



TREE KANGAROO CONSERVATION PROGRAM



ANNUAL REPORT 2017





TREE KANGAROO CONSERVATION PROGRAM



ANNUAL REPORT
2017





www.treekangaroo.org

Tree Kangaroo Conservation Program
Annual Report 2017
Seattle, Washington, USA • 2018

Contents

3

About Us

6

Tree Kangaroo Conservation Program
Team Members

10

Five Strategies for Achieving
TKCP's Mission

12

STRATEGY ONE:
Managing the YUS Conservation Area

26

STRATEGY TWO:
Applying Our Research

20

STRATEGY THREE:
Planning for a Sustainable Future

24

STRATEGY FOUR:
Supporting the Communities

34

STRATEGY FIVE:
Operating TKCP

38

Media & Outreach

40

Support

42

Thanks

46

Maps



Cover: Matschie's tree kangaroo at TKCP's Wasaunon research site.
Photo by Jonathan Byers.

Back Cover, from left: YUS Junior Ranger Program volunteer teachers Eunice
Limson, Jenilah Jethro, and Emily Jacob, Yawan village. Photo by David Gillison.

Title Page: A boy poses next to his home for photographer David Gillison's
"Voices of YUS" book project. Photo by David Gillison.

Left, top: Matschie's tree kangaroo in YUS. Photo by Doug Bonham.

Left, bottom: Children at play in YUS. Photo by David Gillison.



Village and landscape in YUS. Photo by Mikal Nolan

Common Acronyms

AZA – Association of Zoos & Aquariums (USA)

AZA TK-SSP – Association of Zoos & Aquariums Tree Kangaroo Species Survival Plan

CA – Conservation Area

CAMC – Conservation Area Management Committee

CBO – Community-based Organization

CEPA – Conservation and Environment Protection Authority (formerly the Department of Environment and Conservation)

CIC - Coffee Industry Corporation

GEF – Global Environment Facility

IUCN – International Union for the Conservation of Nature

LLG – Local Level Government

LUP – Land-use Planning

NGO – Non-governmental Organization

PHE – Population Health Environment

PNG – Papua New Guinea

TKCP – Tree Kangaroo Conservation Program

TKCP-PNG – Tree Kangaroo Conservation Program – Papua New Guinea (local NGO)

UNDP - United Nations Development Program

UNDP GEF-SGP – United Nations Development Programme Global Environment Facility Small Grant Programme

WPZ – Woodland Park Zoo

YUS – Yopno-Uruwa-Som

YUS CO – YUS Conservation Organization (landowner association and community-based organization)

About Us

Vision

The Tree Kangaroo Conservation Program envisions a sustainable, healthy, and resilient Huon Peninsula landscape which supports the area's unique biodiversity, human communities, and culture.

Mission

The Tree Kangaroo Conservation Program fosters wildlife and habitat conservation and supports local community livelihoods in Papua New Guinea through global partnerships, land protection, and scientific research.

Three Organizations, One Common Vision

The ***Tree Kangaroo Conservation Program (TKCP)*** is the umbrella name for the partnership between Woodland Park Zoo's TKCP and TKCP-PNG.



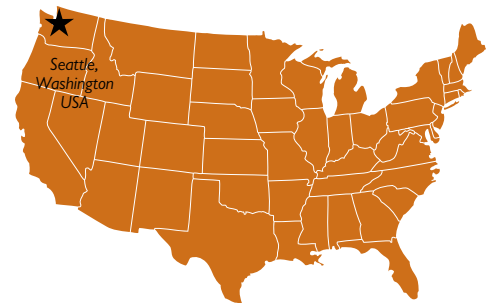
TREE KANGAROO CONSERVATION PROGRAM – PAPUA NEW GUINEA (TKCP-PNG)

An independent non-governmental organization registered in PNG. TKCP-PNG is the implementing partner of TKCP. Based in Lae, PNG.



WOODLAND PARK ZOO'S TREE KANGAROO CONSERVATION PROGRAM (TKCP)

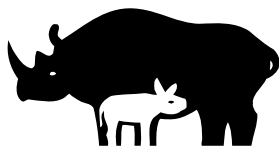
Woodland Park Zoo's TKCP serves as a model for the "living landscape" approach to conservation among the zoo's Partners for Wildlife field conservation program. Based in Seattle, Washington, USA.



