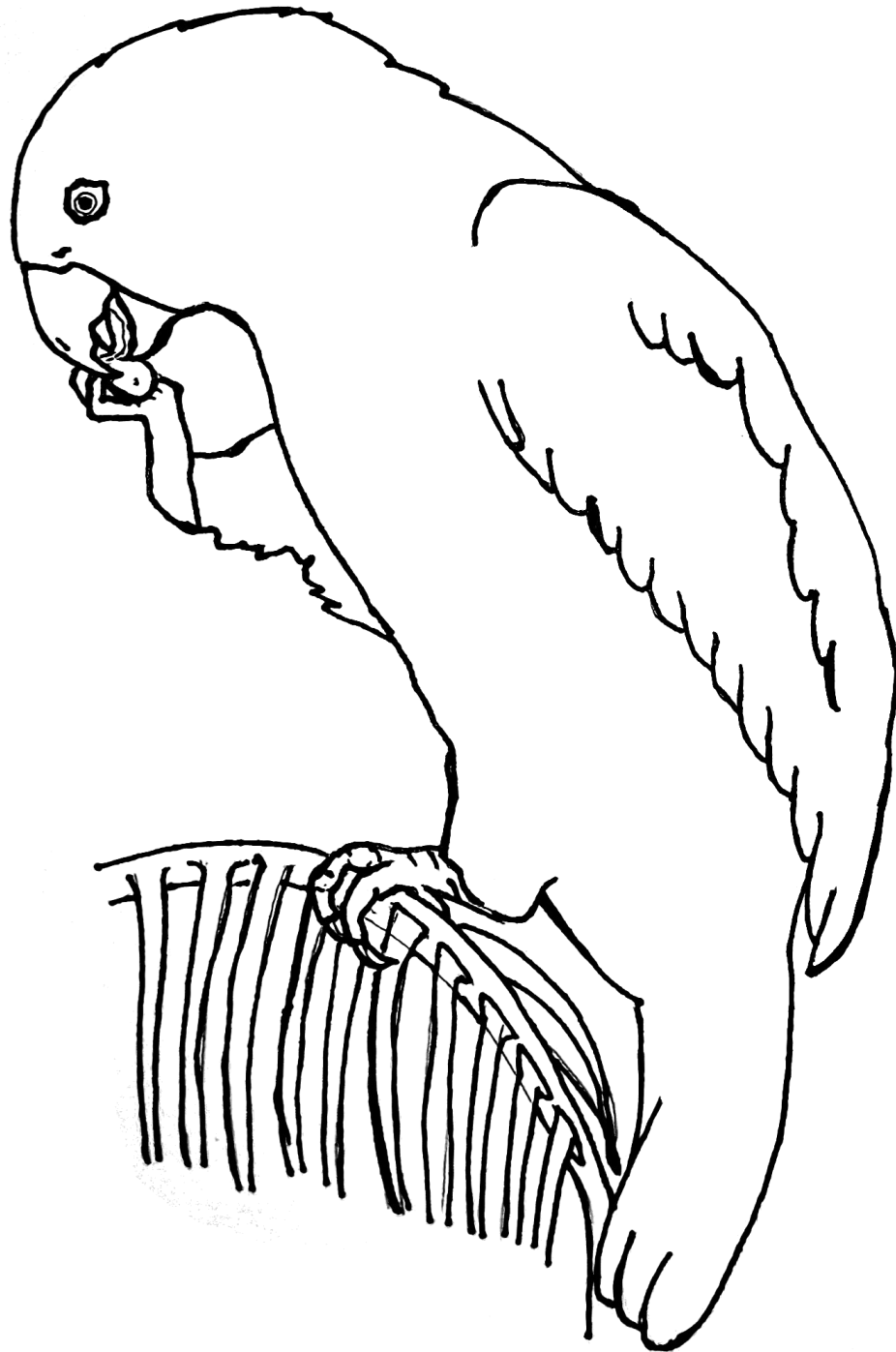
Label the parts of the parrot.



Parrot feet are **Zygodactyl** (say ZI GO DACK TAL), which means it has two toes facing forward, and two facing back. This allows them to grip tree branches, or even hang upside down.

Toucans, woodpeckers and woodcreepers also have this special toe arrangement. They can hold on to the side of trees.

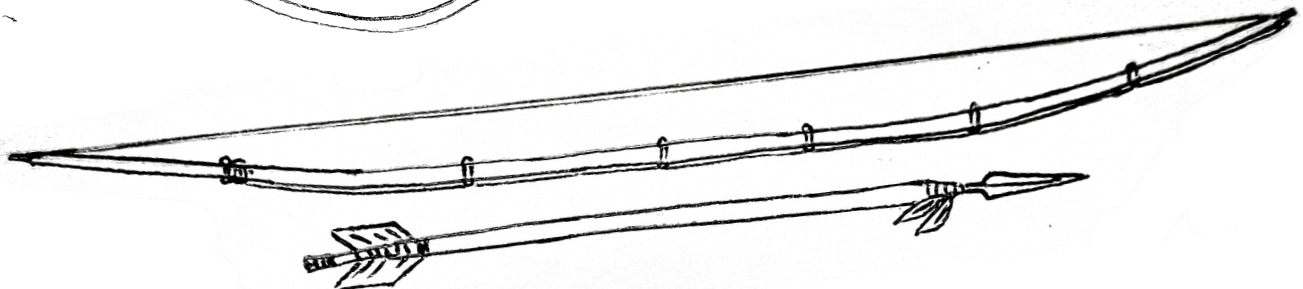
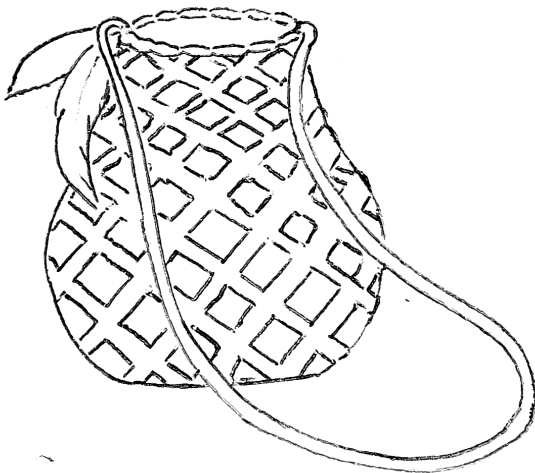
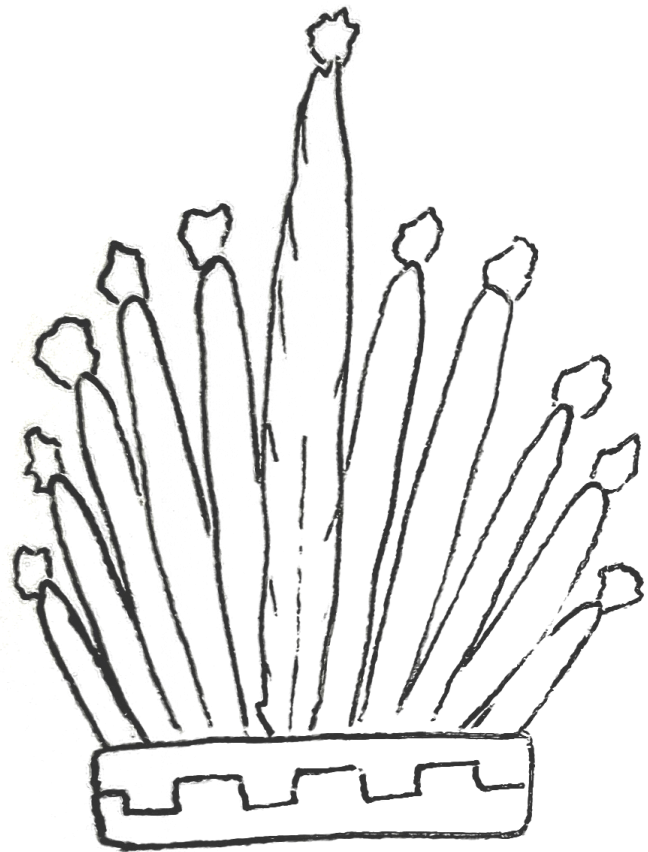
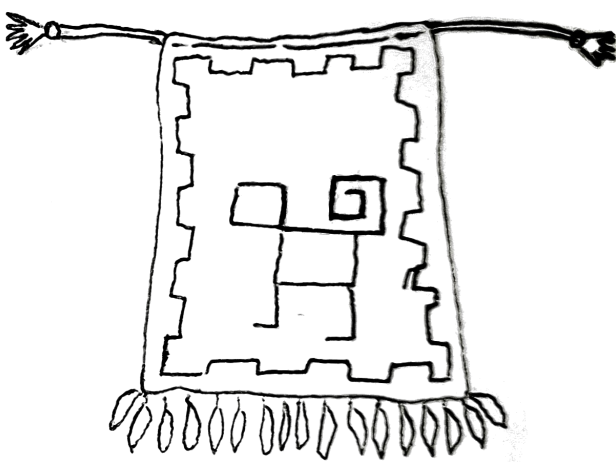
Parrots are the only birds that can lift food to their mouth with a foot!



