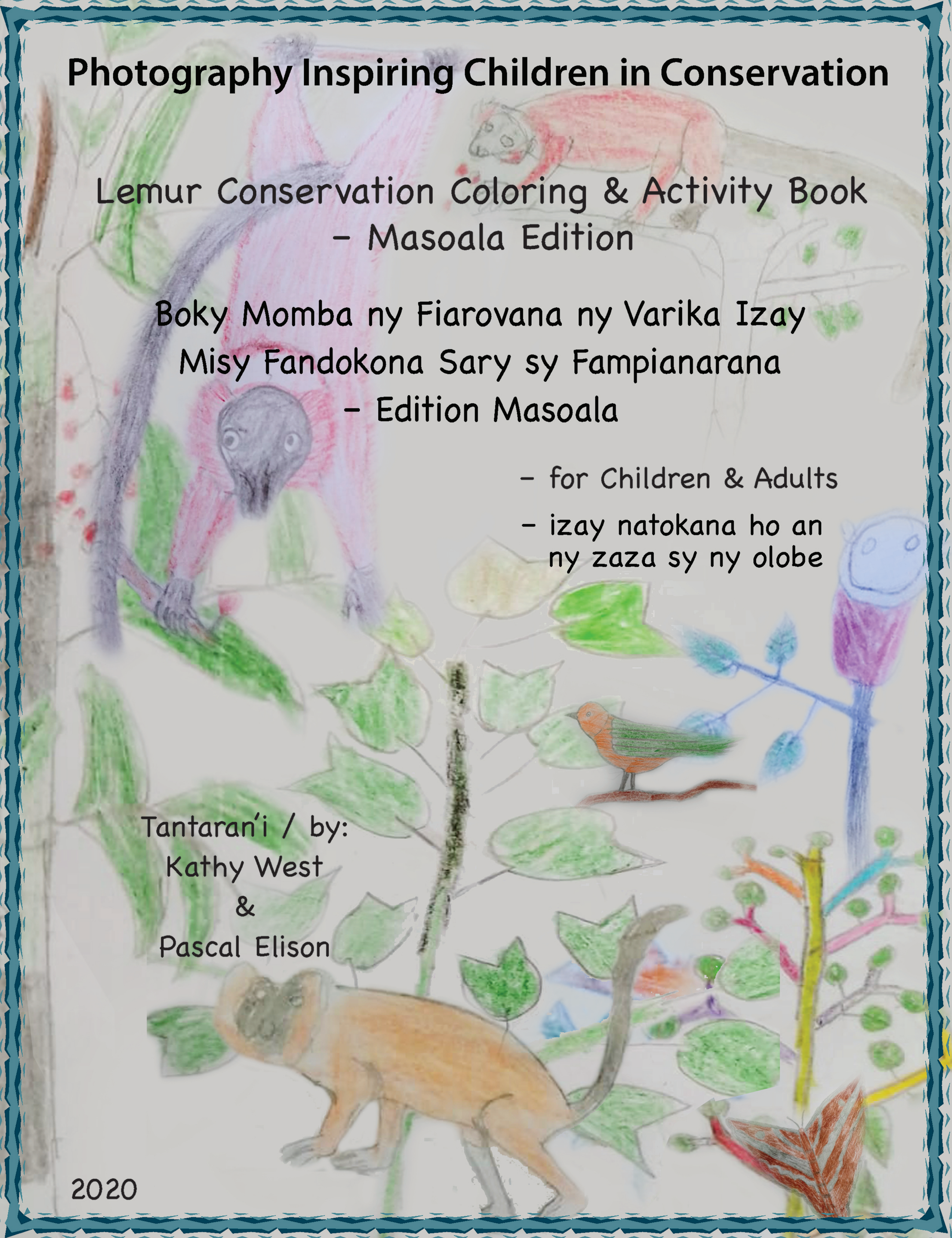


Photography Inspiring Children in Conservation

Lemur Conservation Coloring & Activity Book – Masoala Edition

Boky Momba ny Fiarovana ny Varika Izay Misy Fandokona Sary sy Fampianarana – Edition Masoala

– for Children & Adults

– izay natokana ho an ny zaza sy ny olobe

Tantaran'i / by:
Kathy West
&
Pascal Elison

2020

We hope you enjoy this book as you learn about lemurs and conservation solutions in Madagascar. Please share your knowledge and interest with your friends and families!

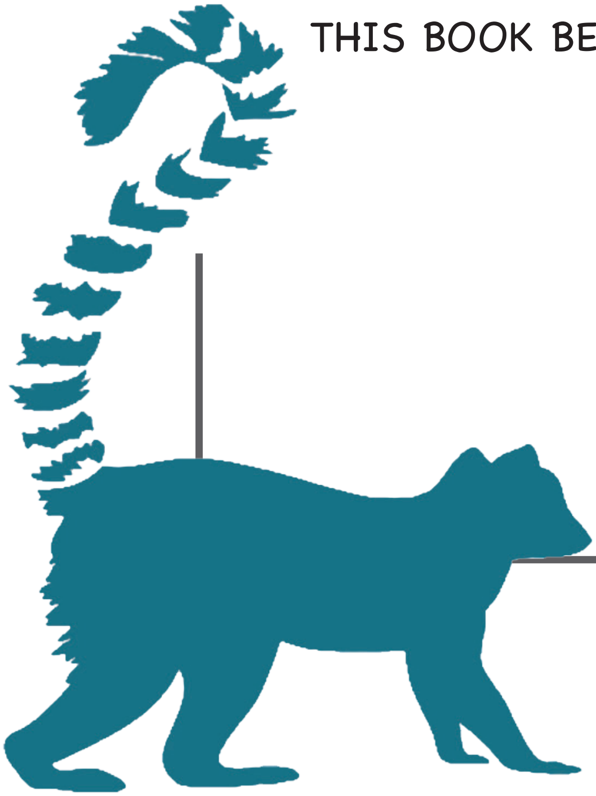
Check out our latest projects and how to get in touch with us on our website: www.PICCmadagascar.org

Visit us on:

Facebook: https://www.facebook.com/PICCconservation

Twitter: @piccmadagascar and Instagram: #piccmadagascar

THIS BOOK BELONGS TO:



Thank you to the individuals and organizations that made this book possible:

- American Society of Primatologists
- Dr. Cortni Borgerson
- Pascal Elison, Maroantsetra, Madagascar, for translating this book into Malagasy
- Student artists in Ambodiforaha, Madagascar
- Kathy West, kathywestsudios@gmail.com

Copyright ©2020
United States of America

FIZAHAN-TAKELAKA
TABLE OF CONTENTS

Inona mao variky zaigny?
WHAT IS A LEMUR? 2

Ny varika dia primaty. Magnanjaigny ka ny Ôlo!
LEMURS ARE PRIMATES. SO ARE PEOPLE!...4

Avy taiza niavian'ny variky?
WHERE DID LEMURS COME FROM? 6

Aiza ny varika mivelona?
WHERE DO LEMURS LIVE? 8

Ny varika dia madiniky na tena maventy
VERY SMALL OR VERY LARGE......................10

Ino raha hoaniny variky?
WHAT DO LEMURS EAT?.............................12

Varika amin'ny alina
LEMURS IN THE DARK!...............................14

Ny varika dia mpitsabo
SUPERPOWERS! LEMURS AS DOCTORS.....18

Mandry na milevy ary matanjaka amina tôhotragnany
SUPER SLEEPERS & SMELLERS.....................20

Varika vavy tomponantoko
LEMUR LADIES ARE IN CHARGE.............22

Kara fiainana ankohonan'ino varika?
WHAT IS LEMUR FAMILY LIFE LIKE?......24

Tantarao edy tantaran'ny varika
TELL A LEMUR STORY!.............................26

Ny varika nanjavo
DISAPPEARING LEMURS.........................28

Ino antony iarovantsika ny varika?
WHY PROTECT LEMURS?.........................30

Ankôry ataon'ny varika magnampy ny fianakaviako?
HOW DO LEMURS HELP MY FAMILY....34

Akôry ataoko mba anampiako ny variky?
HOW CAN I HELP LEMURS?..................38

Holasa siantista!
BECOME A SCIENTIST!............................46

Raha mahasondriana mikasika ny variky
FUN FACTS ABOUT LEMURS..................48

Teny tadiavina
WORD SEARCH.......................................50

Teny vaovao
NEW WORDS...52

TANTARAN'I / STORY BY:

KATHY WEST AND PASCAL ELISON

ILLUSTRATIONS BY: KATHY WEST

©2020

What is a Lemur?

Lemurs are in a family of animals called primates. Monkeys and apes are also in this family, but lemurs are special to the primate family and are found only in Madagascar, no where else in the world!

Madagascar is a very special place for you and your family. Do you know why visitors come from all over the world to visit? One of the biggest reasons is that people want to see lemurs and the other special animals that only live on the island of Madagascar.

There are over 100 different types (species) of lemurs. Draw some different kinds of lemurs that you have seen.

Ataova sary izay karazana varika favy itanao.
Draw some differernt kinds of lemurs that you have seen.

Inona mao variky zaigny?

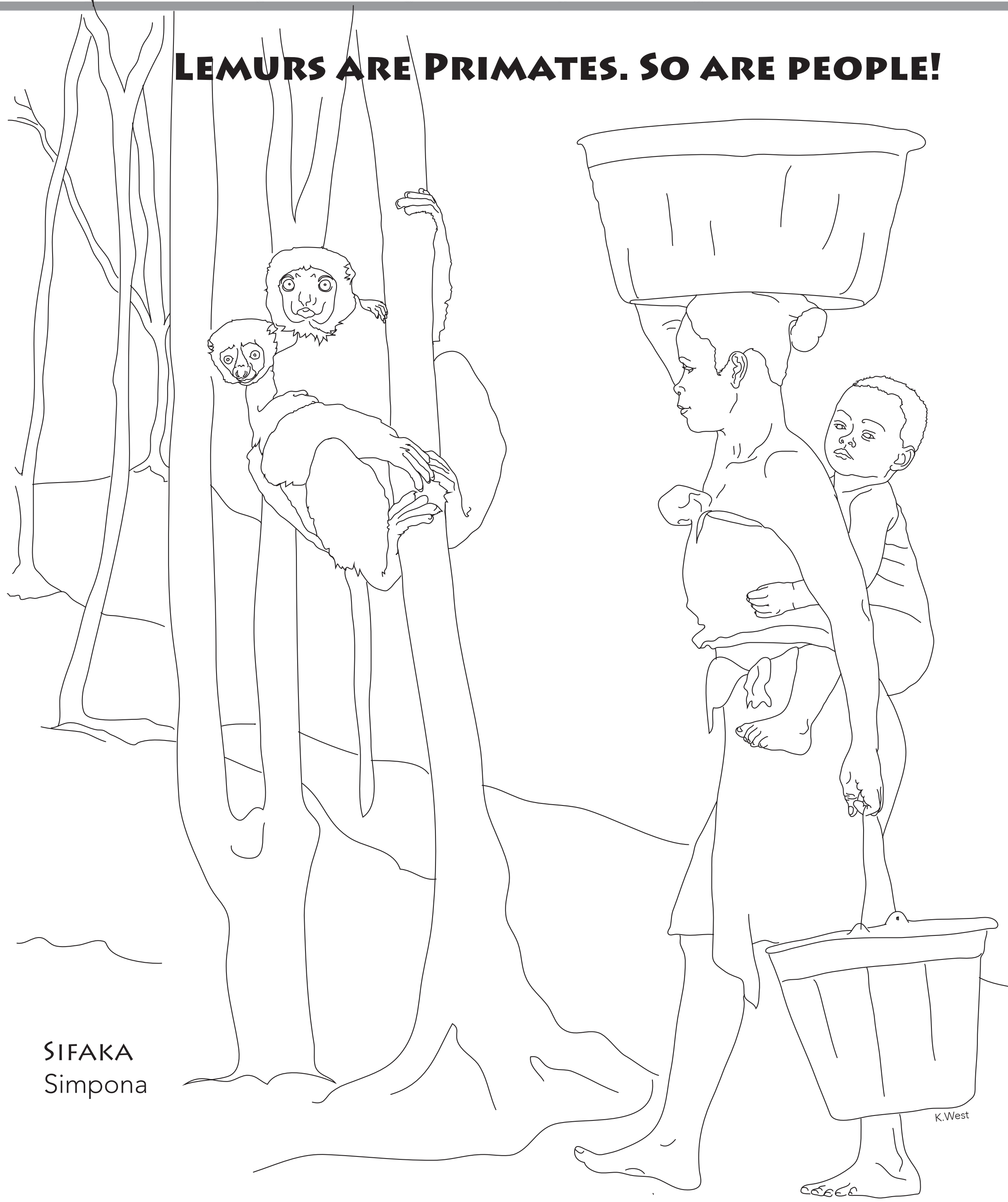
Varika dia fianakavianan'I biby antsoina hoe Primaty. Rajako sy ny sisa dia anatiny io fianakaviana io, fao ny varika dia manokana indrindra amin'ny fianakaviana primaty io ary tsy ita izy ka tsy eto I Madagasikara ihany magneran'izao tontolo izao.

Madagasikara dia toerana miavaka manokana indrindra hoanao sy hoan'ny fianakavianao. Mbao hainao ndreky mao antony mahataonga vahiny magnairan'izao tontolo izao mitsidiky aty? Antony araiky be voalohany amin-jaigny dia ny olona tahita variky ary ankoatrizay indrindra dia tizaha ny biby mivelona tsy hita hafa tsy eto amin'ny nosy Madagasikara.

Mioatrany 100 karazany ireo varika ireo.

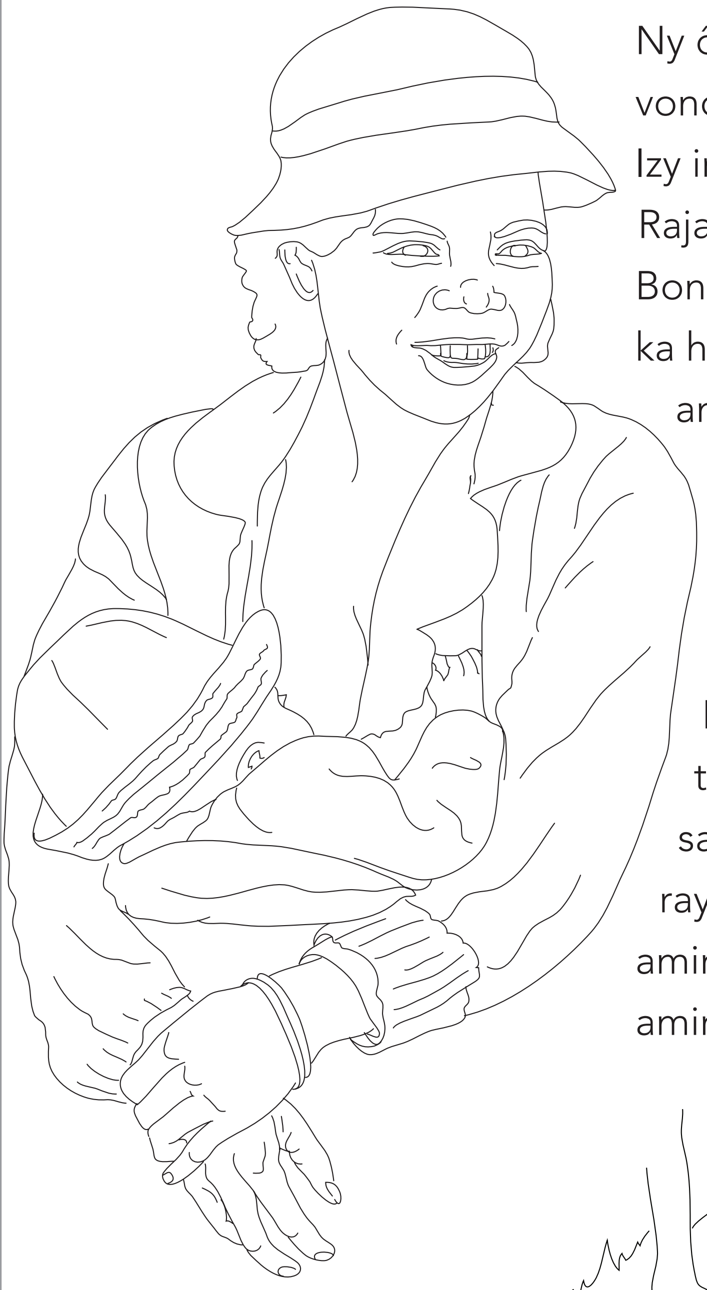
White Fronted Brown Lemur
Varikôsy

Lemurs are Primates. So are people!