YUS CONSERVATION ORGANIZATION (YUS CO)

To ensure local ownership and continued community support of our work, TKCP partners with the community-based YUS Conservation Organization which represents the interests of local landowners and their communities. Based in YUS, PNG.

International Partnerships for the Protection of Tree Kangaroos



Species Survival Plan

TKCP is the designated field program for the Association of Zoos & Aquariums Tree Kangaroo Species Survival Plan (AZA TK-SSP). Species Survival Plan programs focus on animals in danger of going extinct in the wild, using breeding in zoos as one approach to help the species survive and to link AZA institutions to field conservation work.



World Association of
Zoos and Aquariums
WAZA | United for
Conservation

TKCP is supported by zoological institutions throughout the globe which are working together for the conservation of tree kangaroos. Through the World Association of Zoos and Aquariums (WAZA) and its affiliate zoological associations, the international tree kangaroo partnership network promotes greater integration and a more holistic approach to protecting tree kangaroo species.



Top: Matschie's tree kangaroo with tracking collar. *Photo by Daniel Solomon Okena, TKCP.*
Bottom: Annie Ogate and children pose in Yawan village for photographer David Gillison's "Voices of YUS" book project. *Photo by David Gillison.*

1996

First land pledged for conservation by YUS landowner Mambawe Manaono and his clan

Tree kangaroo conservation research begins

1999

TKCP's education project starts

2004

First YUS Teacher's Scholarship students graduate from Balob Teacher's College and return to teach in YUS primary schools

2005

Landmark YUS landowner workshop with the Department of Environment and Conservation (now CEPA), Conservation International, and TKCP to apply for Conservation Area status

TKCP's health project starts with the visit of its volunteer team of physicians

2008

TKCP receives five-year grants from Conservation International and from the Lifeweb Initiative of the German Federal Ministry of Environment (BMU) and German Development Bank (KfW)

2009

The YUS Conservation Area is formally gazetted by PNG's national government, protecting 187,000 acres of wildlife habitat

2010

TKCP's livelihood project starts with a focus on coffee

2011

The YUS Conservation Endowment is established at Woodland Park Zoo to provide sustainable funding for conservation efforts in YUS

YUS Conservation Coffee farmers' first bags of coffee are exported to Caffe Vita in Seattle

History

Building a Model for Community-based Conservation in Papua New Guinea

The Tree Kangaroo Conservation Program (TKCP) is Woodland Park Zoo's flagship international conservation program, focused on conserving the endangered Matschie's tree kangaroo (*Dendrolagus matschiei*) and the habitat in which it lives. From its beginnings in 1996 to determine the status of the Matschie's tree kangaroo in the wild, TKCP has evolved into a holistic program supporting habitat protection for a wide range of threatened species, as well as initiatives to enhance local community livelihoods and access to government services. TKCP is now the umbrella name for the partnership between WPZ's TKCP and TKCP-PNG, the locally-registered nongovernmental organization in Papua New Guinea.

Over the course of more than 20 years, the program has grown from its mountainous roots to embrace a broad landscape encompassing marine and coastal reef ecosystems, lowland and montane rain forests, alpine grasslands, and the agricultural areas and settlements belonging to more than 50 villages within the Yopno, Uruwa, and Som (YUS) watershed areas on the Huon Peninsula.

Together with the local landowners in YUS, the PNG government, Conservation International, Lifeweb Initiative, and many other supporters, TKCP helped to establish the

country's first nationally-protected Conservation Area in 2009. The 187,000-acre YUS Conservation Area is the first protected area of its type in PNG –providing protection at the landscape scale, wholly owned by local people, and with the support of the PNG government for long-term protection.

Under PNG's customary land tenure system in which local people own and control over 90% of the land, long-term habitat protection relies on the commitment and participation of the local communities who depend on the forest's products and services. Together with local landowners and communities, TKCP partners with the PNG government, conservation biologists, social scientists, universities, research institutions, and other NGOs to build local capacity for the sustainable management of the YUS Conservation Area (YUS CA) and the surrounding landscape. Through these efforts, TKCP strives to create a healthy landscape for humans, wildlife, and the environment.