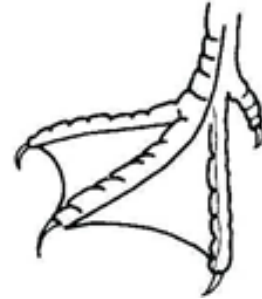
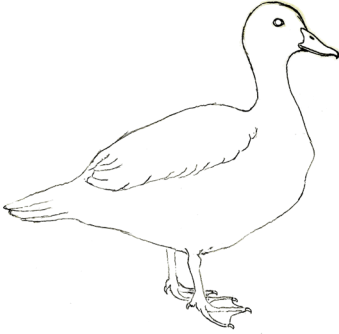
Some people may keep parrots as pets. Wild animals do not make great pets because part of them will always remain wild. Their **instinct** is to behave wild, they may bite and injure people.

Domestic animals like dogs make better pets.

Some Indigenous people use parrot feathers to decorate baskets, headwear and clothing. Parrot feathers are not good to use on arrows. Parrots are noisy birds and their feathers would chase away fish and game.



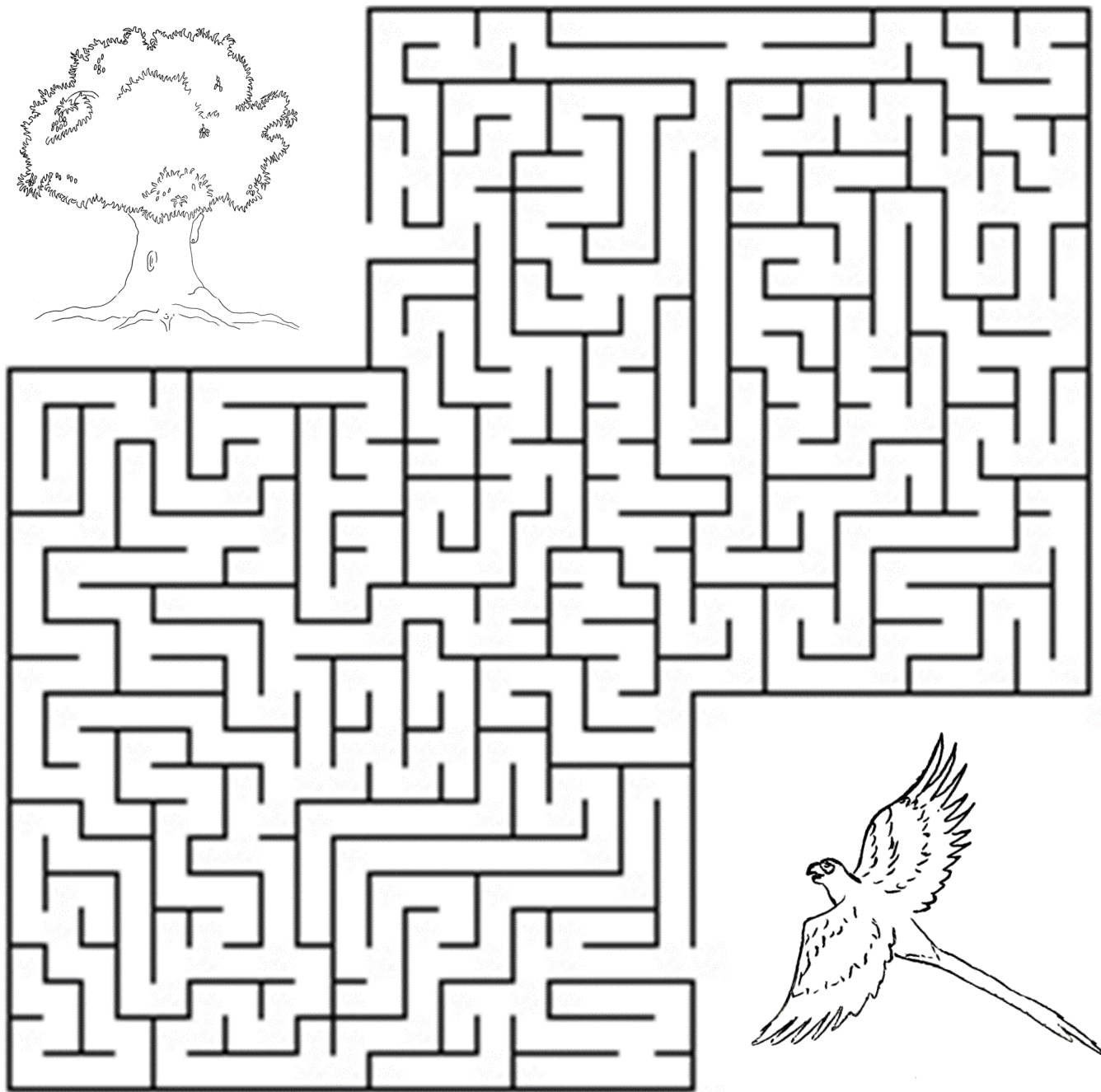
Have a look at a chicken's foot. It is **Anisodactyl** (say A NEE SO DACK TAL), with three toes facing forward and one to facing backwards.



Draw a line from the type of foot to the correct bird.