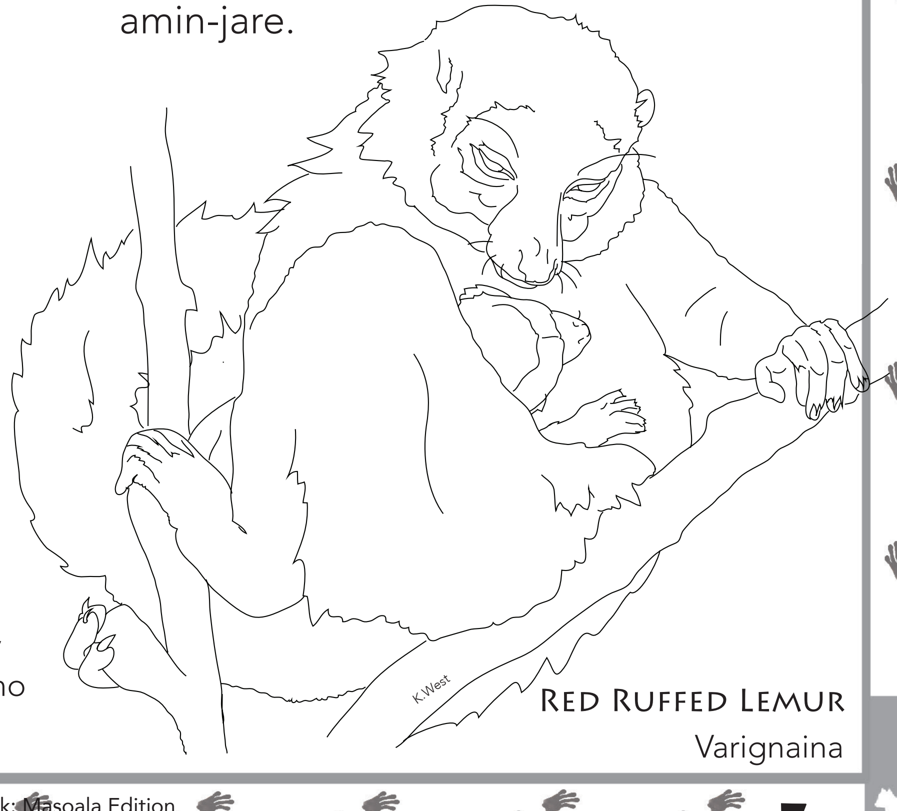
People and lemurs are both members of the animal family of primates. There are also apes in this family – gorillas, chimpanzees, orangutans, bonobos, and humans! So when you see a lemur carrying its baby on its back, or feeding on its mother's milk, remember that they are in our family and so are like us in many ways! Just like people, lemurs need a place to live, food that they can eat, their parents' knowledge and protection from dangers, and others of their same species in their community.

Ny varika dia Primaty. Magnanjaigny ka ny Ôlo!



Ny ôlo sy ny varika zare roa zaigny dia vondrona fianakaviam-biby primaty. Izy ireo koa dia anatiny fianakaviana Rajako, Gorille, Chimpanze, Orangutan, Bonobos ary ny olombelona! Izy ka hitanao varika mibaby zanany antahaizanan'azy, na minono amin'ny reniny, tsarôva fa fianakavian-tsika izy ireo kara atsika fao aminy fomba maro.

Kara ôlombelona, varika mila toerana ivelomana, ahanina na sakafo azo hoanina, ny fahaizan'ny ray amandreniny na amin'ny fiarovana aminy fahavalo na aminy vahoaka mitovy amin-jare.



Red Ruffed Lemur
Varignaina

THIS MAMA LEMUR IS FEEDING HER BABY WITH MILK JUST LIKE WOMEN IN YOUR COMMUNITY FEED THEIR OWN BABIES.

Ny renim-bariky magnamia nono ny zanany dia kara viavy eo amin'ny fiarahamoniana vahoaka mampinono ny zanany.

Where did lemurs come from?

Lemurs floated to Madagascar from Africa on little mats of plants more than 40 million years ago, and they were happy living in Madagascar with lots of trees, many delicious things to eat, and no predators, including no humans to hunt them! Lemur's main predator today is the fossa, but fossa didn't arrive in Madagascar until 21 million years ago. People came much later, sailing across the ocean by canoe from Borneo to Madagascar around 10,000 years ago.

Some of these first lemurs were the size of gorillas! These large, slow species of lemurs are now extinct, probably due to hunting because they were easy to catch and provided meat for many families.

Your community could have been some of the first people to arrive in Madagascar!

Mety vahoakanandre na razambenandre sasany no tonga voalohany teto madagasikara!

Avy taiza niavian'ny variky?

Ny varika avy tany Afrika ka tonga taty Madagasikara dia nientin'ny tapaka kakazo miempo, talohan'ny 40 tapitrisa taona lasa tany, faly be zare monina eto Madagasikara satria misy kakazo fôntry, maro be raha matsiro ohaniny, ary tsisy fahavalo, tagnatin'ny mbola tsisy ôlombelona nihaza zare! Ny fahavalo njare be indrindra amin'izao fotoana izao dia ny fôsa, fao ny fôsa tsy mbola taonga teto Madagasikara ka hatra tamin'ny 21 tapitrisa taona lasa. Ny olona dia tonga farany, tamin'alalan'ny sambo voaly nitsaka tamin'ny ranomasina avy tany Borneo tonga teto Madagasikara, teo eo 10,000 taona lasa tany.

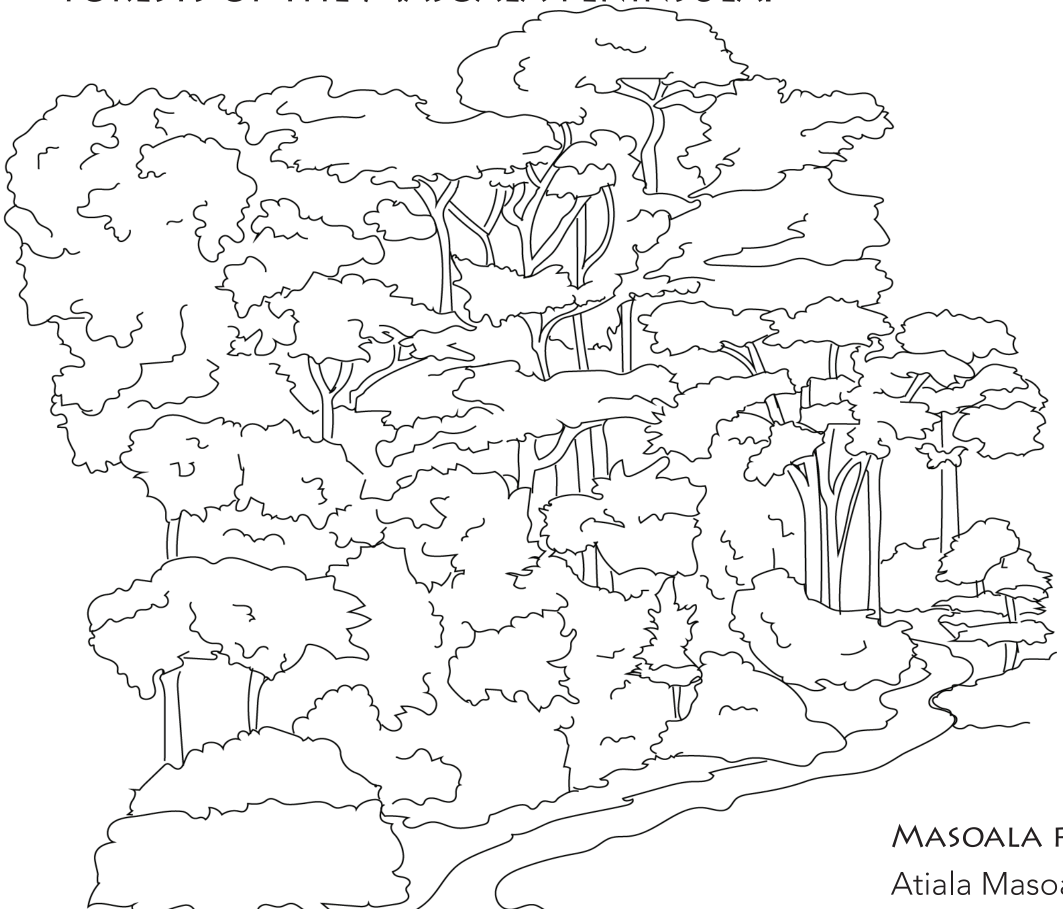
Misy habezan'ny varika voalohany tamin'izany dia mitovy habezana Gorille! Maventy be, mavesatra be amin'ny karazana varika tamin'izany dia efa lany taranaka zare amin'izao fotoana izao, mety nohon'ny zareo mora ihazaigny na mora azo ka atao hainan'ny ankohonana na fianakaviana maro.

Giant Lemur
Babakôty be

Where do lemurs live?

Different lemurs live in different areas of Madagascar. They are all special in what plants they eat, what kind of trees make good homes for their family, and how warm or dry they like it. They may live in the trees or on the ground, in wet rainforests or dry deserts. Just like you live in a house, lemurs need trees where they can sleep and eat, and raise their babies. Even lemurs that spend most of their time on the ground (terrestrial) still need trees to sleep in at night so the fossa can't find and eat them! This means that if you cut down a tree, you may be taking away a lemur family's home and protection.

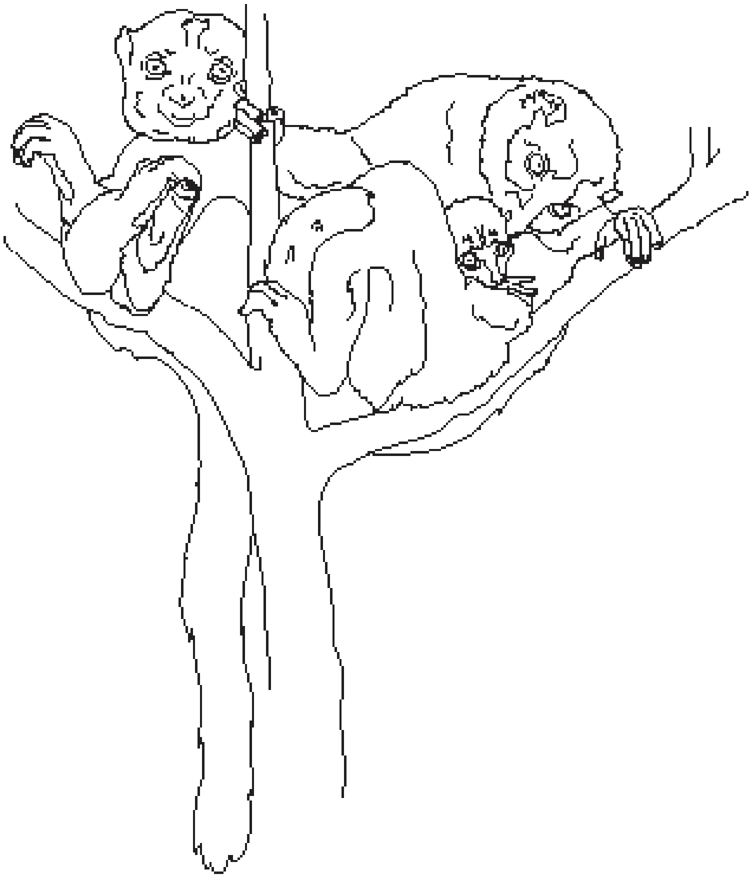
This book focuses on the lemurs who live in the wet forests of the Masoala peninsula.



Masoala forest habitat
Atiala Masoala

Aiza ny varika mivelona?

Karazana variky maro no mivelona an faritra maro eto Madagasikara. Izy ire dia samy manana karazana zavaman- iry manokana mba hoanina, misy karazana kakazo manokana dia tsara ataon-jare trano ny ankohonanan-jare mafana na maigny koa. Zare afaka mi agnambon-kakazo na ambon-tany, ar alamando na amin'ny tany maigny. Ka mipetraka antragno, varika mila kaka driagna sy hoaniny, ary anabeazana r Na ny varika milvelona ambonin'ny ta mbola mila kakazo mba andriana am beky tsy hoitan'ny fôsa teihinana zare izany fa andre ka manapaka kakazo, andre man- dratra tranon'ankohonana varika sy fiarovana ny atiala.



Ataova sary izay atiala favy itanao nivilômany na nipetrahana variky. Karazana kakazo inona tian-jare?
Draw some forests where you have seen lemurs living.
What kind of trees do they like?

Lemurs can be very small or very large

There are many different sizes and shapes of lemurs – from the tiny pygmy mouse lemur (30 grams – as heavy as a banana and as big as the Indri's nose!) to the very big Indri (10 Kilogram – as much as a small dog weighs). If you were to measure a lemur's height, they could be as little as 6 cm tall to as big as 76 cm tall, almost as tall as you!

Indri indri
Babakôty

PICC Lemur Conservation Coloring and Activity Book: Masoala Edition
By: Kathy West and Elison Pascal, 2020

Ny Varika dia Madiniky na tena Maventy

Samibisany habezany sy ny endriky ny variky, miala avy amin'ny Tsidy (30 grama – mitovy avisarany fontsy masaka) ka hatra amin'ny Babakôty maventy be (10 kilograma – mitovy avisarany amboa ely). Izy ka iragninao ambaosana varika, misy tena madinika 6 santimetatra (sm) ambaosany ka hatra 76 sm ambaosany, saika mitovy ambaosananao. Ino varika maventy indrindra favy itanao?

Grey Mouse lemur
Tsidy

What do lemurs eat?

Have you seen a lemur helping another lemur clean its fur? It is looking for, and eating!, the insects that they find hiding under the thick fur. Lemurs have different tongues than we do — under a lemur's main tongue is a smaller, stiff, grooming tongue which they use to move insects into their mouths for a tasty snack as they groom their friends. Delicious!

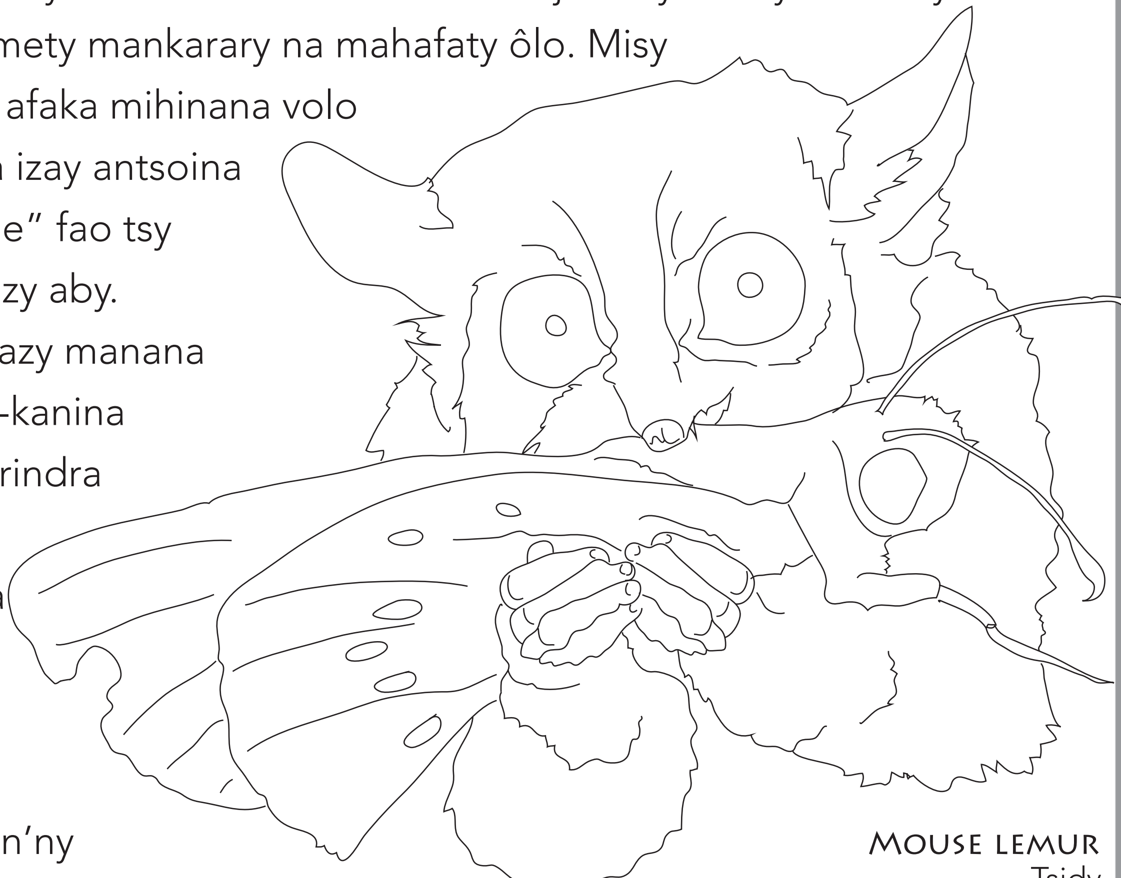
Just like people, lemurs like to eat different foods. But unlike people, some species of lemurs have special superpowers to eat foods that might make a person sick or even kill them. Some bamboo lemurs can eat lots of bamboo that has a poison called "cyanide" without getting sick. Their bodies have a special digestion system that can get rid of the cyanide so they can take advantage of the bamboo to eat. Not all bamboo lemurs can eat cyanide though, and don't you try eating bamboo — your body doesn't have this special power!

Bamboo Lemurs
Bokombolo

Ino raha hoaniny variky?

Anao mbao favy nahita variky nagnampy variky hafa nagnady volovolon'azy (anao favy nahita varika nilelatra sy magnekekitra volovolony varika hafa)? Ino raha tadiaviny, aomana kaka madinika mivony agnatin'ny volovolon'azy.
Lelana varika dia tsy mitovy lelantsika, ambaniny lelana varika dia misy lela ely koa, mahiagna, marakorako izainy ilay angalany kaka madiniky mandeha amina vavanaza sady ataony tsamotsamoka matsiro avy amin'ny namany. Fy ay!