Through these partnerships, local residents build a strong connection between their commitment to conservation in YUS with better opportunities for their families and communities. With more than two decades of effort and experience, TKCP continues to shape the concept of conservation for the country, setting a benchmark to which other national protected areas can aspire. ■

2012

Team of 12 YUS Conservation Area Rangers is established to patrol and monitor the YUS Conservation Area

2013

TKCP-PNG is registered as a local nongovernmental organization in Papua New Guinea

2014

TKCP receives the United Nations Equator Prize

2015

YUS Conservation Area expands its protection and management to include coastal and marine ecosystems with the launch of a community-based marine monitoring program

2016

YUS Junior Ranger Program developed and piloted to engage the future leaders of YUS in local conservation efforts

TKCP receives five-year grants from the Global Environment Facility through the UNDP and from Rainforest Trust

2017

YUS Conservation Coffee & Cocoa Cooperative is formally registered with the PNG government, representing the interests of more than 600 farming families in YUS

Spatial Monitoring and Reporting Tools (SMART) are integrated into YUS Conservation Area Ranger patrols to enhance YUS CA management

In partnership with Microsoft software engineer Doug Bonham, TKCP developed and deployed a new type of tree kangaroo collar equipped with GPS tracking and altitudinal sensors, enabling TKCP to collect much more data on tree kangaroo ecology and behavior

PNG's Healthy Island Concept is incorporated into TKCP's health program

"A Life in the Clouds," a 10-minute film about TKCP and its tree kangaroo research, is produced by Pontecorvo Productions

Tree Kangaroo Conservation Program Team Members 2017



Mikal Nolan has worked with TKCP since 2011, first as its Community-Based Organization Coordinator supporting the development of the YUS Conservation Organization and, since 2013, as Program Manager overseeing TKCP's team in PNG. Mikal fostered a culture of collaboration and learning among the TKCP team, providing opportunities for staff to develop their leadership skills and to serve as experts in their field. We are tremendously grateful for Mikal's leadership over the years, and wish her all the best.

Papua New Guinea



Mr. Rick Passaro
Incoming Program
Manager in 2018 (Lae)

*Expertise: Project
management, leadership,
and capacity-building*



Mr. Karau Kuna
Conservation
Strategies Manager

*Expertise: Geographic
information systems,
information technology,
and land-use planning*



**Mr. Daniel
Solomon Okena**
Research and
Conservation Manager

*Expertise: Biological research,
mammal surveying, plant
phenology, and long beaked
echidna biology*



Ms. Francisca Yagama,
Healthy Community
Coordinator

*Expertise: Community
development, health
education, partnerships, and
project management*



Mr. Gibson Gala
Education and
Leadership
Coordinator

*Expertise: Environmental
education, youth activism,
and leadership development*



Ms. Nadine Paira
Administrative
Coordinator

*Expertise: Office
management, program
administration, and human
resource management*



Mr. Karl Aglai
Coffee Operations
Specialist

*Expertise: Coffee husbandry
and processing, agricultural
extension services, and
freight logistics*



Mr. Nicholas Wari
Research Assistant

*Expertise: Field
research, data collection,
management, and analysis*



Mr. Namo Yaoro
Conservation Officer

*Expertise: Leadership,
conservation outreach, and
community mobilization*

Seattle, Washington, USA



Dr. Lisa Dabek

Program Director

Expertise: Leadership, marsupial biology, animal behavior, partnerships, and fundraising



Mr. Trevor Holbrook

Program Manager

Expertise: Program management, strategic planning, livelihoods, and organizational development



Mr. Dono Ogate
Conservation Officer

Expertise: Leadership, coffee production, and conservation outreach



Mr. Steven Fononge
Conservation Officer

Expertise: Leadership, conservation outreach, and community engagement



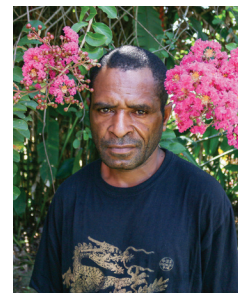
Mr. Chris Max
Conservation Officer

Expertise: Leadership, cocoa production, and coastal resources



Mr. Victor Eki
Mapping Officer
(now Conservation Officer)

Expertise: Landowner engagement and dispute resolution



Mr. Matthew Tombe
Mapping Officer
(now Conservation Officer)