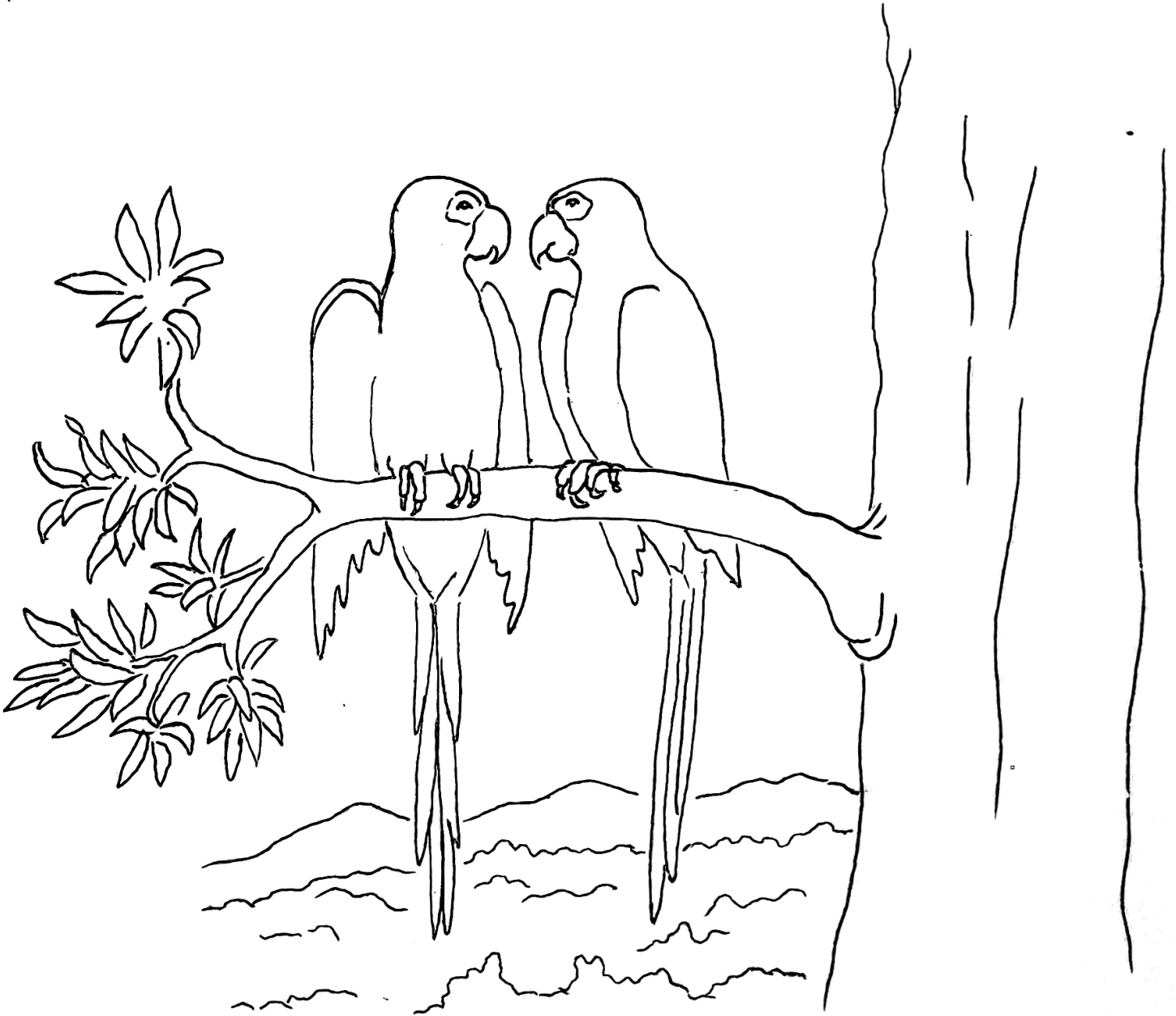


Parrots can fly long distances and narrow wings make them swift fliers. A **flock** of parrots will often **roost** in one area. Every day they will travel in search of food. This is why you often see parrots flying in the early morning and late afternoon, chattering and talking about their plans of the day!



Help the parrot get home to roost.

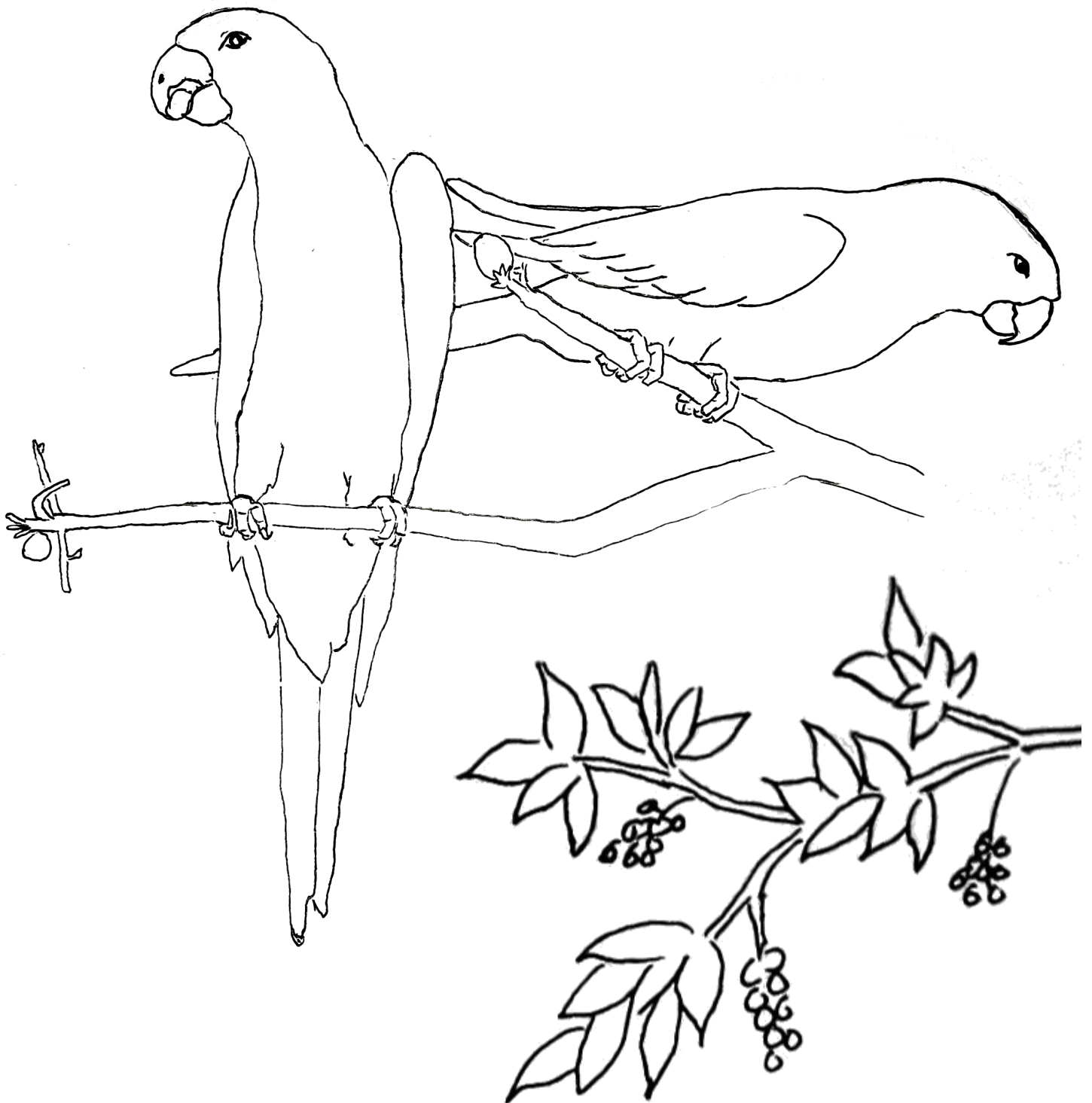
Parrots are **social** and noisy. They use their calls to **communicate** with each other and work together to look for food and to protect themselves from predators.



All birds fly differently. See if you can tell the difference between parrots, macaws, woodpeckers, toucans, storks and kingfishers when you see them flying.