Kara ôlo fao, variky tia mihinana ahanina maro karazany. Ny tsy itovisany amina ôlo, misy karazana varika tena matanjaka ny aminy finanany sakafo izay mety mankarary na mahafaty ôlo. Misy bokombolo afaka mihinana volo misy poizina izay antsoina hoe "cyanide" fao tsy mankarary azy aby. Ny vatanan'azy manana fandevonan-kanina miavaka indrindra ka afaka mandravana ny cyanide kay misy tombony betsaka amin'ny finanana volo zare. Fao tsy bokombolo jiaby mihinana cyanide, ary aza magnaohatra mihinana bokombolo fao vatananao tsy manana fitaovana miavaka kara zareo!



Mouse lemur
Tsidy

Lemurs in the dark!

Have you seen a lemur at night? Do you know what they eat and how they travel through the forest when it is so very dark? Lemurs that are active at night are called "nocturnal".

One lemur you have in the Masoala forest that sleeps all day in tree hollows on a bed of leaves or dried grasses and comes out at night is the hairy-eared dwarf lemur, one of the smallest lemurs alive (only 13 cm long). (Why do you think their ears are hairy? It is thought to make them hear better!). You might have heard them whistling at night— that is the way they talk to each other. These little lemurs come out at night to leap through the trees and use their incredible eyes and ears to hunt moths and other flying insects— they are fantastic insect hunters! You would be very lucky to see this special lemur that few people in the world have ever seen!

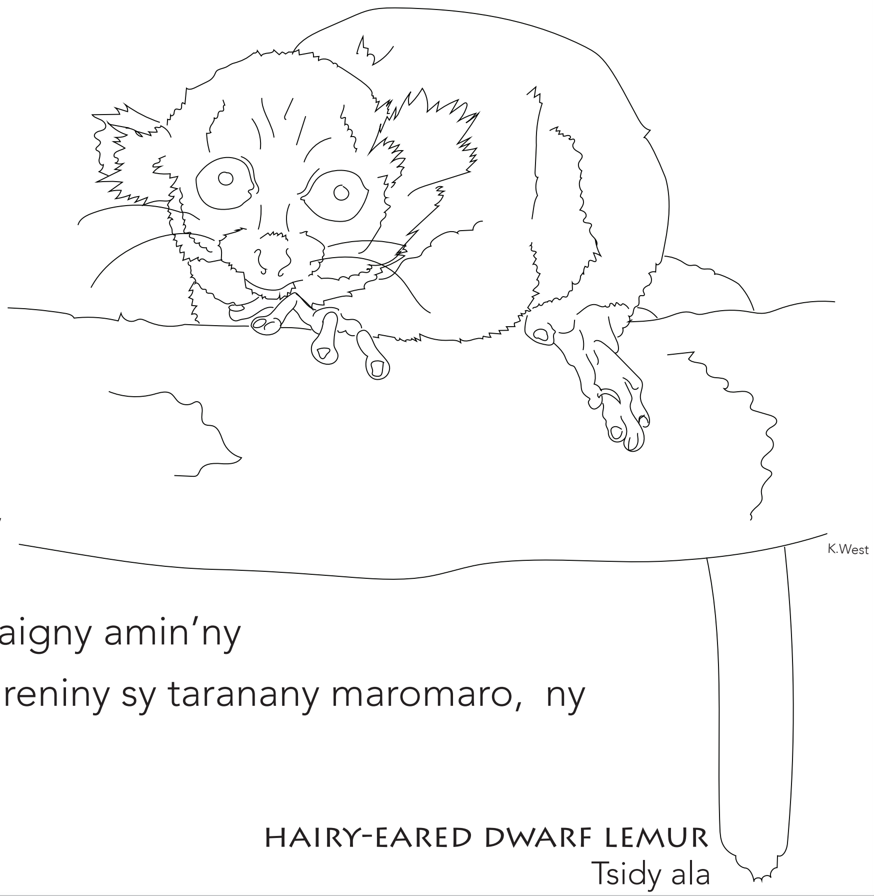
Some Malagasy people say that another night lemur, the Avahi, or woolly lemur, is the king of the lemurs. Woolly lemurs live together in family groups, with their parents and several generations of their kids and grandkids.

Varika amin'ny alina

Anao mbao favy nahita varika tamin'ny alina? Mbao hainao raha hoan-jareo ary manakôry zare mitsangatsangana kafa amin'ny alina? Ilay varika mandeha amin'ny alina no antsoina hoe " nocturne".

Misy varika araiky ao aminy atialan'i Masoala mandry an-davaka na anaty ravindraha sy ahitra maigny izy amin'ny antoandro ary miboaka kosa izy rehefa alina tsy izôvy izany fa ny Tsidy ala, anisany variky mbao tena madiniky miaigny izio (13sm alavany). (araka ny eritreretin'andre inona antony tadignin-jare misy volovolo? Eritreretina beky mahatsaratsara tadigninazy!) Mety regninandre zare mitsoitsoiky amin'ny aliny, kara izainy zare samby zare rehefa mikoragna. Ny varika madinika miboaka amin'ny alina dia mambokombokono amina kakazo ary mampiasa maso malanifagnahy sy tadigny mandeha mangôro bakobako sy kaka madiniky magnembana ary zare tena mahay mitrapa kaka! Andre tsara anjara (bonne chance) ka mahita io variky miavaka io satria vitsy amin´ôlo magneran'izoa tontolo izao favy nahita zare io.

Misy vahoaka malagasy milaza fa misy varika hafa koa mandeha amin'ny alina, ny Fôtsy fe, ampajakan'i varika. Ny Fôtsy fe miara miaigny amin'ny fianakaviany, ny Ray aman-dreniny sy taranany maromaro, ny zanany ary zafiny.



HAIRY-EARED DWARF LEMUR
Tsidy ala

Lemurs in the dark!

Have you seen the super cool lemur called an aye-aye? So strange looking, but so amazing! They have huge eyes to see in the dark and a funny-looking super long finger that can turn all the way around in its joint. Aye-ayes eat lots of things like fruits, nuts, nectar, seeds, and fungi, but the most interesting way to get their food is when they hunt insects. Tapping on trees with their long middle finger, aye-ayes use their big ears to hear insect larvae moving under the bark. Then they bite through the bark and use that special finger to fish the larvae out. Read more about Aye ayes on page 36 / 37!

Varika amin'ny alina

Anao favy nahita varika mahagaga atao hoe Aihay? Hafahafa ny fahitana azy, nefa mahavarigna! Maventy be mason'azy izay mahita amin'ny alina sy lava angôfy tsy mampino izay afaka mihody amin'izay tany tiany iodinany izy avy aminy tany dokoany. Aihay mihinana raha maro toy ny voan-draha, taignan-draha, failan-draha ary ôlatra, fa ny tena malasa eritreritra ny fazahoany sakafo, izy rehefa mitsakaraka na mikarenjo lafa. Kovehiny amin'ny angôfy lava be nazy agnivo io lafa io avy agnaty kakazo, aihay mampiasa tadigny nazy maventy be io mba arignaisany lafa kafa mietsiky ely ao anatiny oditry kakazo. Aveo Kikeriny na ivoasany ny oditry kakazo izay misy lafa, rehafa tokony azohoany azy dia alainy amin'ny angôfin'azy lava mba azahona izy ivelany. Vakio tsara momba ny varika aminy pejy 36 / 37!

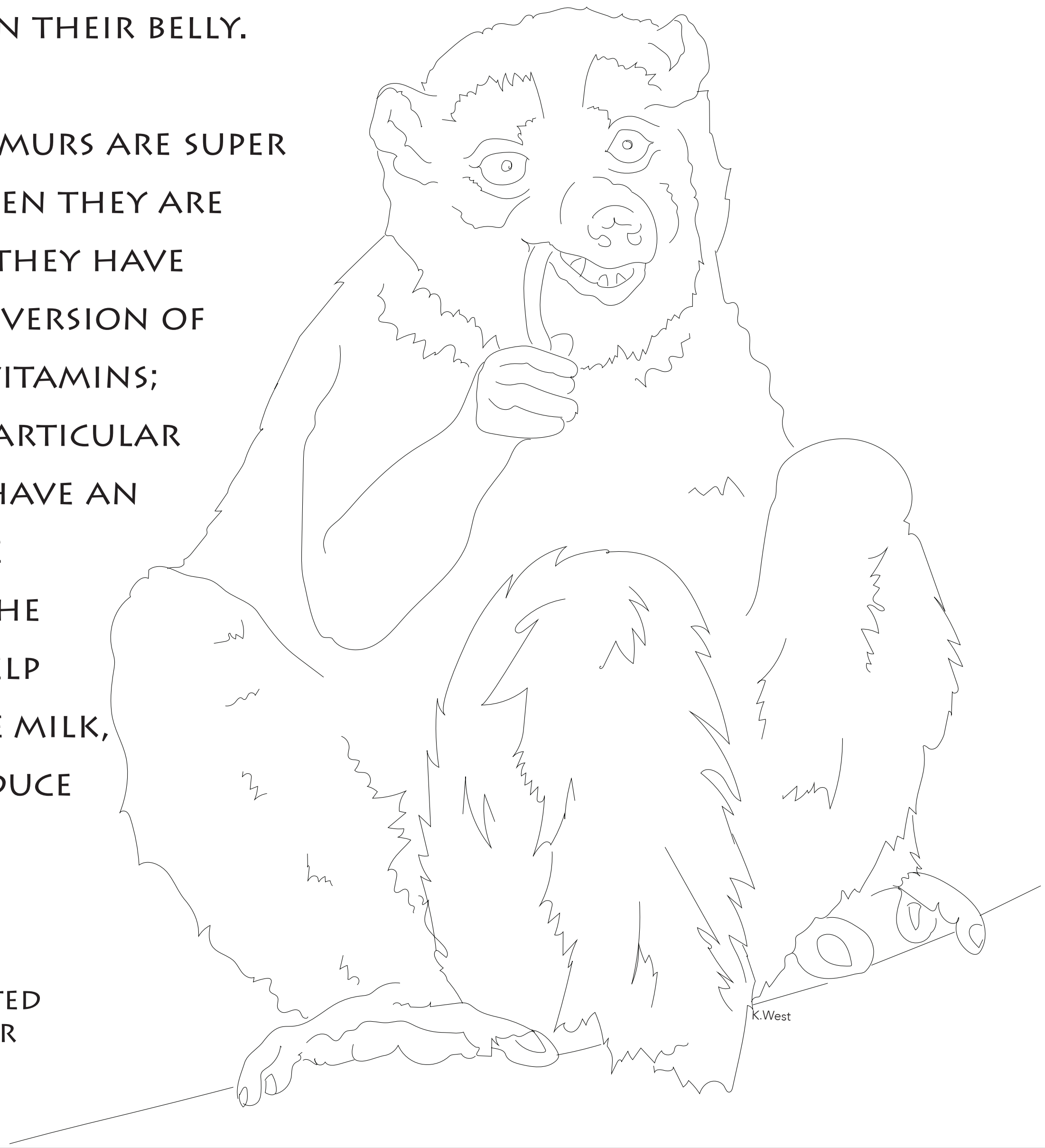
Aye-aye
Aihay

Lemurs have super powers! Lemurs as Doctors

Would you like to have a superpower? The lemurs in your forest have many special powers that we don't have!

If a lemur has a parasite that makes them itchy, gives them diarrhea or a belly ache, they can't go to the doctor or get medicine from their village like you or me, but they do have a special trick to make themselves well. Brown lemurs squish giant millipedes, rub them all over their bottom to treat their itchy skin, and then eat the rest of the millipede to kill the parasites in their belly.

Mother lemurs are super smart! When they are pregnant they have the lemur version of prenatal vitamins; chewing particular leaves to have an easier time birthing the baby, to help make more milk, and to reduce parasites.



White fronted brown lemur
Varikôsy

Ny varika dia mafy tsy mampino! Ny varika dia

Anao mbao te ho mafy? Ny varika ao anatialandre ao dia manana amafisana miavaka izay tsy ananandre!

Raha misy aretina mikiky izay mangidy amina haignin-jare, izay mitondra aretim-bôtraka na mampanehoko vôtraka, zare dia mandeha amin'ny mpitsabo (Dokotera) na malaka ahody avy antananan-jare kara andre fao ary kara zaha koa, fao zare manana fomba manokana ataon-jare samby zare koa. Karazany Varikôsy dia mamiaka ankodavitra dia osokosôhiny ijiaby dia isaorana amina aigni'azy mba ampahivana oditran'azy mangidy, ave hoaniny izay tavela amin'ny ankodavitry io mba amonoany aretina ambôtrakan'azy.

Ny renim-bariky dia tena mafy! Raha bivôtraka dia mihinana vitamina aloham-piterahana izy, miôtahôta ravin-draha manokana ihany koa izy mba hamora ny fiterahany ny zanany, sady magnampy azy mba hoisy ronono maro, ary manala ny kaka mihinana oditran'azy (Pia)

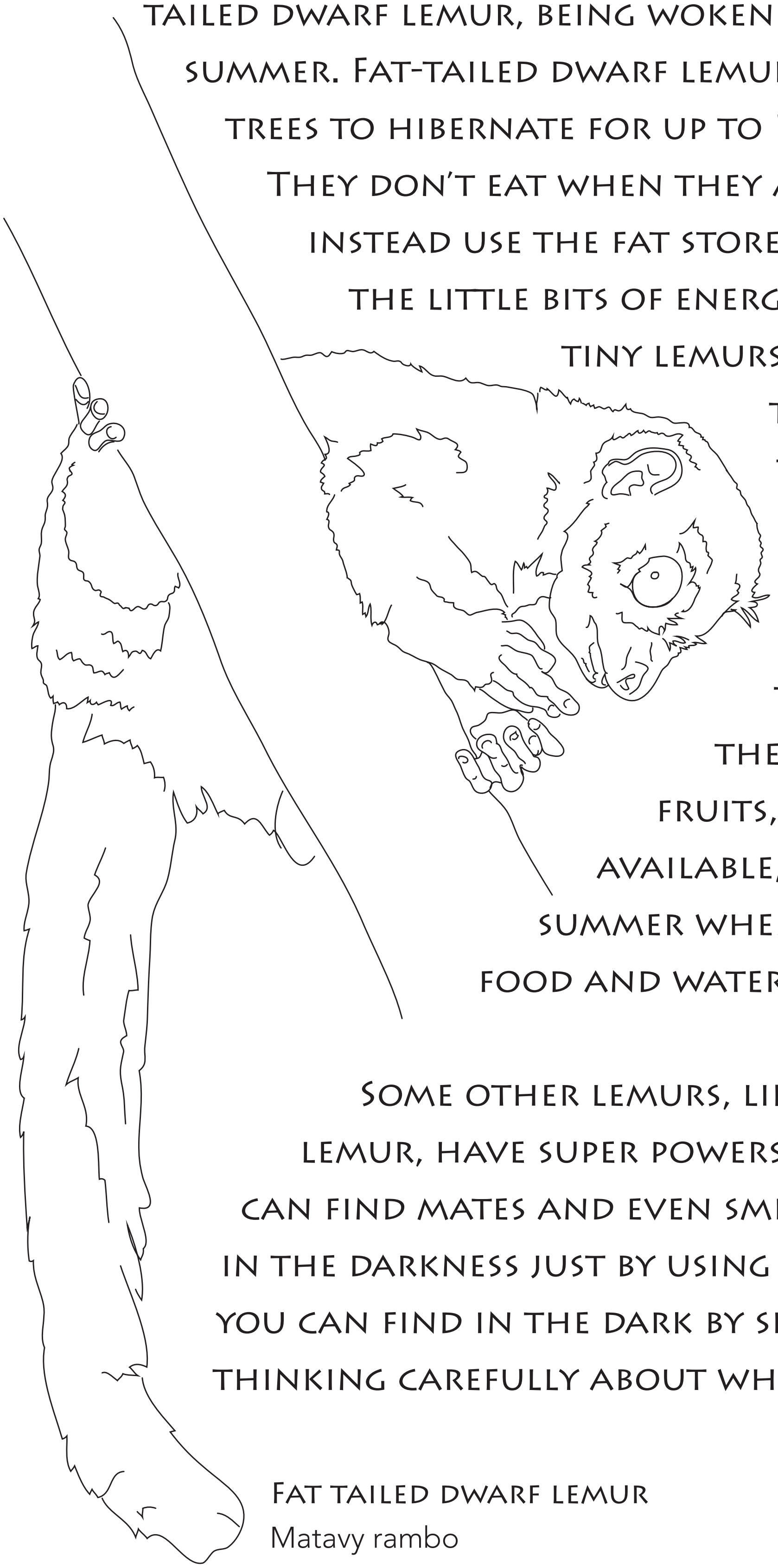
Araova sary izay karazan varika ankoatrany izay misy aminandreo.

Draw a picture of another kind of special ability that lemurs have.

Lemurs have Superpowers! Super Sleepers and Smellers

You might have heard the story of the cheirogaeus, fat-tailed dwarf lemur, being woken by the thunder of summer. Fat-tailed dwarf lemurs use the holes of trees to hibernate for up to 7 months every year. They don't eat when they are hibernating, but instead use the fat stored in their tails for the little bits of energy they need. These tiny lemurs can store more fat in their tails than they themselves weigh! By doing this, these lemurs are able to sleep through the time of year when their foods of leaves and fruits, and water!, is not available, and wake up in the summer when there is plenty of food and water.