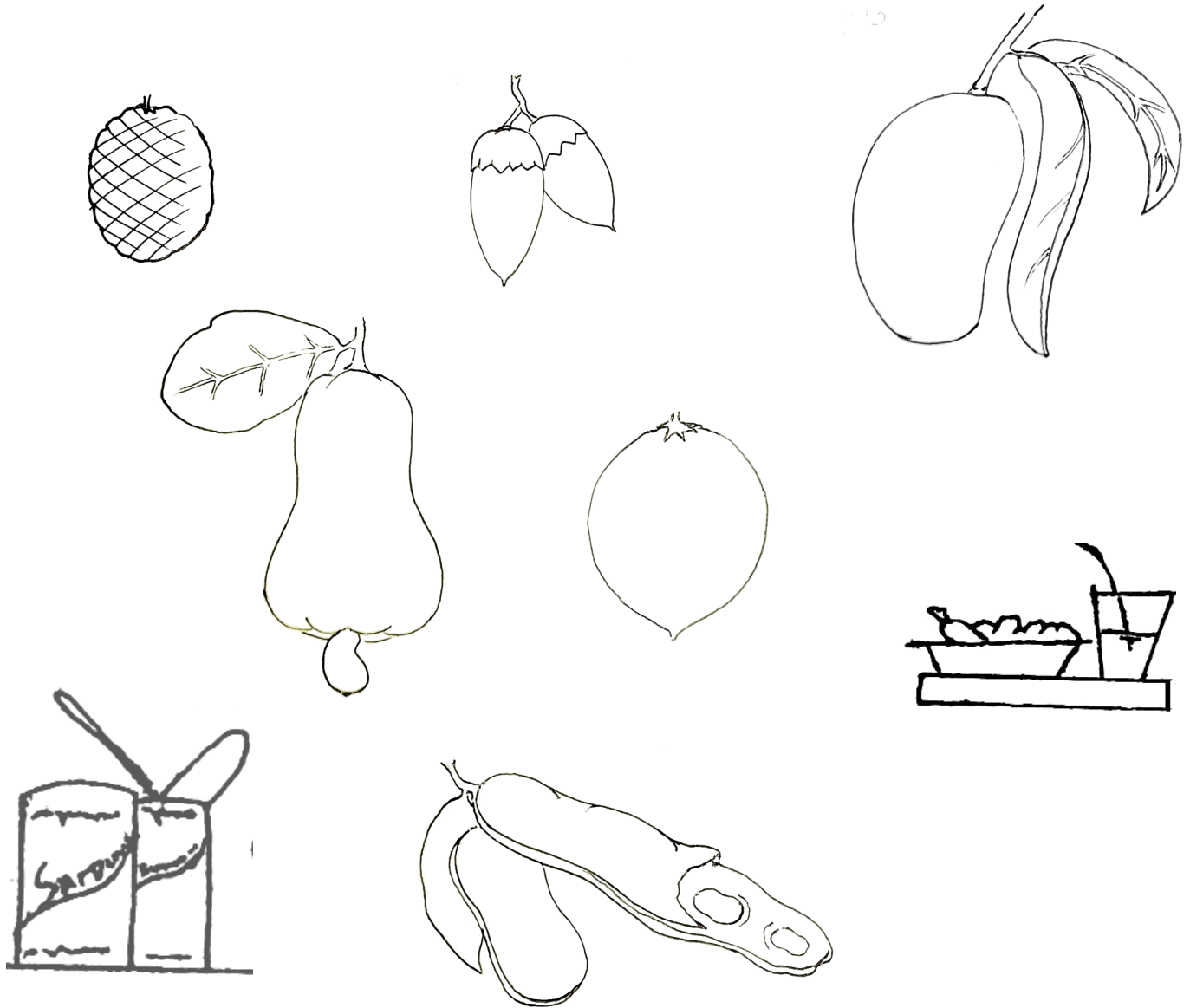
A parrot's beak is sharp and tough enough to crack seeds and nuts. The sharp hooked tip can pull out the soft parts of nuts and fruit.

Parrots can also be very gentle. They use their beak to preen each other's feathers, to straighten them and take out tiny bugs. Parrots will sit together in small groups to help each other preen.



In the wild, parrots also eat fruits, flowers, bark, and leaves.

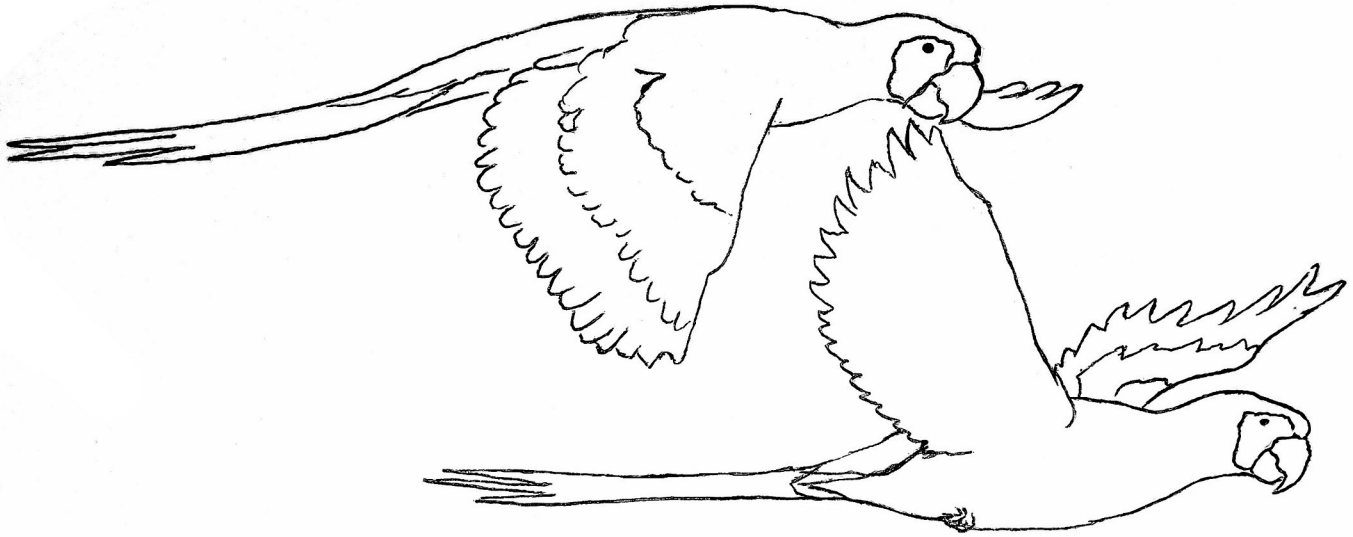
Parrots are seed **dispersers**, after eating the seed, the bird may drop it or poop it out.



Colour the food that parrots eat in the wild.



The biggest parrots are macaws; they are large, brightly coloured birds with long wings and tail. Macaws with a strong wing beat. They often fly in pairs.



Some macaws in Guyana include:

Scarlet macaw

(Wayara)

Red-and-green macaw

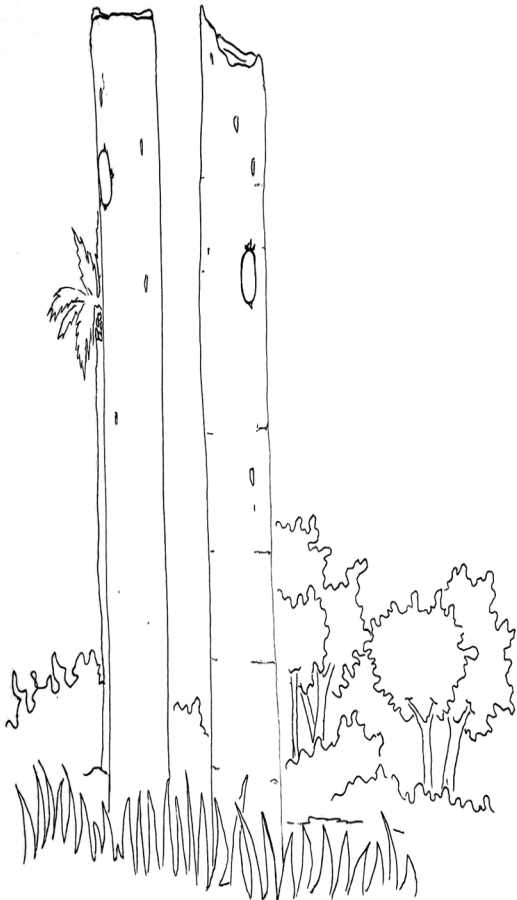
(Kiyari)

Blue-and-yellow macaw

(Karara)

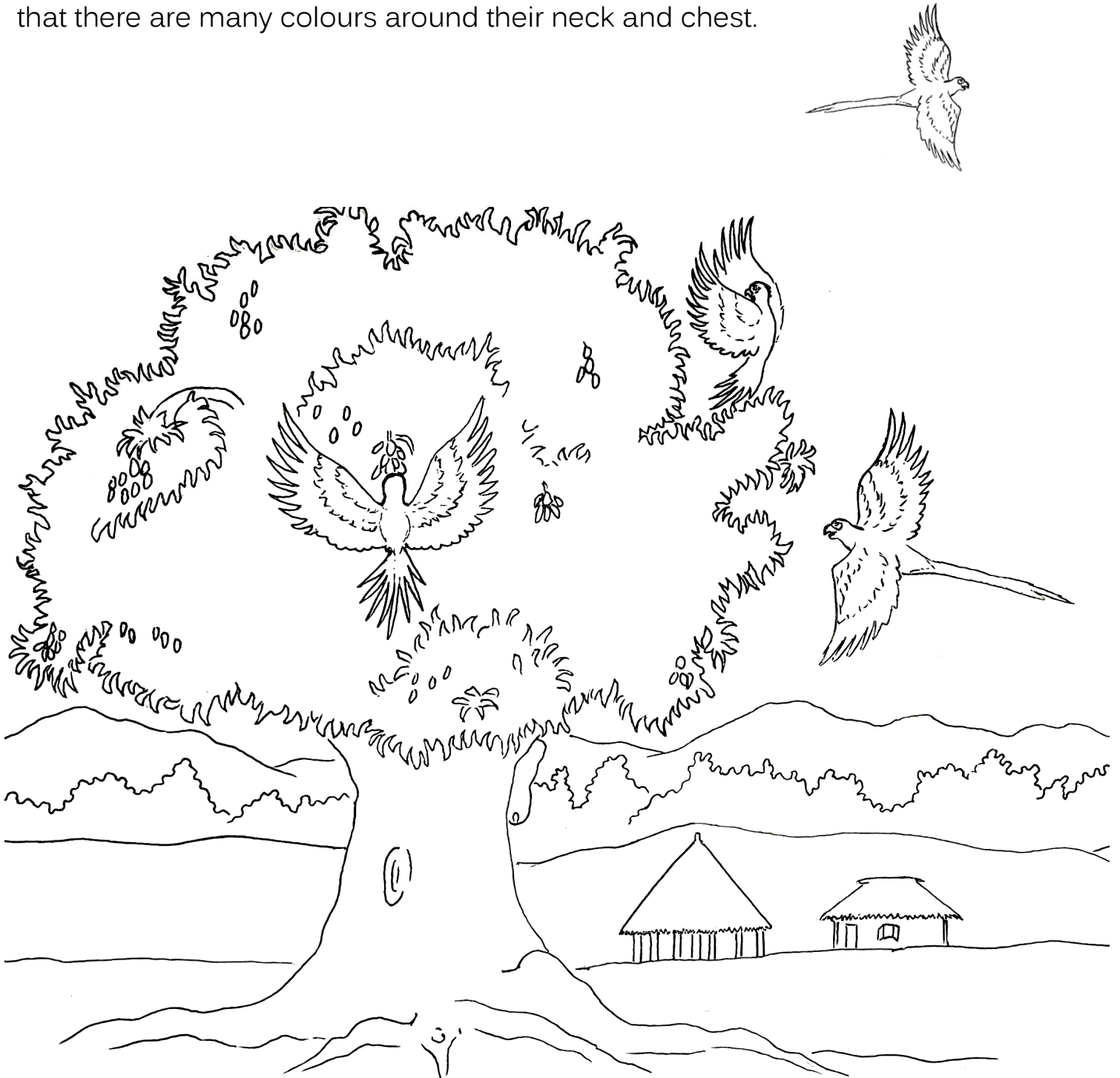
Red-shouldered macaw

(Marakan)



Parakeets are medium sized, parrots. They are mostly green, with long tails. They are loud and noisy! They often fly in small flocks and can be seen swooping into village trees, where they disappear, to feed silently on mangoes and other fruit.

If you watch them carefully, you will see the area around their eye is bare and that there are many colours around their neck and chest.



Keseé, the sun parakeet, is a small in size, but bright yellow and orange in colour.

These parakeets live in large family groups. At night, they roost in tree **cavities** together.

Keseé used to be throughout the savannah areas of Region 9, but now they are rare and found only near the village of Karasabai.

It is illegal in Guyana to trap this species, but people still do. There are now more sun parakeets living as pets in other countries than there are living in the wild in Guyana!



Many parrots are **monogamous** (say MO NOG A MUS). When they choose a mate, they stay together. You can't tell the difference between male and female parrots by looking at them.

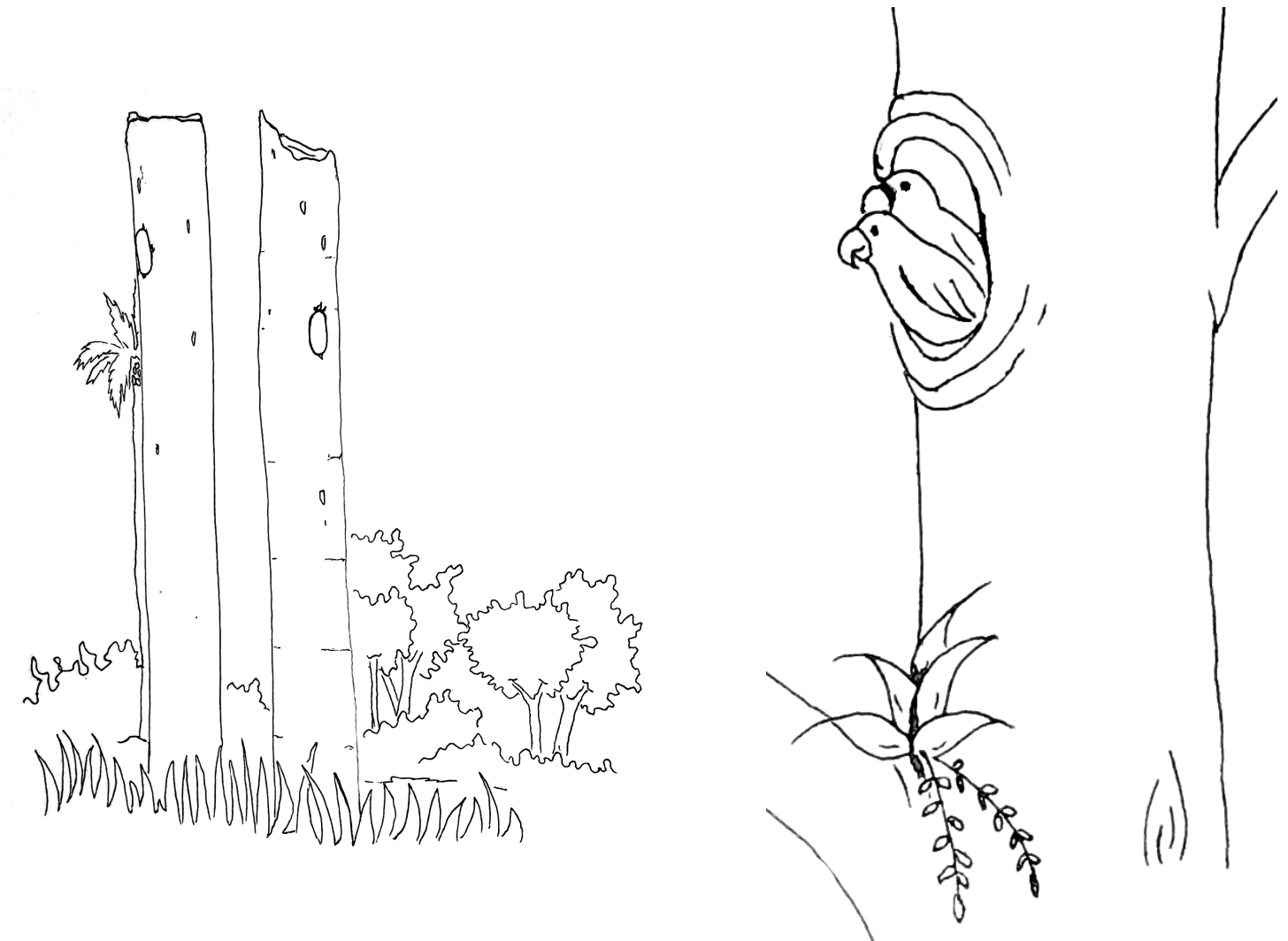
Most parrots do not build nests from sticks. They lay their eggs in a tree **cavity**.