Some other lemurs, like the ring-tailed lemur, have super powers of smell, and can find mates and even smell and avoid enemies in the darkness just by using their noses. See what you can find in the dark by sitting quietly and thinking carefully about what you can smell.

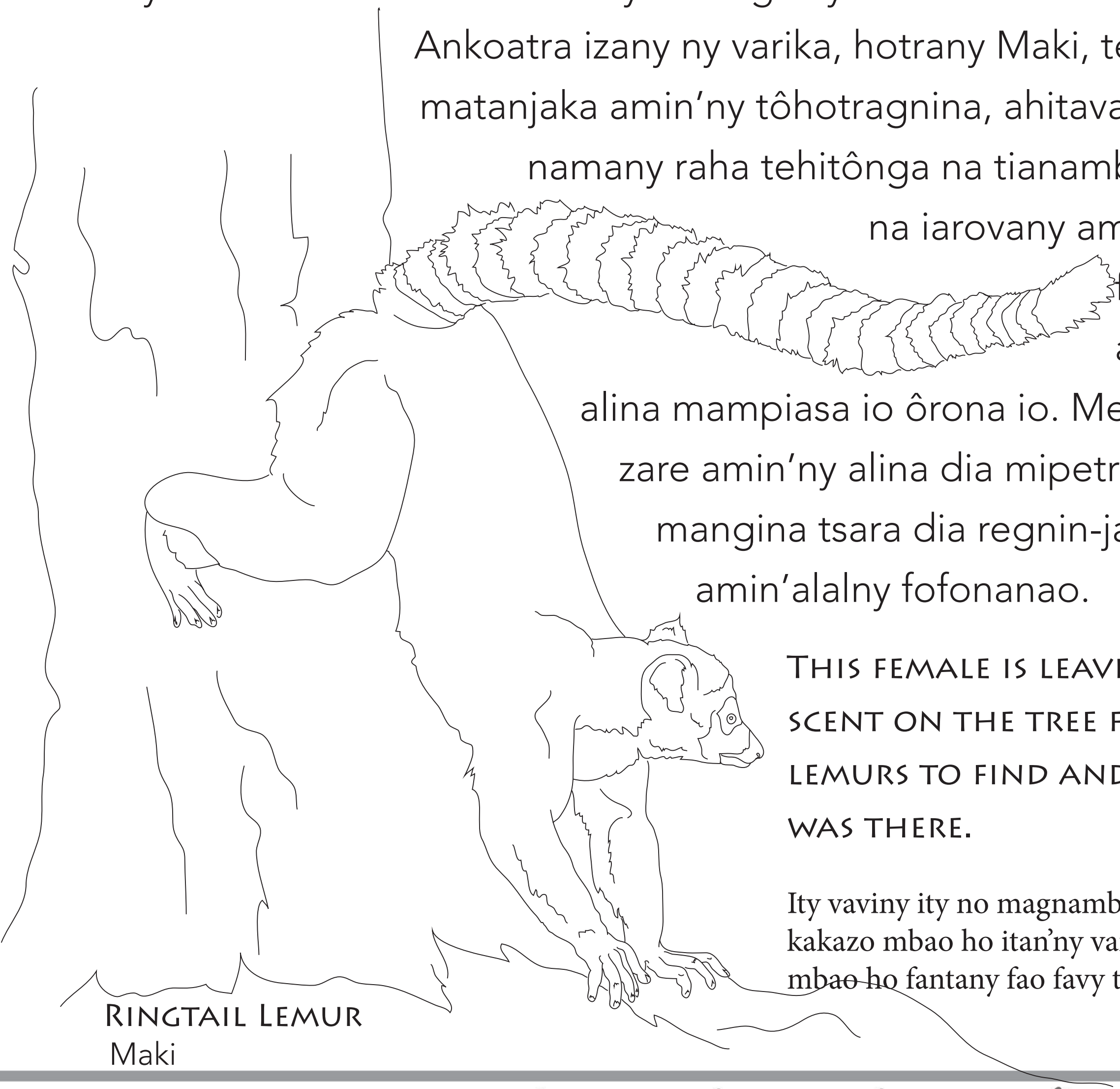


Fat tailed dwarf lemur
Matavy rambo

Ny varika dia matanjaka! Mandry na milevy ary matanjaka amina tôhotragnany

Mety efa naharegny tantaran'ny Tsitsiha ianao, Matavy rambo, mifôha izy rehefa avy ny lôha taogno izany hoe aminy andro mikorogno iny. Matavy rambo dia mampiasa lavaka kakazo mba ilivaignany isan-taona agnatin'ny 7 volana na mihoatra. Tsy mihinana zare mandritran'izany hotoana filevaignana izany, fao mampiasa nohony na volombodiny ely zare mba azohoany hery izay ilainy. Anisany variky ely nefa afaka mikajy atavasana (jabôra) anatiny nohony ary mampavesatr'azy na mampisy lanja azy! Ka nohony izany afaka matory na milevina mandritrany fotoana jiaby izay tsy maha misy ahanina toy ny ravin-draha, voan-draha, rano, ary mifôha na miboaka rehefa tonga ny taona amizay koa no maniry tsara kakazo atao sakafo sy rano igiahy!

Ankoatra izany ny varika, hotrany Maki, tena matanjaka amin'ny tôhotragnina, ahitavany namany raha tehitônga na tianambady, na iarovany amin'ny fahavalo amin'ny alina mampiasa io ôrona io. Mety itanao zare amin'ny alina dia mipetraka mangina tsara dia regnin-jare anao amin'alalny fofonanao.

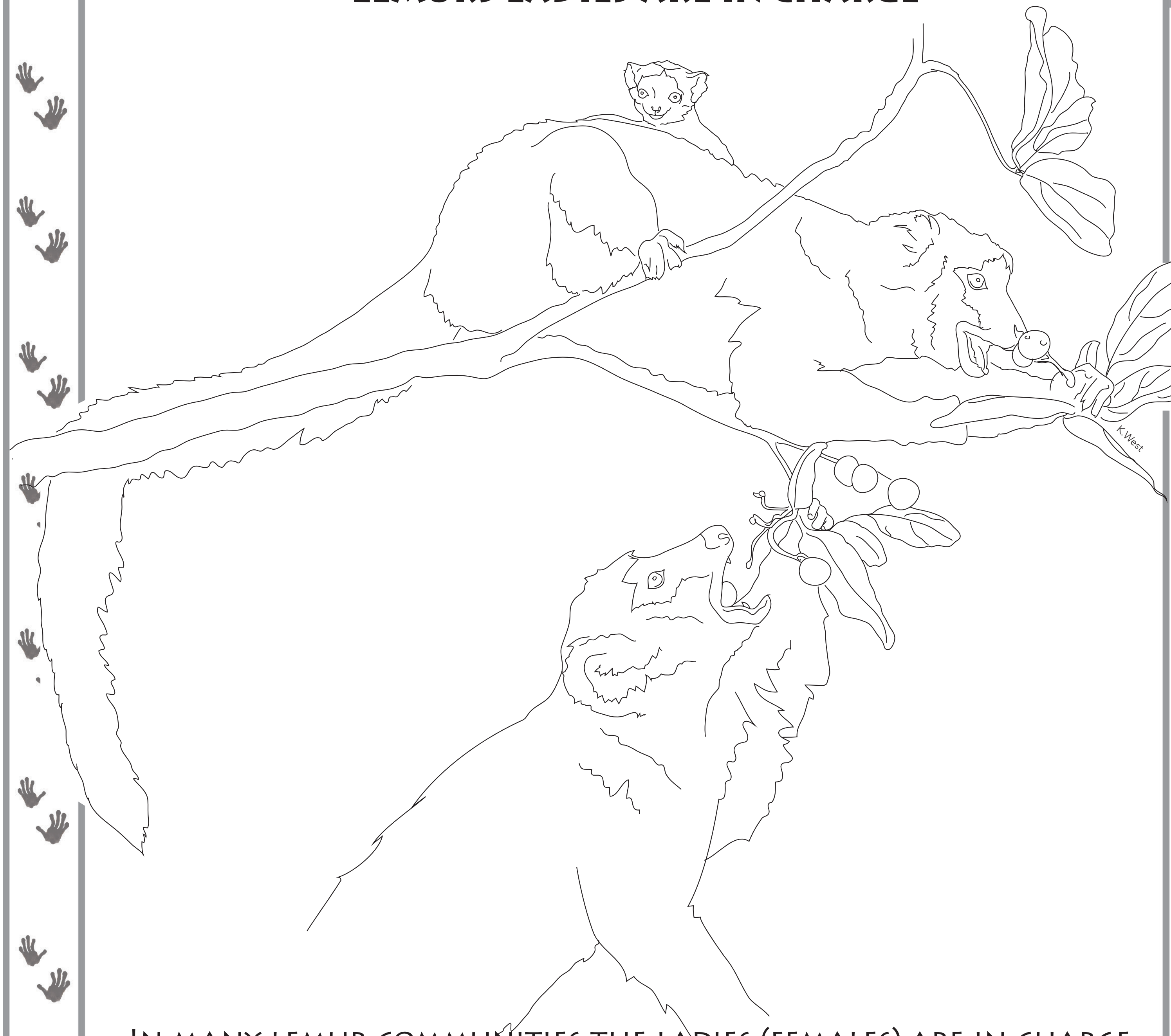


THIS FEMALE IS LEAVING HER SCENT ON THE TREE FOR OTHER LEMURS TO FIND AND KNOW SHE WAS THERE.

Ity vaviny ity no magnambela fofona amina kakazo mbao ho itan'ny varika hafa sy mbao ho fantany fao favy take izy

Ringtail Lemur
Maki

Lemurs ladies are in charge

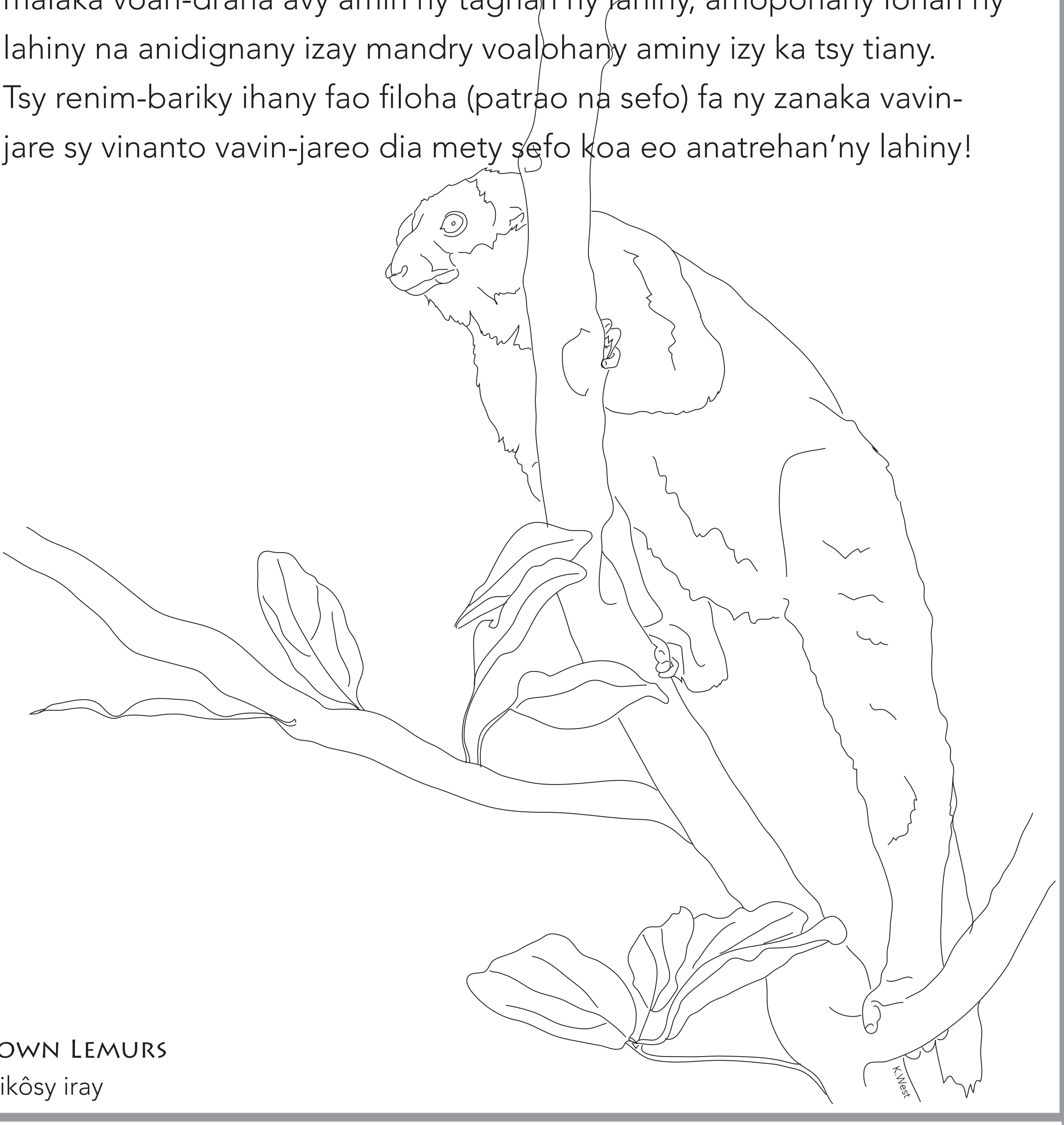


In many lemur communities the ladies (females) are in charge of the group and family. The adult females can eat all the food they want before the guys (males) get to eat, and then the guys can eat the leftovers. Lady lemurs might bite their mates, grab a piece of fruit from their hands, whack them in the head or shove them out of prime sleeping spots. It's not only the mother lemurs that are boss – their daughters and granddaughters can also boss around the males!

Varika vavy tomponantoko

Agnatiny vahoakam-barika maro ka ny vaviny no tomponandraikitry na lohany vondrona (goropy) sy ny fianaviana. Renim-bariky no afaka mihinana sakafo aloha na ijiaby aza hoaniny aveo ny lahiny no mihinana izay lambiny tsy laniny.

Ny vaviny mety agnekitra rehefa mitaonga zare, izy ihany koa no malaka voan-draha avy amin'ny tagnan'ny lahiny, amopohany lohan'ny lahiny na anidignany izay mandry voalohany aminy izy ka tsy tiany. Tsy renim-bariky ihany fao filoha (patrao na sefo) fa ny zanaka vavin-jare sy vinanto vavin-jareo dia mety sefo koa eo anatrehan'ny lahiny!



Brown Lemurs

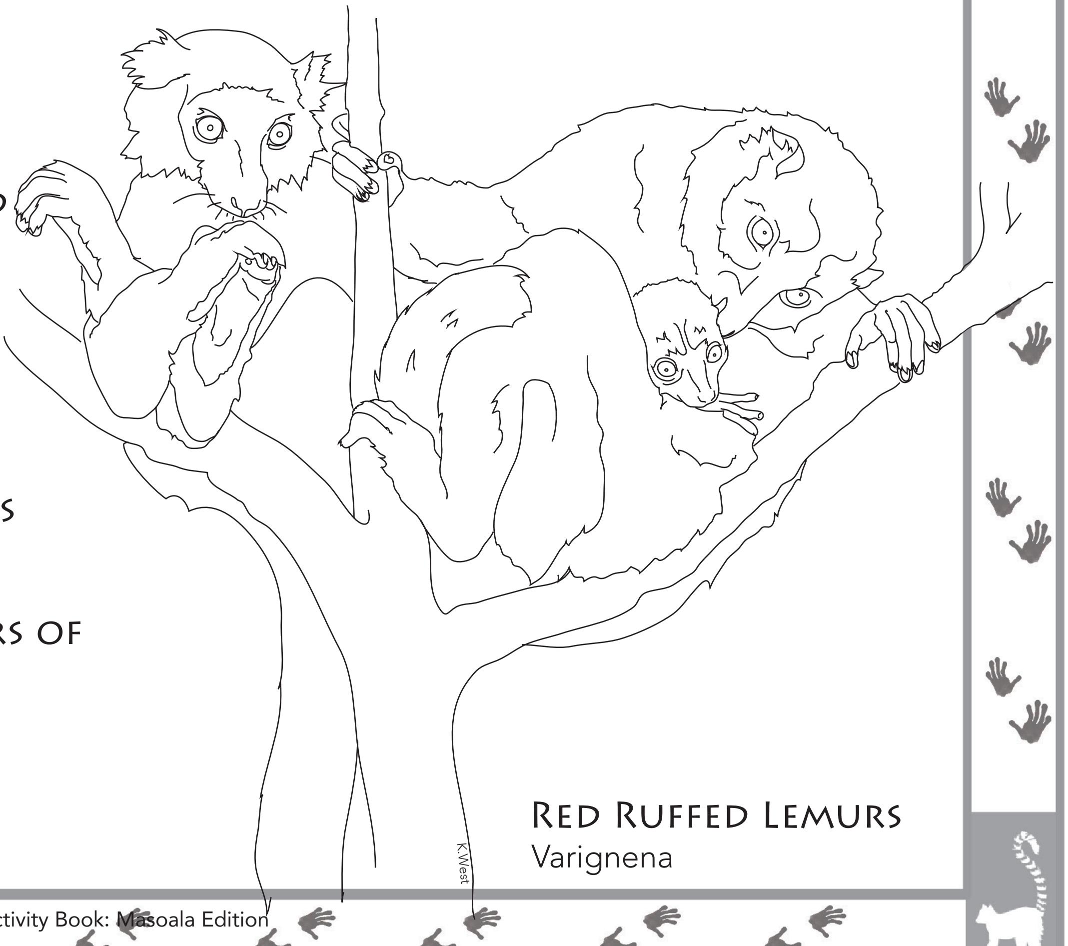
Varikôsy iray

What is lemur family life like?

There are more than 100 different types of lemurs and nearly that many different styles of lemur families! However, there are some general rules about lemur family life – most lemurs live in a family group with the mom, dad, and kids, but some live in pairs, or even all alone. Many lemurs live in big groups of animals called troops, with many relatives just like in your own community.

Family relationships are very important to lemurs. They can recognize who is related to them and who is not. When young male lemurs become mature, they leave the community where they were born and find a new group to join. Young female lemurs stay in their birth group with their mom, aunts, sisters and other female relatives.

Red ruffed lemurs are wonderful fathers. They build comfortable nests for their mate which they lined with their own fur for the females to snuggle in and give birth to litters of babies!



Red Ruffed Lemurs
Varignena

PICC Lemur Conservation Coloring and Activity Book: Masoala Edition
By: Kathy West and Elison Pascal, 2020

Kara fiainana ankohonan'ino varika?

Mihoatrany 100 karazany ny varika saika isankarazany ny fomba fitondrantenany aminy fianakaviana! Na karakôry na karakôry, dia misy lalàna ankapobeny no mifehy fiainan'izy ireo aminy fianakaviana, ankamaroan'ny variky miaiana amin'ny fivondronana na fianakaviana dia aminy reny, baba, ary zanaka, fao ny sasany miaina tsiroroa, na iaby mandeha manokana. Maro be variky miaina anatin'ny vondrona maventy be izay antsoina hoe andiam-briraka (toropy), mifampihavana ankamaroan'izy ireny kara anao amin'ny fiarahamonina.

Ny fihavanana amim-pianakavy no tena be lanjany amin'ny varaky. Zare mahafantatra izôvy ilay havan-jare na tsy havan-jare. Rehefa tovolahy ilay zanaka zare lahiny, dia miala ankohanany izay natirahan-jare ary mifandra aminy ankohanana hafa vaovao iarahan-jare. Fao ny zanka vavy ndreky dia mipetra amin'ny ankohonana naterahany izay misy iry maman-jare, zainan-jare, rahavavin-jare na koa ankohanam-bavy.

Ny babam-barignena dia mahavariana. Mitsabo trano matomboko tsara fitongan-jare (fanambadian-jare) izay tovonany amin'ny volovolonazy ka finaranan'i vaviny sy amahirany zananany!

Brown Lemur
Varignena

Tell a story / Tantarao tantara

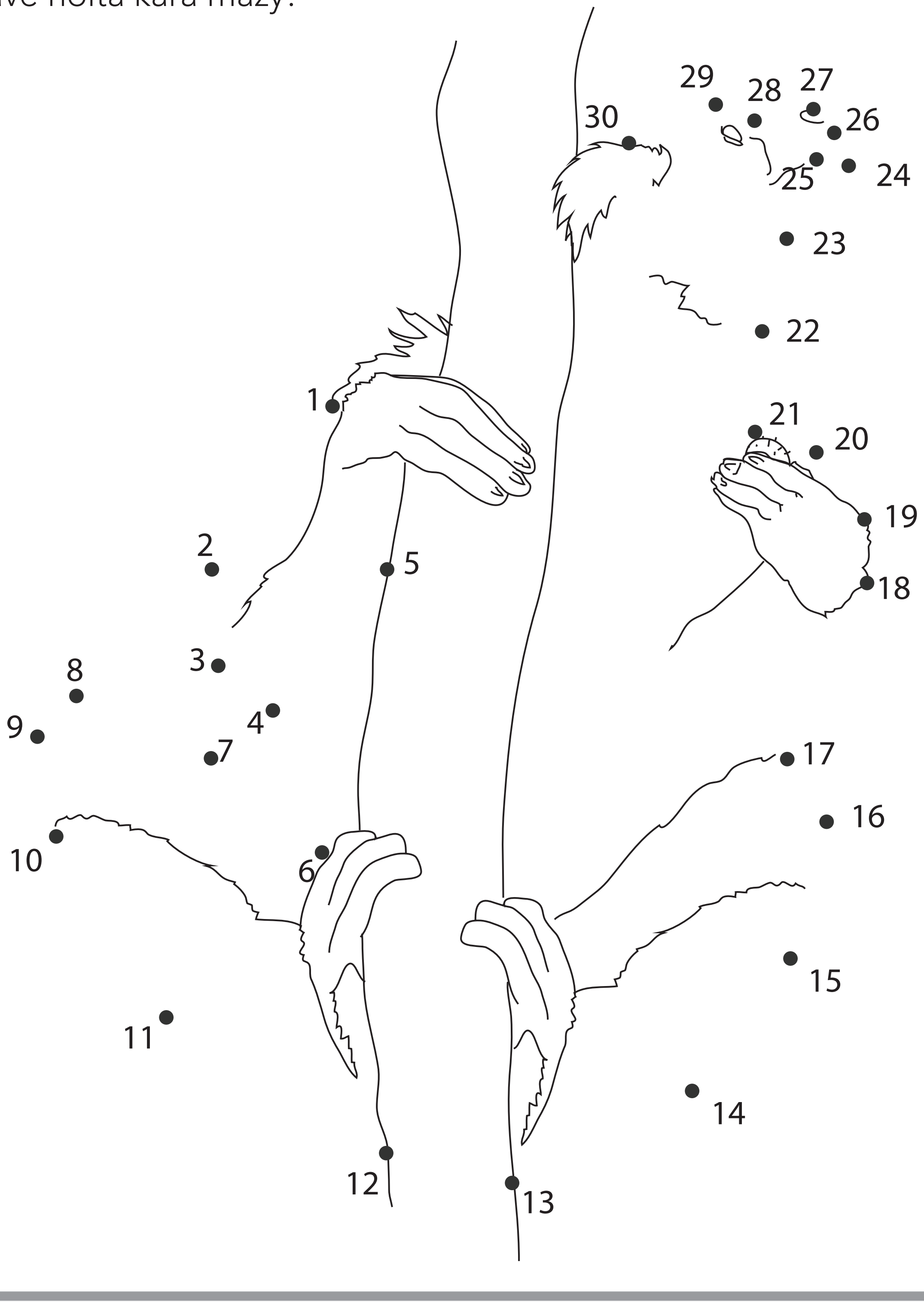
Write a story about lemurs!

Sorata tantara mikasika ny variky!

Make a Picture! / Ataova sary

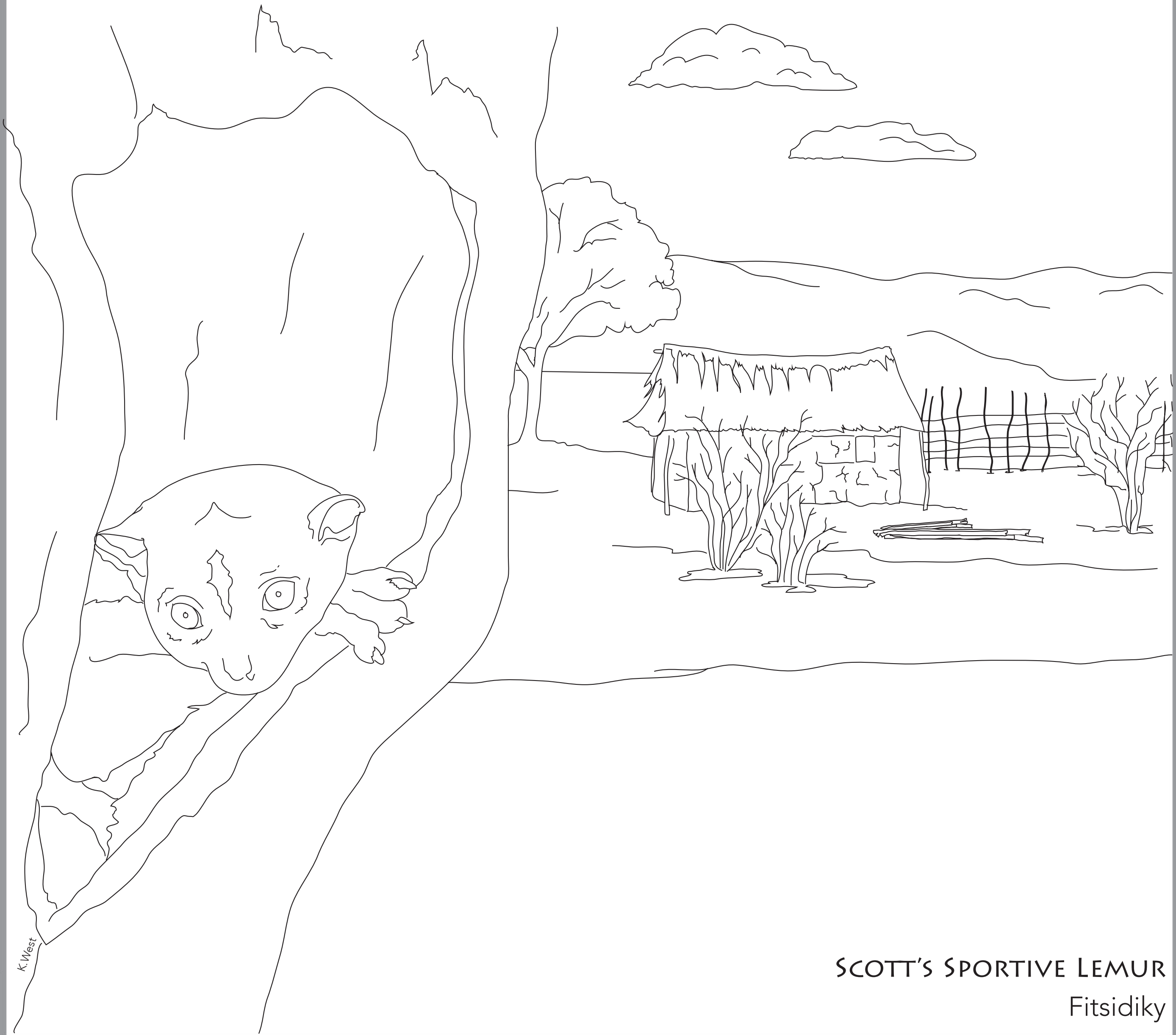
Draw a line from one number to the next, starting with #1 until you reach the last number. A picture will appear like magic!

Manaova tsipika manomboka avy amin'ny araiky mandeha amin'ny manaraka, miantomboka amin'ny #1ka hatra amin'ny isa farany. I sary iny ave hoita kara mazy!



Lemurs are disappearing. What do they need?

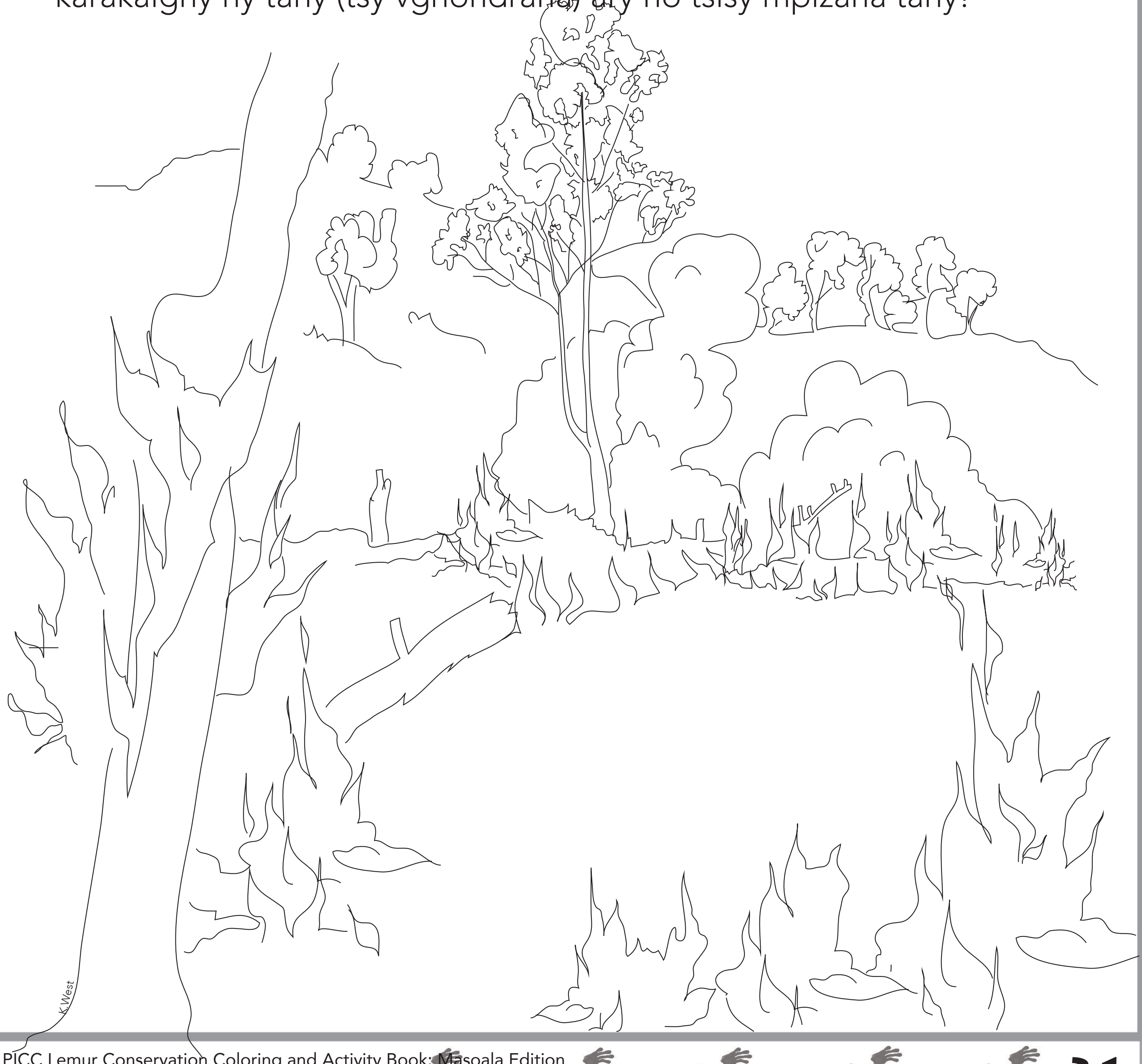
Lemurs need trees to live in, safety from hunters (human and fossa!), and food to eat. Almost every lemur in Madagascar, from the pygmy mouse lemur to the Indri are threatened with extinction (endangered). Why? There are many reasons but a big one is because their habitat (where an animal lives) is being destroyed by cutting down and burning trees. Without forests there will be no lemurs and there will also be less and less rain, less fish, more mudslides, poorer soils, and many fewer visitors!



Scott's Sportive Lemur
Fitsidiky

Ny varika nanjavo (tsy hay tany nomboany)

Varika mila kakazo ivelomany, mahafatoky tsy hoazon'ny fahavalo (ôlo sy fôsa), sy sakofo ohanina. Saika mitovy aby varika maneran'ny Madagasikara, manomboka avy amin'ny Tsidy ely ka hatra amin'ny Babakôty dia mampatahotro ho lany taranaka. Iono antony? Marobe ny antony izany, fao tena maventy indrindrany ny toerana ivelomanjare dia potika nohon'ny tevy ala sy fagnoroan'ôlo tanety. Raha tsisy ny atiala dia tsisy ihany koa variky ary mihegny ny oran'andro. Mihegny ny vary, mihegny ny lôko, maro tany mototro sy ho karakaigny ny tany (tsy vgnondraha) ary ho tsisy mpizaha tany!



Why should we protect Lemurs?

Lemurs are Madagascar's gardeners! They pollinate flowers, disperse seeds, and control insect populations. Without lemurs, Madagascar might not be able to grow all of their food crops.