Some macaws and big parrots will use their beak to dig out the cavity in a dead tree or clay cliff, or use an old woodpecker nest.

Parrots usually lay 2 to 3 eggs at one time and parents take turns keeping the eggs warm.

Parrot chicks are hatched almost naked, with only a thin layer of **down** and they are blind for the first 2 weeks of their lives.

After about 3 weeks, the chicks start to grow adult feathers and can take anywhere from 1 to 5 years to **mature**.



The brown-throated parakeet, or siriki, makes its nest in a wood ants nest, high in a tree.

They use their beak to dig out a tunnel from the bottom of the nest. This way their eggs are kept dry and out of reach from most **predators**.



Parrots are also extremely **intelligent**, and many of them can **mimic** humans and other sounds. Because of their beauty and **intelligence**, parrots are often kept as pets.

People trap parrots and macaws and sell them. The **wildlife trade** can provide an income to people. But if the birds are all trapped out, there will be none left in the wild. Many places in Guyana do not have the species or numbers of parrots they used to.



Parrot predators include jaguars, monkeys, snakes, toucans, humans, and raptors, including falcons and hawks.

Other threats to parrots include **deforestation**, wild fire, and cutting down trees to take baby birds for the **wildlife trade**. To conserve parrots, leave them to nest!

Some conservationists build nest boxes in trees if there aren't enough natural nest cavities for the birds.

Circle the things that may be a threat to parrots in the wild.



A LIST OF PARROTS FOUND in GUYANA and the RUPUNUNI

	Parrots found in Guyana	Found in the Rupununi	Makushi Name	Tick this box for parrots I have seen
1	Lilac-tailed parrotlet, <i>Touit batavicus</i>	Yes		
2	Scarlet-shouldered parrotlet, <i>Touit huetii</i>			
3	Sapphire-rumped parrotlet, <i>Touit purpuratus</i>			
4	Tepui parrotlet, <i>Nannopsittaca panychlora</i>			
5	Cobalt-winged parakeet, <i>Brotogeris cyanopectera</i>			
6	Golden-winged parakeet, <i>Brotogeris chrysoptera</i>	Yes	kîri kîri	
7	Caica parrot, <i>Pyrilia caica</i>	Yes		
8	Dusky parrot, <i>Pionus fuscus</i>	Yes		
9	Blue-headed parrot, <i>Pionus menstruus</i>	Yes		
10	Festive parrot, <i>Amazona festiva</i>	Yes		
11	Blue-cheeked parrot, <i>Amazona dufresniana</i>	Yes		
12	Yellow-crowned parrot, <i>Amazona ochrocephala</i>	Yes	owoke	
13	Mealy parrot, <i>Amazona farinosa</i>	Yes	sarama	
14	Orange-winged parrot, <i>Amazona amazonica</i>	Yes	kairika	
15	Dusky-billed parrotlet, <i>Forpus modestus</i>	Yes		
16	Green-rumped parrotlet, <i>Forpus passerinus</i>	Yes		
17	Black-headed parrot, <i>Pionites melanocephalus</i>	Yes		
18	Red-fan parrot, <i>Deroptryus accipitrinus</i>	Yes	panakinya	
19	Painted parakeet, <i>Pyrrhura picta</i>	Yes	msutu mutume	
20	Fiery-shouldered parakeet, <i>Pyrrhura egregia</i>			
21	Brown-throated parakeet, <i>Eupsittula pertinax</i>	Yes	siriki	
22	Sun parakeet, <i>Aratinga solstitialis</i>	Yes	keseé	
23	Red-bellied macaw, <i>Orthopsittaca manilatus</i>	Yes	marakan	
24	Blue-and-yellow macaw, <i>Ara ararauna</i>	Yes	karara	
25	Scarlet macaw, <i>Ara macao</i>	Yes	wayara	
26	Red-and-green macaw, <i>Ara chloropterus</i>	Yes	kiyari	
27	Chestnut-fronted macaw, <i>Ara severus</i>	Yes		
28	Red-shouldered macaw, <i>Diopsittaca nobilis</i>	Yes	kai kai	
29	White-eyed parakeet, <i>Psittacara leucophthalmus</i>	Yes	kuriwai	



There are 29 parrot species in Guyana.
Of that, 24 species live in the Rupununi.
How many have you seen?
Tick them off in the table!

There are a lot of words in this book which may be new to you! The meaning of all the words in **BOLD** are in the glossary at the back.

See if you can find the words in the puzzle below!



Created with TheTeachersCorner.net Word Search Maker

Vocabulary Word Search

Search up, down, left, right and diagonally to find the words.

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

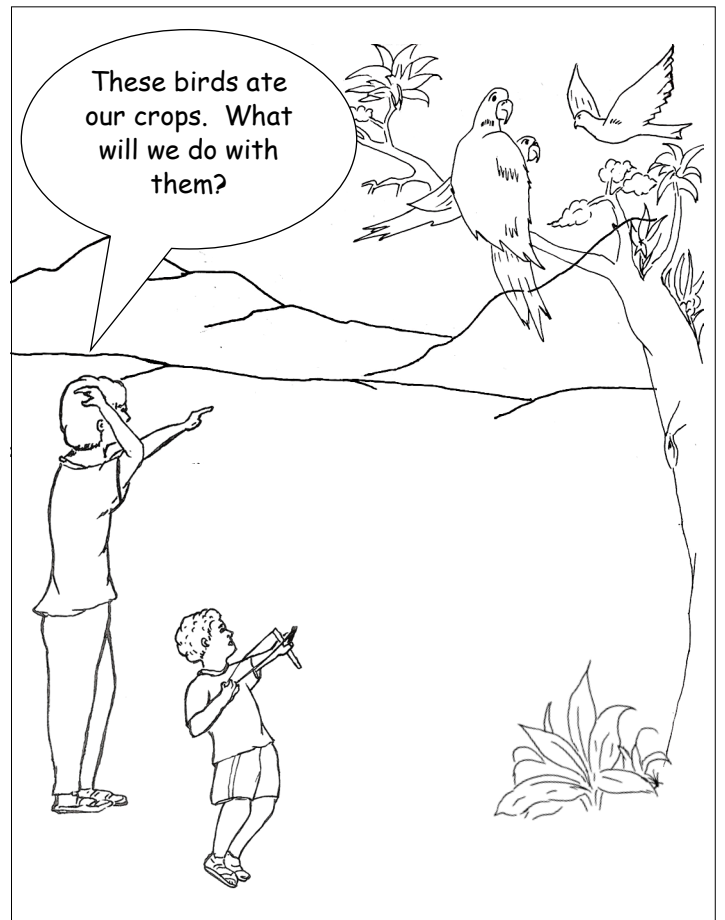
ANISODACTYL
 DEFORESTATION
 PREDATOR
 RESPONSIBLE
 ZYGODACTYL