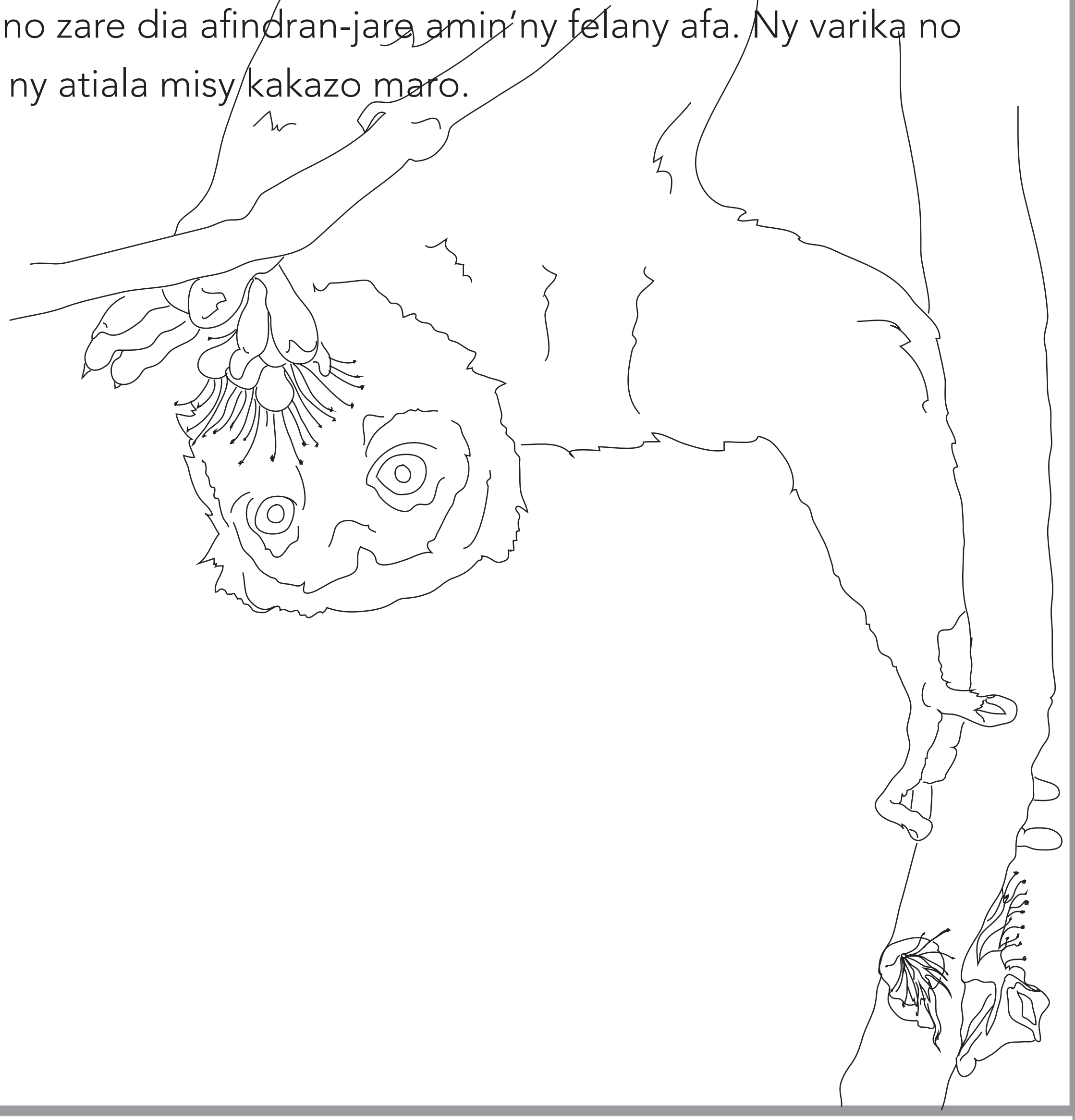
Many people think that only insects like bees and butterflies are pollinators. But lemurs, like the ruffed lemurs in your forest, play a big role pollinating plants in rain forests. Did you know that traveler's palm and hardwood trees rely on lemurs to pollinate their flowers? When the lemurs are eating the fruit and nectar, they get pollen all over their noses and take that pollen to other trees to pollinate the flowers. Lemurs keep the forests healthy with many trees!

Red Ruffed Lemur
Varignena

Ino antony tokony iarovan-tsika ny variky?

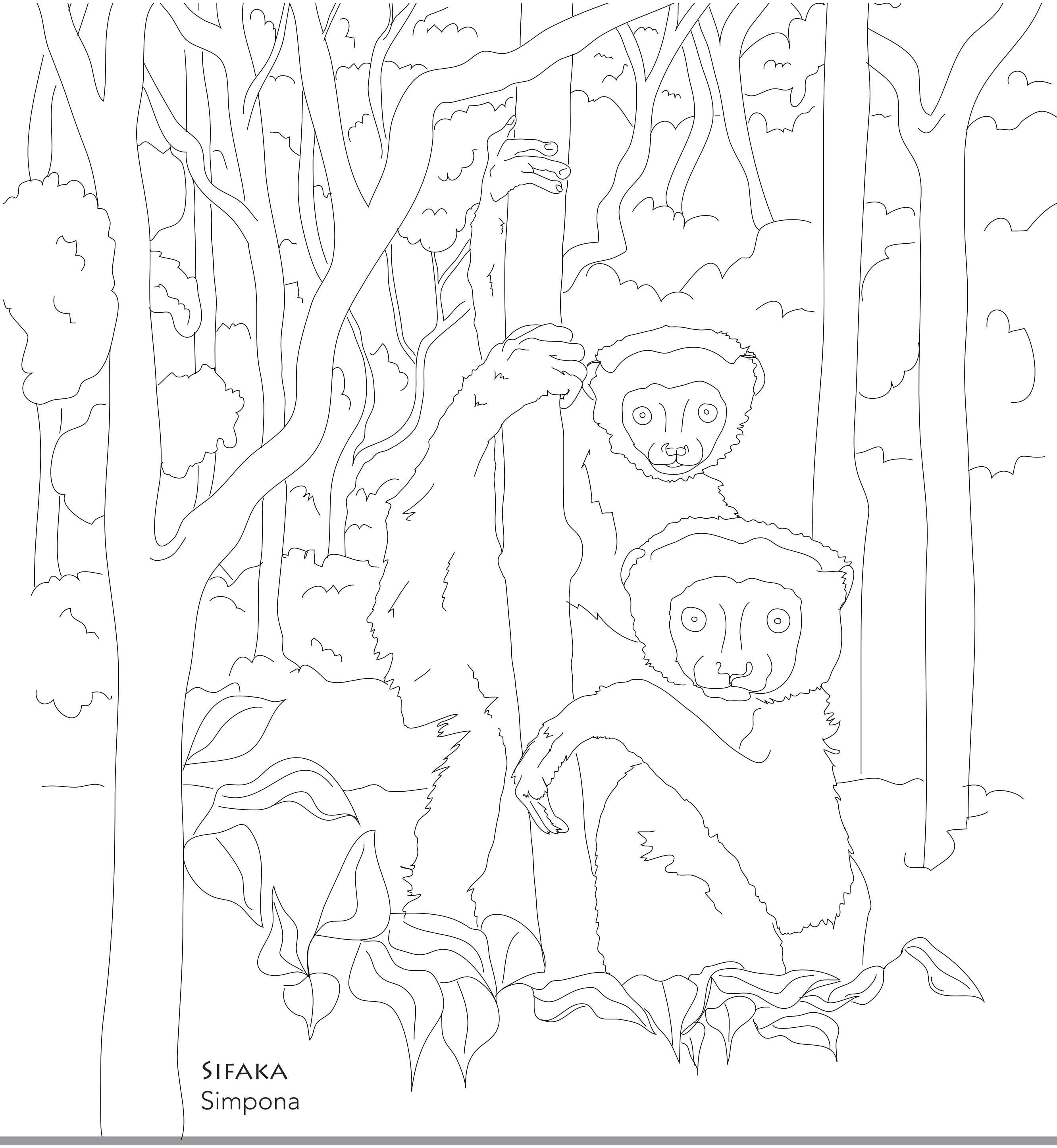
Ny Varika dia mpikolokoplo voninkazon'ny Madagascar! Mamaky folera, mpamafy voan-kakazo, mpagnaramaso ny kaka mba tsy ho maro loatra. Raha tsisy ny varika, I Madagasikara mety tsy afaka hamokatra raha atao ahaniny.

Maro ôlo mievitra kaka kara antely sy bakobako no mpamaky foleran-kazo. Nefa variky toy ny varignena dia manana andraikitra be amin'ny famakiana foleran-kakazo amin'ny atiala mando. Mbao efa hainandre ravinala sy kakazo mahiagna aby ireny dia variky no mamaky felan'izy ireny? Rehefa mihinana felan-kakazo dia misy lahim-bogny aignin-jare sy ôrogno zare dia afindran-jare amin'ny felany afa. Ny varika no mahatonga ny atiala misy kakazo maro.



Why should we protect lemurs?

People travel around the world to visit Madagascar just to see the lemurs (ecotourism). That means there are more Ariary for everyone because tourists buy food, need transportation and a place to stay, and need guides that know about the animals and plants in the forest. You could become an eco-guide!



Ino antony iarovantsika ny varika?

Ôlo mitsangatsangana erany izao tontolo izao mitsidky I Madagasikara tahita variky fao. Midika izaigny fao mampidi-bôla nohon'ny mpizaha tany mividy ahaningny, mila fitaterana sy toerana ipetrahana, ary mpisairadia mpitarika (gidy) mahay biby sy zava-maniry agnatiala. Mety ho lasa na manao gidy andre.

Guide and Ecotourists

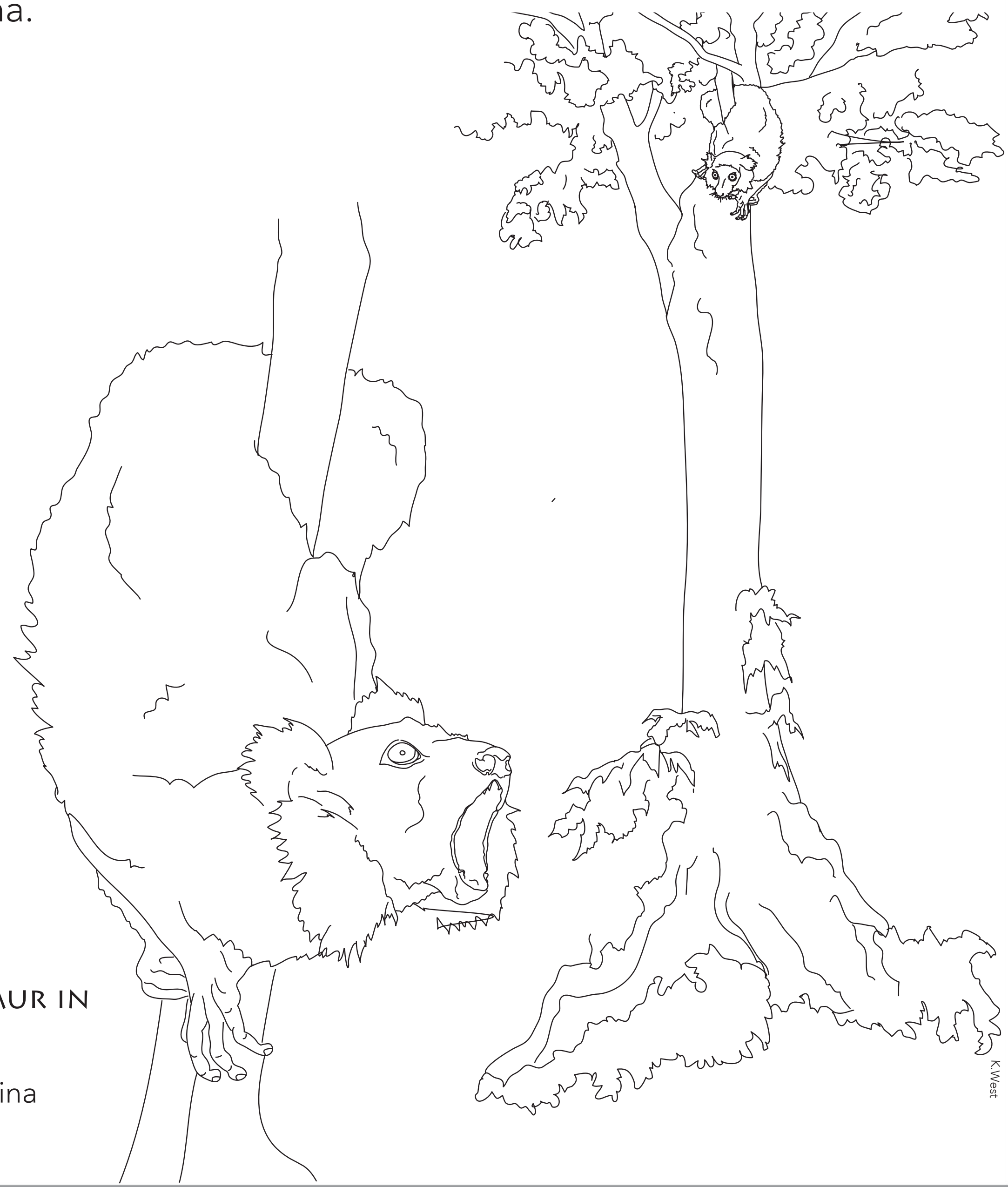
Mpisairadia (gidy) sy mpizahatany

How do Lemurs help my family?

Have you seen the red ruffed lemurs in the top of the tall haramy trees? I am sure you have heard them – they are so loud! These lemurs eat the seeds of the haramy tree and when the seeds are pooped out and fall to the ground they grow faster and stronger trees than the seeds that have not been pooped. Haramy trees are some of the most important trees for making boats. So without these lemurs, there would be fewer big Haramy, Hazinena and Nanto trees that we need for building houses and boats.

Arakôry ataon'ny variky magnampy ny fiahakaviako?

Andre mbao favy nahita varignena antilina haramy lava be iny? Za mino fa andre vavy naregny henon-jare maresaka! I variky aby ireny dia mihinana voany haramy ave rehefa mangery zare dia latsaka ambontany ireny voana haramy aby ireny ary dia mora maniry raha oharina amin'ny ilay voany tsy taim-bariky. Haramy dia anisany kakazo tena manan-danja amin'ny kakazo fatao lakana. Raha tsisy variky, mety tsy hoisy haramy maventy, Hazinina sy Nanto dia ilaina mba anaovana trano sy lakana.



Red ruffed lemur in haramy tree
Varignena ambônina Haramy

How do Lemurs help my family?

Another lemur that helps all of Madagascar is the aye-aye! The beautiful and important Madagascar palm tree, Traveler's Palm, can die if it gets too many beetle larvae making holes in it. Aye-ayes love these big chunky larvae that are high in both fat and protein, and by eating them they are saving the palm trees. You can say that aye-ayes are the guardians of the symbol of Madagascar!

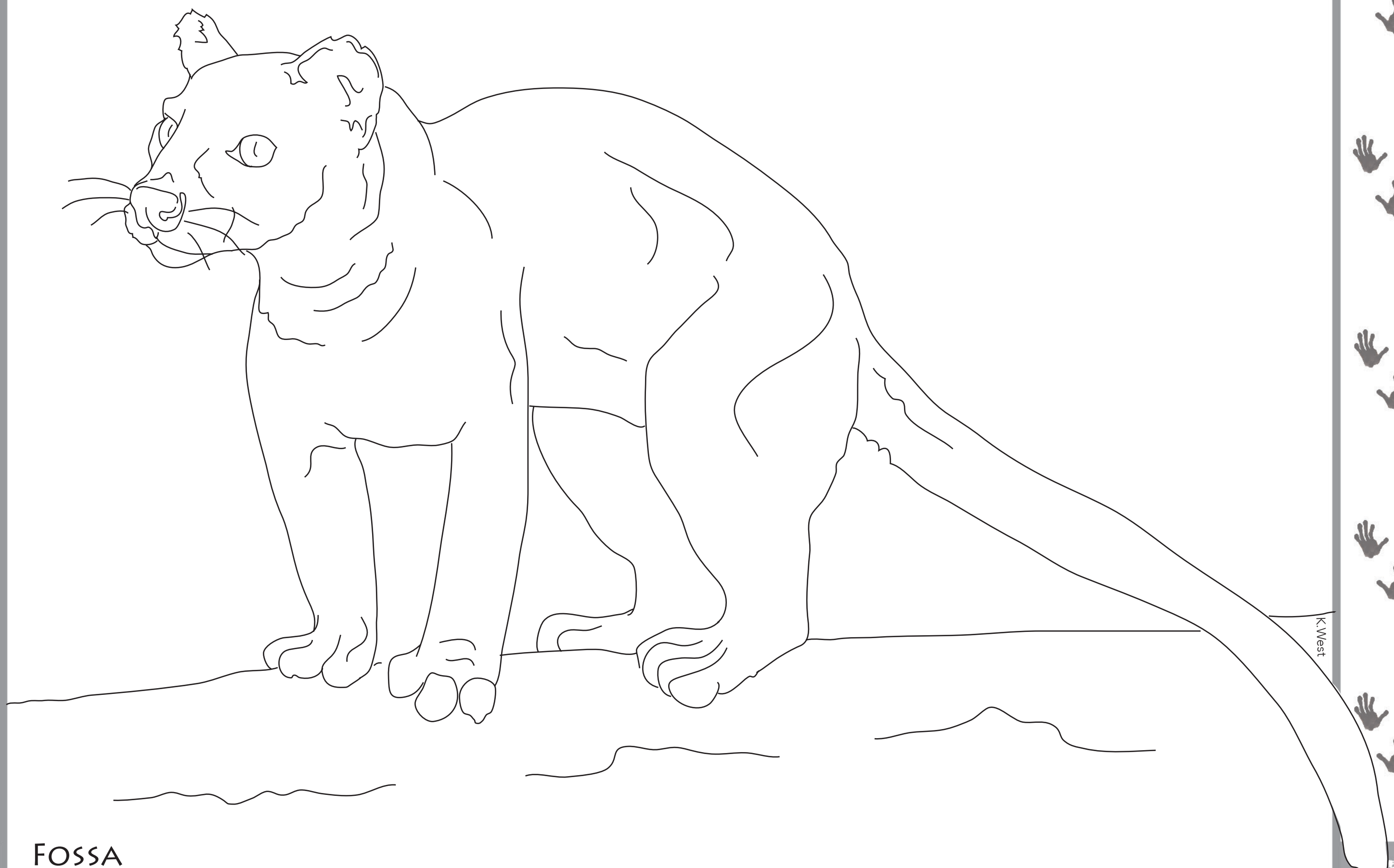
If the fossa can find enough lemurs to eat, they won't be so hungry for your chickens! You probably don't want the fossa hanging around your chicken coop, especially if you have heard the story about a fossa fart that was able to kill an entire coop of chickens! Do you think that is really true or possible? Fossa also eat rats and other rice pests, so they are good to have around!

Aye-aye eating a beetle grub
Aihay mihinana Sakivy

Arakôry ataon'ny variky magnampy ny fiahakaviako?

Misy variky hafa koa magnampy I Madagasikara jiaby, tsy izôvy fa Aihay! Ny Ravinala manan-danja sy tsara endriky hon'i Madagasikara dia maty izy kafa maro loatra ny lafa manao lavaka aminy. Aihay tia lafa (sakivy) sady matavy sy be otrin'aina dia miaro na mikajy ireny ravinala ireny izy noho ny finanany lafa aby izay. Azonandre lazaina mpiambina famantaran'I Madagasikara!

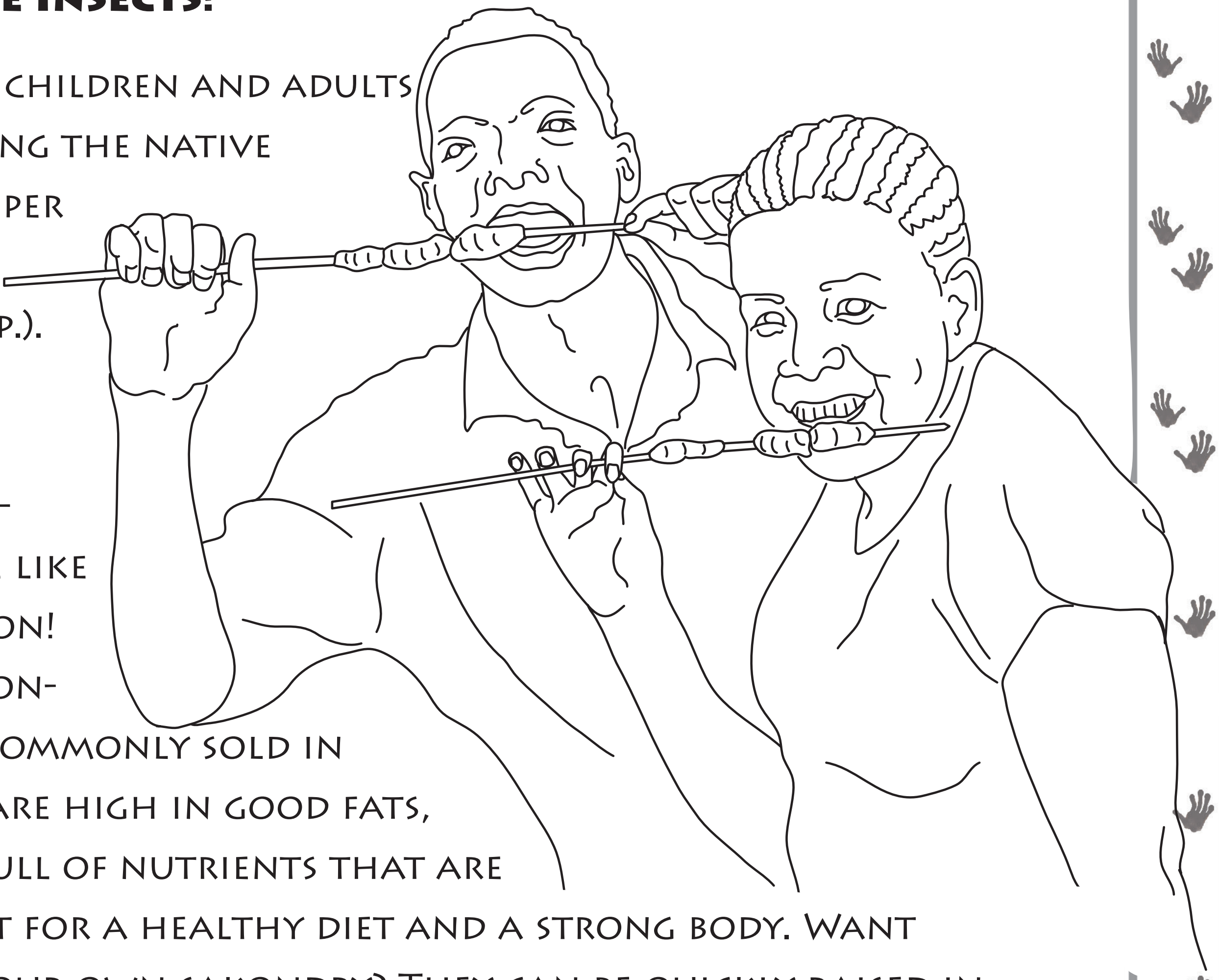
Ka ampy tsara variky hoanina fôsa, zare tsy tihinana akôhondre eky! Angamba mety tsy tianandre iantaognan'ny fôsa manodidina rôvandre indrindra izy kafa efa regninandre tantarana fôsa afaka mamono akôho jiaby agnaty rôva! Andre mieritreritry izaigny mariny na mety? Fôsa ka mihinana valavo sy haom-bary, tsara ny fisiany manodidina.



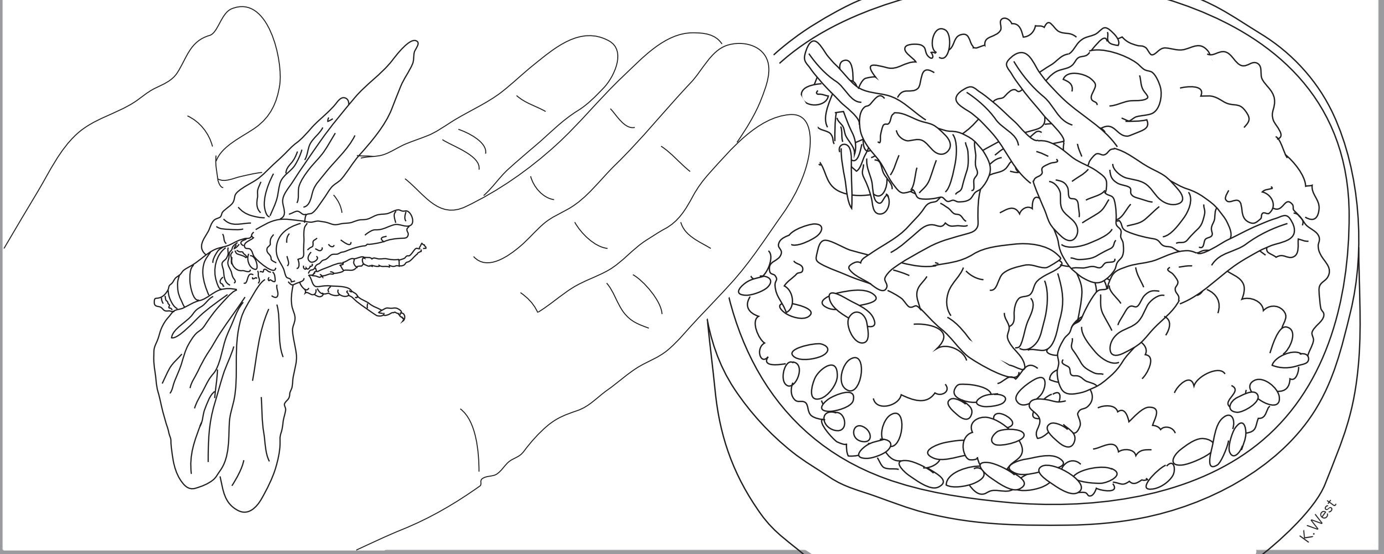
Fossa
Fôsa

How can I help the lemurs?

Eat More Insects!



Malagasy children and adults enjoy eating the native plant hopper Sakondry (Zanna spp.). Sakondry are extra delicious – they taste like sweet bacon! These bacon-bugs are commonly sold in markets, are high in good fats, and are full of nutrients that are important for a healthy diet and a strong body. Want to raise your own sakondry? They can be quickly raised in large numbers on lima bean plants in both home gardens and agricultural fields. Bacon-bugs are perfect food to help families, fill bellies, and save the lemurs!

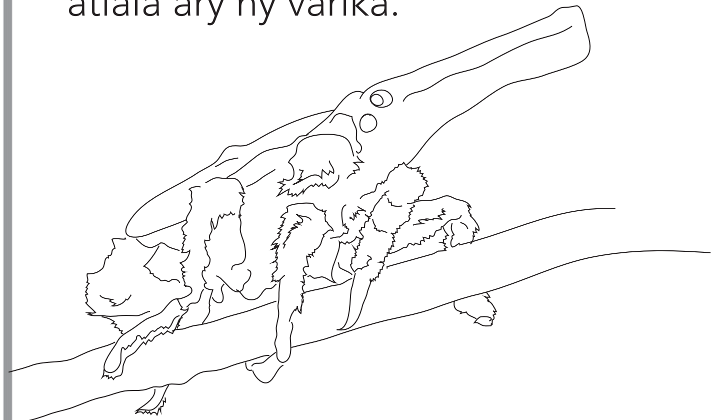


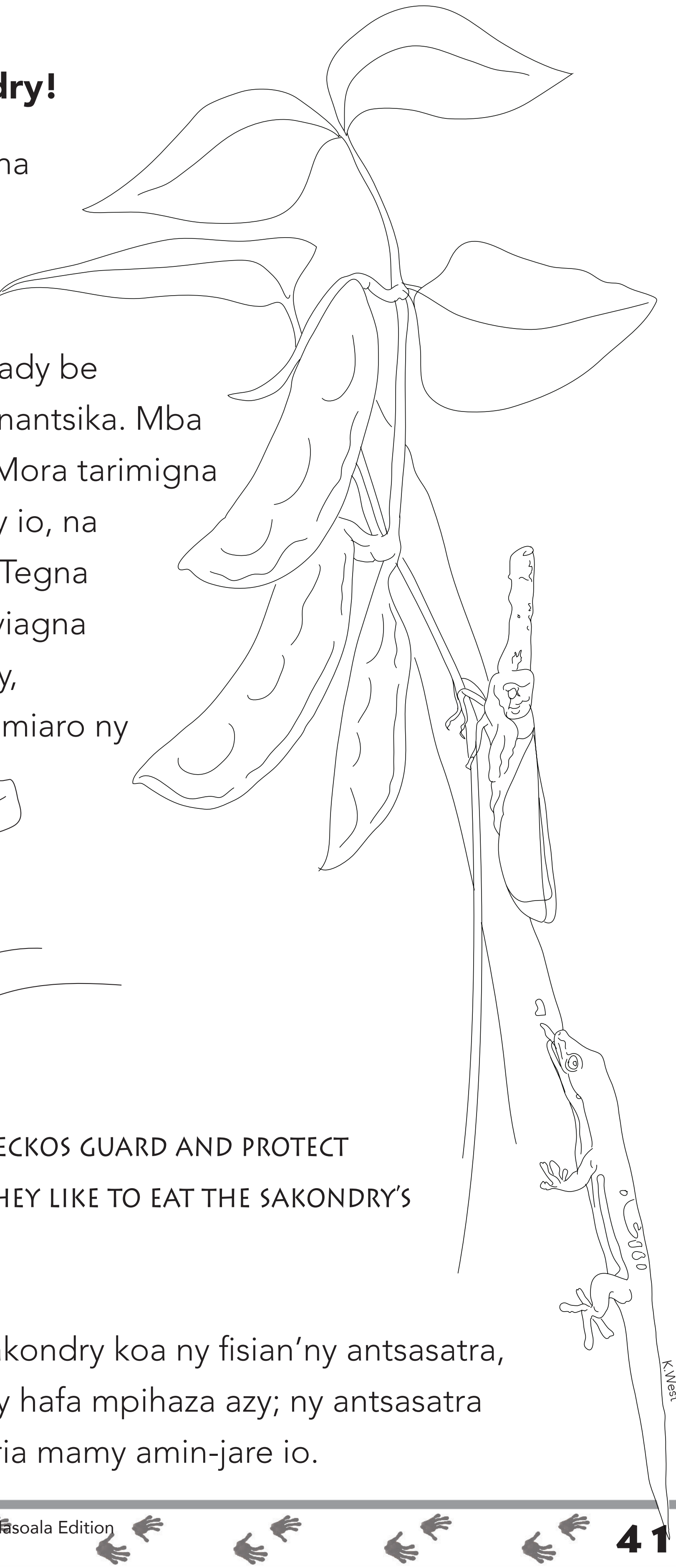
PICC Lemur Conservation Coloring and Activity Book: Masoala Edition
By: Kathy West and Elison Pascal, 2020

Te hiaro ny varika atsika?

Andao Hihignana Sakondry!

Na zaza na olobe tia mihinana sakondry satria raha tegna matsiro kara hena matavy izy io. Am-bazary mety ahitavana azy, mampatavy, sady be otrikaina mahasalama vatagnantsika. Mba te hitarimy sakondry anao? Mora tarimigna amin’ny tany misy tsidimy izy io, na an-tanimboly na an-tanana. Tegna tsara atao sakafom-pianakaviagna ny sakondry, satria mahavoky, mahasalama, sy magnampy miaro ny atiala ary ny varika.





As farm helpers, native day geckos guard and protect sakondry from predators – they like to eat the sakondry’s sweet sugary poop!!

Magnampy ny fitarimigna sakondry koa ny fisian’ny antsasatra, satria miaro azy amin’ny biby hafa mpihaza azy; ny antsasatra mihinana tain-tsakondry satria mamy amin-jare io.

How can I help the lemurs?

Other ways to help the lemurs is to keep your chicken flocks healthy so that you have more to eat and can let the lemurs eat their foods and live in their forests. Win, win! You can raise more healthy chickens by vaccinating them for Newcastle's disease using eye drops. Ask your elder counsel who to contact for this free vaccination.

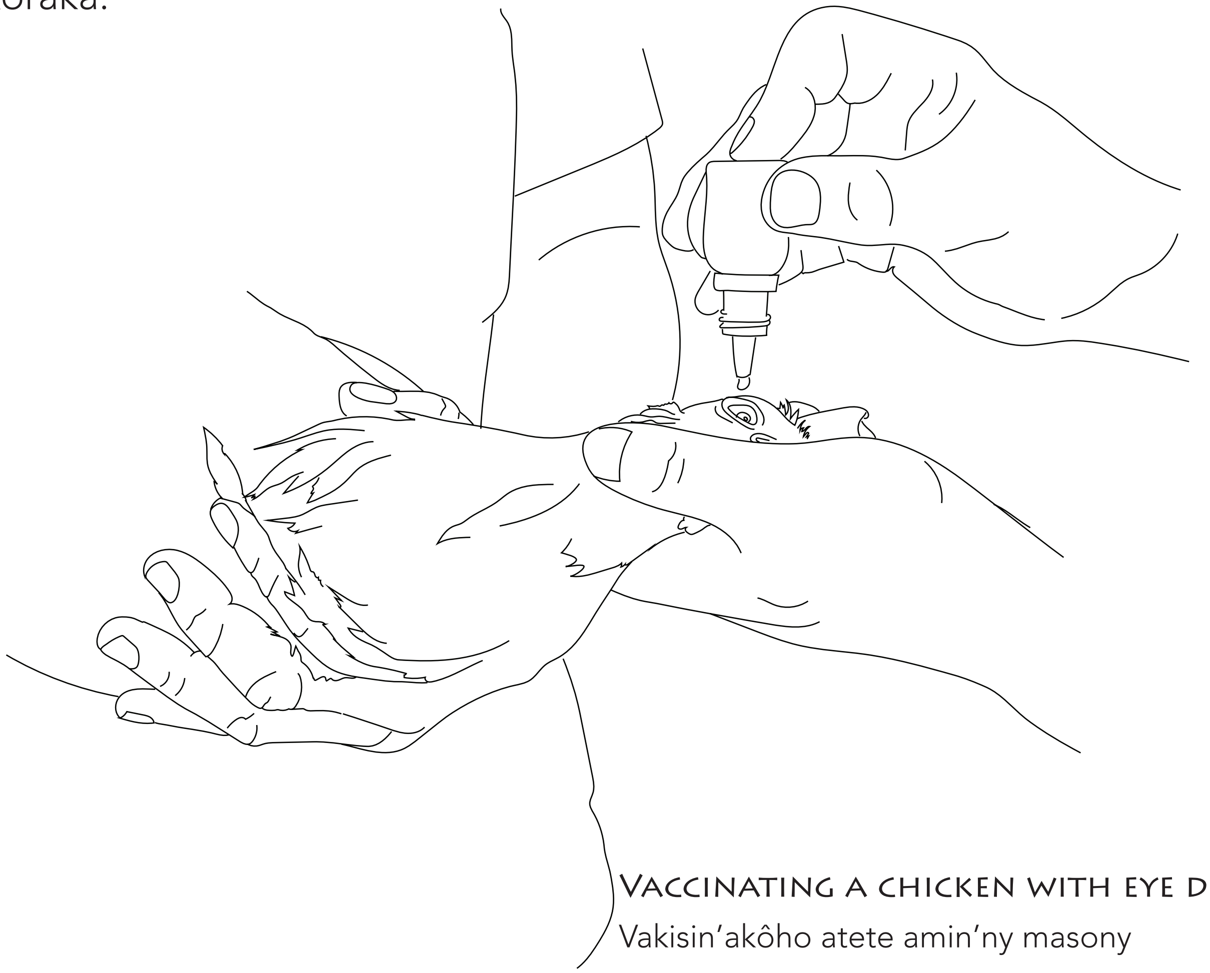
Want to have more food to eat from your crops? You can plant beans between your crops which helps improve soil health and your crop output so less land is cleared; the lemurs have their forests and you have good crops! You can also grow more rice without clearing more land by Système de Riziculture Intensive (SRI).