ADAPTED
 DOMESTIC
 PREY
 SPECIES

CONFLICT
 EVOLVE
 RESPIRATORY
 WILDLIFETRADE

Parrots & People

A True Story

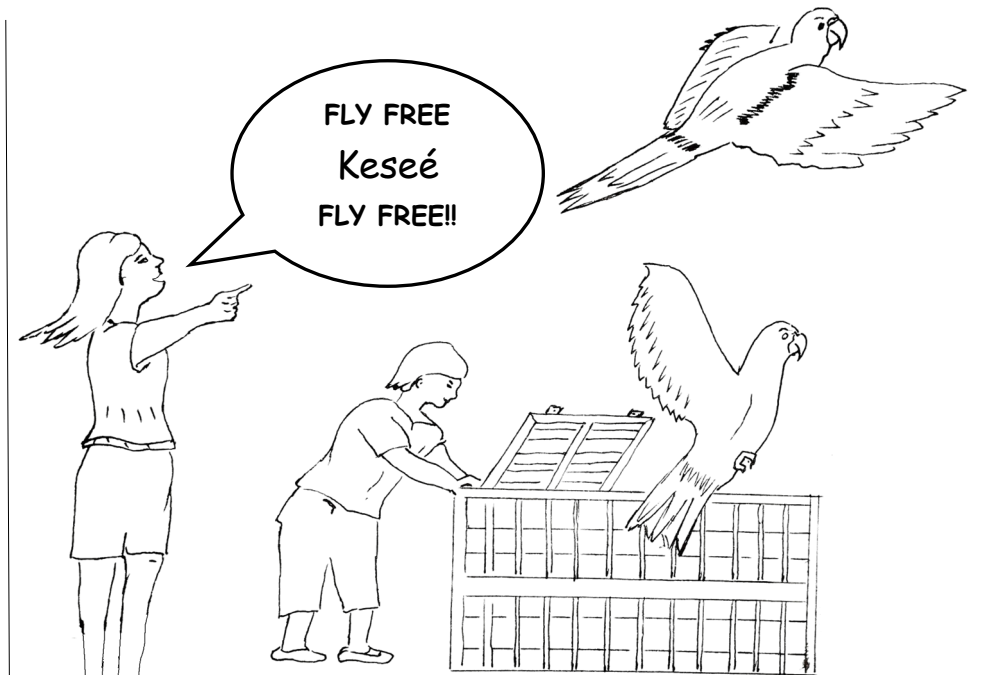
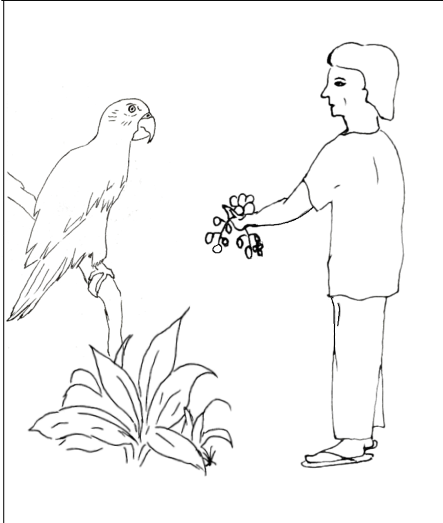




It is illegal to trap, buy or sell sun parakeets in Guyana, but some people still do.



The Parakeet Rangers rescue some birds that were trapped to sell. The children feed them and take care of them until they are ready to return to the wild.





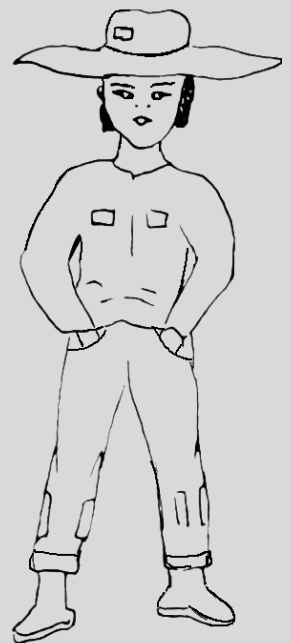
The people of Karasabai are working to protect the sun parakeet.

The Parakeet Rangers of Karasabai patrol regularly, asking people not to trouble the birds. They are also learning all they can about these wonderful birds by watching where they go to feed, what they eat, where they sleep, and how they nest.

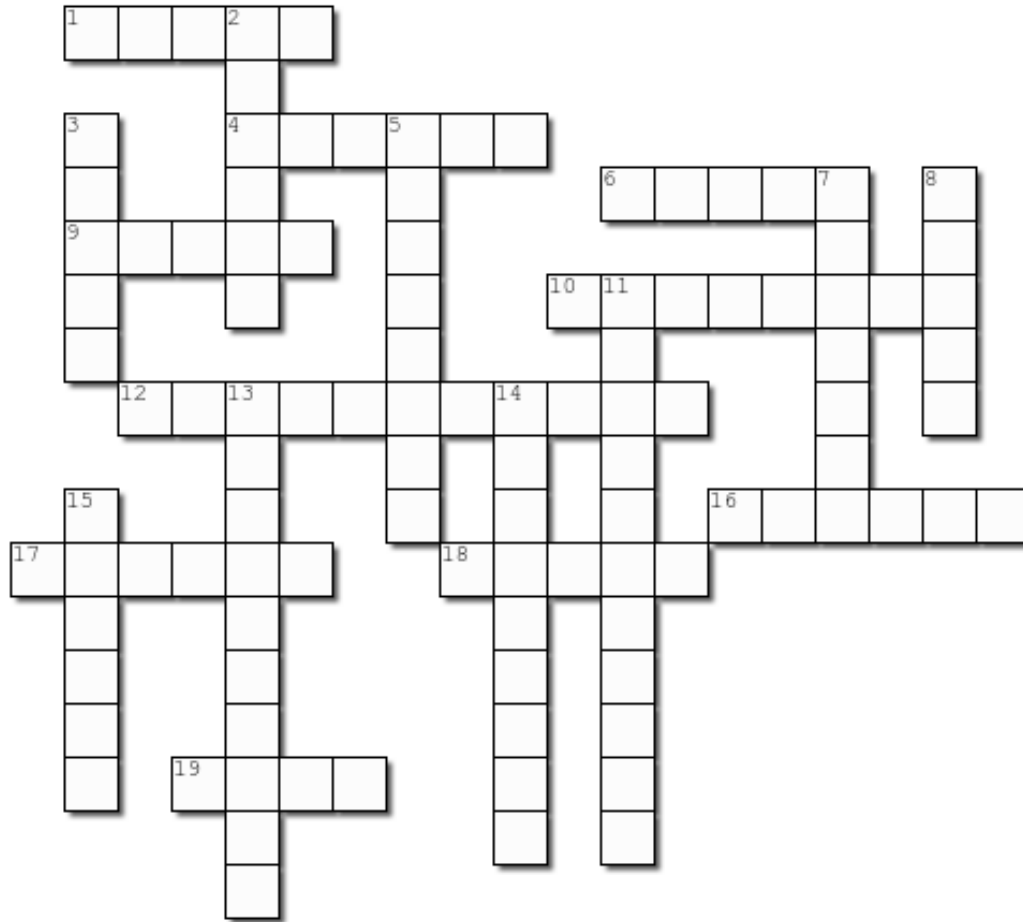
Because parrots live high in the tree **canopy**, they are hard to see and follow. Compared to other species, not much is known about Keseé in the wild. The more we understand about wild-life, the better we can live with them without **conflict**.

We know the work of Karasabai Rangers has been successful because the numbers of sun parakeets has increased.

Now more and more people from around the world are visiting as tourists to see them. This provides income for the people of this village.



Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

Across

- 1. A place where birds sleep.
- 4. A hole, sometimes used by nesting birds.
- 6. A group of birds.
- 9. Largest type of parrot.
- 10. To spread out.
- 12. To share information with each other.
- 16. The leafy top of a tree.
- 17. Bird from tropical areas with sharp, hooked beak and zygodactyl feet.
- 18. To change feathers.
- 19. Soft, fluffy feathers.

Down

- 2. To spend time with others.
- 3. To copy other sounds or actions.
- 5. Natural behaviour.
- 7. Material that makes up hair and fingernails in people and feathers in birds
- 8. To clean and tidy feathers.
- 11. Smart.
- 13. To have one partner or mate.
- 14. The colours and patterns of an animal's skin or fur which help it blend it to its surroundings.
- 15. To grow to adulthood.



Use the hints to find the words in bold in the book.
Then follow the numbers across and down to fill in the crossword puzzle.

To take care of our environment and the things that live in it, we need to know what is there. "**Monitoring**" means keeping an eye on things so that you can care it.

In the farm, you monitor the growth of the cassava, the pests that threaten it, the game that visits, and the weather. All of these things affect the cassava crop. Monitoring these things help you take care of the cassava. Monitoring also tells you when it's time to harvest.