Ataova sary na tantarao mikasika ny evitrinandre mba anampiana ny variky
Draw a picture or tell a story about an idea you have to help the lemurs.

Akôry ataoko mba anampiako ny variky?

Anisany fomba anampiana ny varika dia ny fitarimiagna akôho maro raha manana akôho fôntry manjary ohanina ianao dia tsy ihinana varika ary ambelanao fao zare miaigny agnatiala any. Mitarimia akôho maro salama sady vita vakisinin'ny Newcastle's disease (Biaty na Kopinda????) izay atao amin'ny masony. Afaka anontanianao ny tomponan-draikitra efa ela amin'ny azainy fa mora vidy izainy.

Mbao tehamokatra maro ny tanimbolianandre? Mambolia tsidimy na gros poid agnivon'ny volinandre mba anatsara taninandre ary ahazo tombony ka tsy hazava loatra tanetinandre, ny variky manana atialan-jare ary anandre manana tanimboly tsara! Anandre ka afaka mamboly vary fôntry tsy amin'alany tevy ala fa amin'ny alalany voly vary an-kôraka.



Vaccinating a chicken with eye drops
Vakisin'akôho atete amin'ny masony

How can I help the lemurs?

Energy Efficient stoves

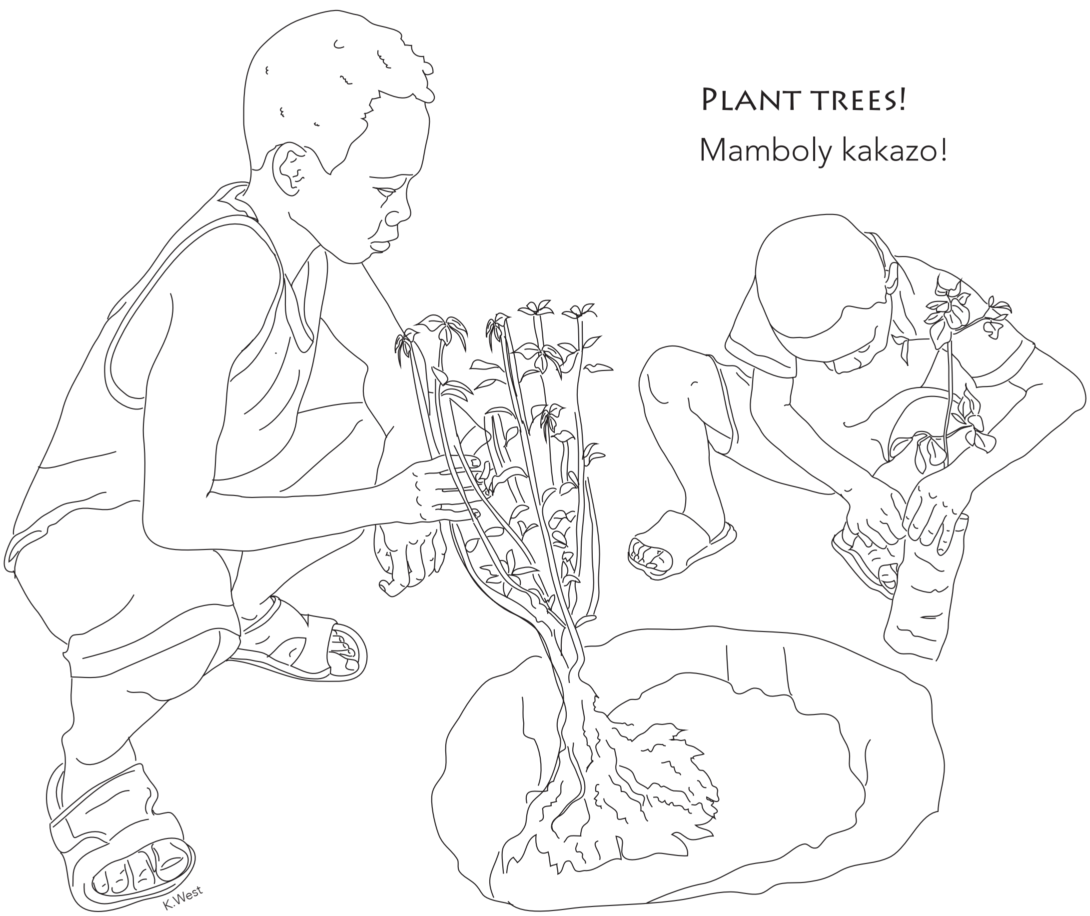
There is a Swiss-Madagascar organization called ADES (Association pour le Développement de l'Énergie Solaire) that creates energy efficient stoves. The stoves are so good at saving energy that you only have to use half as much wood or charcoal! This means saving time because you don't have to gather as much firewood. Another good thing is that the stoves produce much less smoke than regular stoves, so you don't have to breath in smoky air at home, your pots will stay cleaner, and you will be healthier. But the stoves don't just help people. Lemurs like the stoves too because it means that fewer of their tree homes are being cut down.

http://www.adesolaire.org/

Akôry ataoko mba anampiako ny variky?

Fatana mandeha amina erin'aratra

Misy fiarahamiasan'ny Swiss-Madagascar antsoina hoe: ADES (Association pour le Développement de l'Energie Solaire) izay mamokatra fatana mandeha amin'ny erin'aratra. I fatana zainy dia tsy mandany courant, antsasaka ataigny na sarbon izay fampiasainandre fa eky no ampiasainandre! Izany hoe mampihegny fotoana laninandre mamômpona ataigny. Avoe ka mahatsara I fatana zainy dia tsy mitsemboka sy mety reglegny, tsy tafifoka embokafo andre agnaty tragnon'andre, madio fao vilagnin'andre, ary ho salama andre. Nefa i fatana zainy dia tsy ôlo fao ampiany. Ny variky ihany koa tia i fatana zainy satria mampihegny kakazo fidokoan-jare na tranon-jare tapaka.



Plant trees!
Mamboly kakazo!

How can I help the lemurs?

Here are two more fun ways that you can help the lemurs.

You and your family should brush your teeth every day and use a mosquito net on your bed! Huh? How does that help the lemurs? If you do those simple things you won't get sick as often or as badly – no malaria and less dental disease – and your family can work in the fields to produce more food. You will have more to eat, be healthier to go to school and enjoy your play time, and you won't need to spend time or money clearing more land. The lemurs will thank you for it!

Keep mosquito netting on your bed

Ataova lay fandrignan'andre (Mandria agnaty lay)

Akôry ataoko mba anampiako ny variky

Ireto misy fomba roa mahomby afahanao manampy variky.

Anao sy ny ankohonanao tokony iborosy nify isanandro sy mandry agnaty lay! Hooh? Manakôry anampiana varika amin’izainy? Izy ka magnano I raha tsotra zainy andre tsy matetiky marary rary fatany fao no tsy azona tazomôko sy marary vazana na nify ary andre ave afaka miasa antanim-boly ka hamokatra sakafo maro. Misy ahanigny maro, salama tsara mandeha ampianarana sady mankafy misaoma, ary tsy lany fotoana na mitevy ala mba itadiavana vôla.
Hisaotrandre ny variky

Can I become a scientist and study lemurs?

Yes! Are you curious about the world and want to learn all you can? Are you willing to go to school and study hard? You, too, can become a scientist – maybe a primatologist (a person that studies primates, like lemurs), or an ecologist (a person that studies the ways that plants and animals exist together), or any other kind of scientist that studies what you are interested in! Right now you can look carefully at the animals and plants in the forest and ocean, make observations and notes with your notebook, and help to protect the animals and forests by teaching others what you've learned – you are already doing science!

Become a conservation ambassador in your village!
Lasa solontenan'ny fiarovan'I tanananao!

Za mbao mety ho lasa manampahaizana (siantista) sy mianatra variky?

Yah! Anao mbao liagna tahay momba izao tontolo izao sy tianatra izay tokony vitanao? Anao tandeha ampianarana sy tifegny mianatra mafy? Anao, koa, afaka lasa manampahaizanana mety “primologist” (ilay ôlo mianatra primates, kara variky), na ecologist (izay ôlona mianatra momba ny zavamaniry sy biby miaigny miara aminy), ankotrany izay raha hafa koa ataon’ny manampaizana (siantista) izay ianarana mahasôfy anao zao! Marina zahà tsara biby sy zavamaniry anatiala sy ranomasina, alaivo sady ataovy anaty “notebook” nao ao, sy anampy hiaro ny biby sy atiala aminy alalan’ny fomba izay nianaranao ka nanaovanao siasa!

Magnanaova sarinao mijery variky!
DRAW YOURSELF WATCHING LEMURS!

Fun Facts About Lemurs

Q: How many tongues does a lemur have?
A: They have two! They have their main tongue used for eating. Underneath that is a second, stiff tongue that is like a comb and used for grooming.

Q: What is the smallest lemur?
A: The mouse lemur is the smallest — about the weight of a banana. Even though the mouse lemur is very small, they have very large eyes to see in the dark. There are over 25 types (species) of mouse lemurs in Madagascar

Q: Are aye aye lemurs evil or harmful to people?
A: Aye-aye lemurs look really strange with their big ears and long fingers, but they use those things to find their food and don't harm people. In fact, they are helpful because they eat insects that could hurt your crops!

Q: What lemur is making that weird sound?
A: If you are in NW Madagascar, you might hear a creaky sound – that is a Sanford's lemur! If you are in Eastern Madagascar you might hear a high pitched woo-woo – that is the Indri! And if you are in NE Madagascar and hear a funny whistle at night, you are hearing a hairy-eared dwarf lemur.

Q: Who is making that really loud sound in the forest?
A: Red-Ruffed lemurs are! Usually males make the high pitched squeals while females make the low barks. Can you identify who is who by listening carefully?

Fact:
Scientists studying lemurs have found that the smarter a lemur is, the more popular they are with their group! Lemurs are really good at learning new things by watching others, and the more often a lemur does a new skill, the more attention and affection they get from their group, like grooming and sitting close by. Scientists have also found that lemurs can memorize a list of things and even understand basic math!

Raha mahasondriana mikasika ny variky

Q: Firy lailana variky araiky?
A: Misy roa! Zare misy laila be ampiasaigny inanana. Ambany I laila be iny dia misy ilay faharoa, mahiagna ary masakosako kara fiogo ka ampiasainy izy kafa manadio aignin'azy.

Q: Ino varika tena ely indrindra?
A: Ny Tsidy no tena ely indrindra, mitôvy lanjana fontsy masaka. Zare tena maventy maso izay mahita amin'ny alina. Misy 25 karazany tsidy eto Madagasikara.

Q: Ny Aihay dia mpanao ratsy na mpitondra takaitry ratsy amin'ôlo?
A: Aihay dia variky kara otrany tena hafahafa, mahagaga, mahalany fagnahy, tadignin'azy maventy be, lava be angôfin'azy, nefa ilainy itadiavany sakafo fao tsy anaovany ratsy ôlo. Zare manampy andre satria zare mihinana kaka andeha andratra volinandre!

Q: Izôvy hanao foe manga? / iza no anao henon-draha tsy foregny?
A: Andre ka tany amin'ny Avaratra-Atsimon'I Madagasikara, regnin'andre edy henona Komba! Izy ka Antsinanan'I Madagasikara dia maharegny heno maresaka woo-woo izainy henona Babakôty. Andre ka tany Avaratra-Antsinana dia maregny henon-draha amin'ny alina mitsoitsoiky, tsy ino izainy fa Tsidy ala.

Q: Izôvy agnano feo na henondraha tena mafy be ao anatin'ny atialan'ny Masoala?
A: A: Varignena dia! Matetika ny lahina no manao heno madiniky mikintsana fao ny vaviny ndreky magnano ambany no besony. Izôvy agnavaka I feo zainy dia (lahiny sa vaviny) amin'alalany fitandregnisana fao? Firy variky regninandre?

FACT:
Ny siantisty mianatra momba ny variky nahita fao ny variky tena malaza misaigny indrindra dia izay miara monina amin'ny fianakaviany! Ny variky tena malaky mianatra raha vaovao dia amina alalany fizahana ny raha ataon'ny hafa, na matetiky mijery ilay variky maneho ny fahaizamanaon'azy vaovao iry, ary dia matetika izy aveo voasintona sy lasa voasarika na lasa raikitrimbo ao amn'ny vondrona (gropy) zare ao izy, dia mifampilaila-dailatra ary mipetrka ankilan-jare atrany atrany. Ny siantista koa dia favy nahita fao ny varika dia mahazonona lisitry raha sy mahafantatra na dia fototra ara-Matematika!

Word Search

How many words can you find?

Lemur

Forest

Family

Endangered

Scientist

Tree

Primate

Ruffed lemur

Brown lemur

Insect

Habitat

Bamboo

Haramy

Rain forest

School

Fossa

Photograph

Species

Sakondry

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

Teny tadiavina

Variky
Atiala
Fianakaviana
Atohorana
Siantista
Kakazo
Primaty
Varignena
Varikôsy
Kaka
Toerana
Bokombolo
Haramy
AtialaMando
Sekoly
Fôsa
MpialakaSary
Karazany
Sakondry

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

NEW WORDS

Arboreal — lives in the trees

Communicate – "talk" to each other with sounds, and also with scents and body language

Ecotourism – a way for foreigners to visit a country and help the environment and animals of that country

Endangered – an animal that is at risk of going extinct

Extinct – an animal that is extinct will be gone from earth forever

Female – same as a girl or woman in people

Habitat – the landscape and plants in an area where an animal lives

Hibernate – when an animal goes into a deep sleep to save energy, living off fat stored in their bodies, and dropping its body temperature to match the outside temperature

Humans – people

Male – same as a boy or a man in people

Mature – The process of growing up to be an adult

Nocturnal – active at night and sleeps during the day

Parasite – an organism that lives in or on an organism of another species and benefits by getting its nutrients at the other's expense

Predator – an animal that eats other animals

Protein – a nutrient necessary for muscle development

Terrestrial – an animal that stays on the ground most of the time

Species – A group of closely related living things that are very similar to each other

Teny vaovao ianarana

Mivelona – amin'ny agnambon-kakazo

Fifandraisana – ''mikoragna" zare samby zare amin'alalany heno (feo), amin'alalany tôhotragny (fofona) ary Karazana heno (mifankahay aiky)

Fizahantany – ny mpizahatany dia mitsidiky firenena araiky dia manao fanampiana ny tontolo iainana sy ny biby ao amin'ny firenenea izay andehanany.

Ny biby izay atohorana ho lany taranaka na ho lany taminga.

Ny biby favy nisy fao efa lany taranaka ary efa tsisy eky eto ambonin'ny tany mandrak'izay na oviana na oviana

Viavy or vehivavy

Toerana – sy zavamaniry izay iveloman'ny biby

Ny biby izay mandry na milevina anaty lavaka mandritrin'ny ririgniny ("toy ny Trandraka Tsitsiha,…")

Ôlona – ôlo

Tanora, tômbo – Tovolahy na Tovavy

Izay mandeha aminy alina ary mandry mandritran'ny andro antoandro

Karazana – taova na organisma mivelona amin'ny taova na organisma karazana taova hafa sady mitsentsitra tsironaigny ilay lafo vidy aminy sasany.

Ny biby mihinana – biby karazana hafa ataony asa fivelomany

Otrikaina – ilain'ny hôzatra sy vatana

Ny biby izay mipetraka amboniny tany fao fotoanan'azy

Vondrona – zavatra na raha misy fihavanan na fitrahôfana ary misy fitoviana nefa samy hafa.

Appreciate, Conserve, and Protect Madagascar's Lemurs!

Ankasitrao, koloy ary arovy ny varika ny Madagasikara!

Cover Drawings By:
Ambodiforaha Students
PICC Session,
June 2020

Ny Sary eo Amin ny
Fonony Dia Nataon ' I:
zanak'i Masoala
PICC 2020

Chelandia, Angela, Angelina, Elien, Arthèmde, Angelicolin, Tijany, Jaika, Jimmy, Martino, Be Judolin, Jean Reliot, Aurelien, Florancia, Viavy Fotsy Eline, Karistina, Odrelin, Paul-Celien, Be Ricolin, Clarssa, Koto Romeot, Be Fidiano, Angelica, Ranjino, Joelah, Noelette, Alexotina, Aradia