Bird watching and monitoring can tell you a lot about seasons, the habits and population of birds, and the animals and people who live with them



Developing a bird transect

A **transect** is a trail. If you monitor the same transect or trail over time, the data or information about the animals will eventually tell a story about the animals and plants there.

Method

- Choose a trail or clear a transect 1 km long.
- Twice a month, take a 'walk' on it. Make sure you go at the same time of day each time. Early morning is a good time to see birds.
- Record the birds you see on the transect.
- If you have more than one transect in different **habitat** or forest type, you may learn more about the wider environment and the other things that live there.
- If you are working with a club or a group, divide into groups, with each group being responsible for a specific transect. It is optional for the groups to rotate the transects so that everyone can experience all the different transects.

Identification of Species

Identifying a bird correctly can be a challenge! Birds move quickly and colours can look different in bright sun light or shady trees.

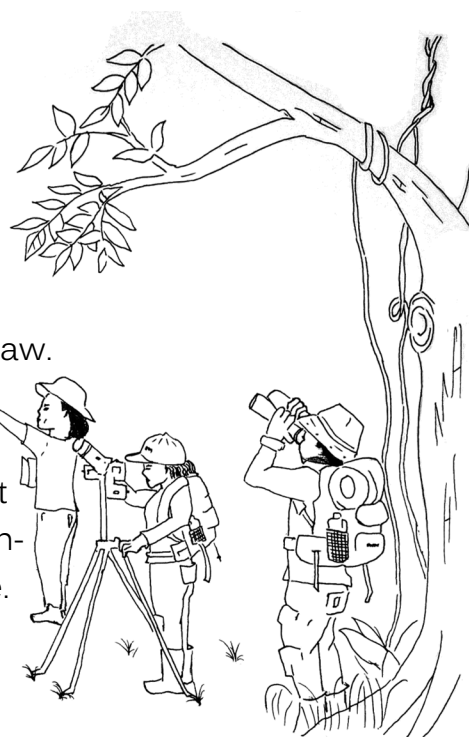
Some things to look out for:

- Shape of the beak
- Tail position (up, straight out, straight down)

- Shape and length of the legs
- The way it moves (jump, walk, hop, using it's beak)
- The way it flies (how does it flap)
- Where you saw it (standing on the ground, watching from a tree, flying over a pond)

Personnel and Equipment Needed

- Ranger, guide or someone who knows their birds
- GPS (to determine the 1km)
- At least 1 pair of binoculars
- Bird Guide book
- Cutlasses (for cutting the trail in the forested areas)
- Data sheets (notebook, pencil)



Data Collection

Data collection is a fancy term for writing down what you saw. If you continue to collect **data** about the birds, it will eventually tell a story. If you continue for a year or more, you will have evidence of what species exist at different times of the year and their habits. You can now make and informed decision on how you use the land or animals you see.

The type of information you will record includes:

- **Location:** This is where the name of the village is to be entered (e.g. Aranaputa)
- **Observers:** Names of people involved in the transect.
- **Weather:** Circle the weather condition.
- **Date:** The date you conducted the transect.
- **Time Start and Time End:** The time you actually started and ended the transect.
- **Bird Name:** The common name of the bird.
- **# Seen:** Use tally marks to show the number of individuals observed for that species.
- **Nesting: Yes / No:** Circle the appropriate response based upon your observation; if the bird is on the nest, has young or is carrying nesting materials.
- **Notes (Individual):** Any notes about the birds, their behavior or interesting observations including mammals, tracks, people can be put here..

EXAMPLE OF A BIRD MONITORING DATA SHEET

Transect Name: _____ **Weather:** sunny cloudy
Time Start: _____ **Time End:** _____ partly cloudy rain
Names of observers: _____

	Bird Name	# seen	Nesting
1	Sun parakeet	###	Yes / No
2			Yes / No
3			Yes / No
4			Yes / No
5			Yes / No
6			Yes / No
7			Yes / No
8			Yes / No
9			Yes / No
10			Yes / No
11			Yes / No
12			Yes / No
13			Yes / No
14			Yes / No
15			Yes / No
16			Yes / No
17	Add more rows if you need them.		Yes / No

Notes; _____

GLOSSARY

Adapted: Developed over time.

Anisodactyl: In birds, three toes facing forwards, one facing backwards.

Camouflage: the colours and patterns of an animal's skin or fur that helps it blend into its surroundings.

Canopy: The tree top.

Cavity: A hole.

Communicate: To share information with each other.

Conflict: Trouble and problems between two parties.

Data: Information gathered, this could be numbers or words.

Deforestation: Cutting down all the trees in the forest.

Disperse: To spread out.

Domestic: Animals that have evolved to work with people. For example, dogs, cows, horses and chickens.

Down: soft, fluffy feathers.

Evolve: Slow change and development over a very long time.

Flock: A group of birds.

Instinct: natural behaviour

Intelligent: Smart

Habitat: The specific type of place where something lives.

Keratin: material that makes up hair and fingernails in people and feathers in birds

Mature: grow to adult.

Mimic: to copy other sounds or actions.

Monitor: To keep an eye on something and take care of it.

Monogamous: To have one partner or mate.

Moult: To change feathers.

Predator: An animal that hunts others for food.

Preen: To clean and tidy feathers.

Prey: An animal that is hunted for food.

Respiratory system: Parts of the body needed to breathe including the lungs.

Responsible: To take care of something

Roost: A place where birds usually sleep.

Social: Spends time with others.

Species: Type

Transect: A trail which is monitored regularly.

Wildlife trade: The business of buying and selling wild animals.

Wildlife: All wild animals in nature.

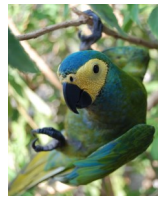
Zygodactyl: In birds, two toes facing forwards, two facing backwards.



Blue and yellow macaw



Golden-winged parakeet



Red-bellied macaw



Tepui parrotlet



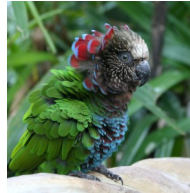
Blue-cheeked parrot



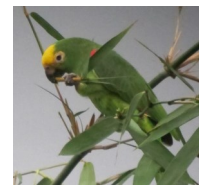
Blue-headed parrot



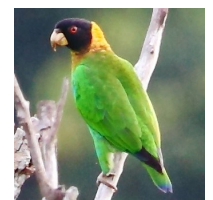
Green-rumped parrotlet



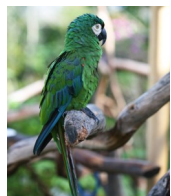
Red-fan parrot



Yellow-crowned parrot



Caica parrot



Chestnut-fronted macaw



Lilac-tailed parrotlet



Red-shouldered macaw



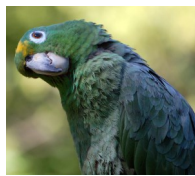
Black-headed parrot



Dusky parrot



Cobalt-winged parakeet



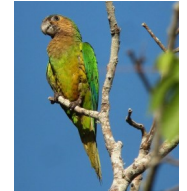
Mealy parrot



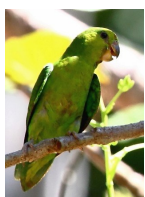
Sapphire-rumped parrotlet



Fiery-shouldered parakeet



Brown throated parakeet



Dusky-billed parrotlet



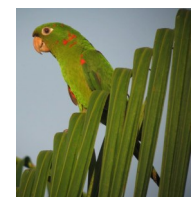
Orange-winged parrot



Scarlet macaw



Red and green macaw



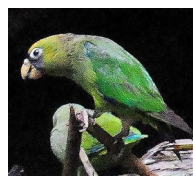
White-eyed parakeet



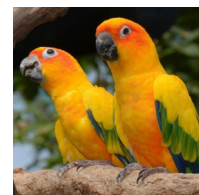
Festive parrot



Painted parakeet



Scarlet-shouldered parrotlet



Sun parakeet

There are 29 species of parrot in Guyana.

Which ones have you seen?