Expertise: Landowner engagement and dispute resolution



Mr. Timmy Sowang
Conservation Officer

Expertise: Leadership, conservation outreach, and community engagement



Mr. James Jio
Mapping Officer
(former YUS CA Ranger)

Expertise: Global Positioning Systems (GPS)



Mr. Sanangke Yape
Mapping Officer

Expertise: Global Positioning Systems (GPS)



Mr. Basip Matumangke
Conservation Coffee Project Assistant

Expertise: Coffee production, post-production processing and quality



Mr. Stanley Gesang
Tree Kangaroo Research Lead Tracker

Expertise: Field research and tree kangaroo tracking



YUS Conservation Area Rangers

Appointed by the landowners of YUS to conduct monthly patrols through steep, treacherous terrain and challenging weather conditions, the YUS Conservation Area Rangers embody the commitment of local communities to protect their environment. TKCP is proud to support Papua New Guinea's first conservation rangers in patrolling and monitoring, educating communities on the rules and boundaries of the YUS Conservation Area (CA), and upholding the YUS CA bylaws in collaboration with landowners and local magistrates. Building upon their traditional knowledge of the YUS landscape and ecosystem, the YUS Conservation Area Rangers are gaining expertise in species identification, tracking, and scientific research.



Back row from left: Robson Soseng, Hemon Yangeng, Stanley Gesang (tree kangaroo research lead tracker), Tamina Findeng, Weo Bafinuoc, Tingke Sapenu.

Front row from left: Soya Werawe, Nelson Teut, Geno Yuwoc, Stanis Max, Mono Sem, Danny Wande.

Not pictured: Moses Nasing, James Jio, Obtus James, Mike Barup, Dogem Mirande, and Manrex Yasaue.
Photo by Daniel Solomon Okena, TKCP.

Mr. Soya Werawe
Mr. Nelson Teut
Mr. Tamina Findeng
Mr. Moses Nasing
Mr. Geno Yuwoc
Mr. James Jio
Mr. Obtus James
Mr. Robson Soseng
Mr. Tingke Sapenu
Mr. Danny Wande
Mr. Mike Barup
Mr. Dogem Mirande
Mr. Manrex Yasaue
Mr. Hemon Yangeng
Mr. Weo Bafinuoc
Mr. Mono Sem
Mr. Stanis Max

Kumbu/Keweng village
Gua/Teptep village
Mek/Nolum village
Yawan village
Worin village
Towet village
Towet village
Gomdan/Sapmanga village
Gogiok village
Kalaset village
Ronji/Yuong village
Bonkiman/Wandabong village
Bonea/Nanaya village
Koripon/Bungawat village
Nokopo/Nian village
Singorokai village
Ronji village



Right page:

Stream in YUS. Photo by Daniel Shewmaker.

Beautiful flower growing in Worin Village, YUS. Photo by Doug Bonham.



TKCP's Successes in 2017

2017 was an eventful year for YUS and the Tree Kangaroo Conservation Program!

Building upon TKCP's two decades of research to understand the ecology, behavior, and conservation status of the Matschie's tree kangaroo, TKCP Director Dr. Lisa Dabek and Research and Conservation Manager Daniel Solomon Okena partnered with Microsoft software engineer Doug Bonham to develop and deploy a new type of tree kangaroo collar equipped with GPS tracking and altitudinal sensors. The technologically-advanced collars have enabled TKCP to collect and analyze much more data on the ecology and behavior of tree kangaroos in the YUS Conservation Area. Additionally, TKCP has partnered with Dr. Falk Huettmann from the University of Alaska Fairbanks to conduct comprehensive analyses of distribution and abundance of the Matschie's tree kangaroo across the YUS landscape and across the entire geographic range of the species on the Huon Peninsula.

To further strengthen the management of the YUS Conservation Area, TKCP incorporated the use of Spatial Monitoring and

Reporting Tools (SMART) (smartconservationtools.org) into the YUS Conservation Area Ranger monthly patrols. The SMART system enhances the ability of TKCP and the YUS Conservation Area Management Committee (CAMC) to receive and analyze patrol data, and to develop data-driven management responses to mitigate conservation threats.

During 2017, YUS Conservation Coffee farmers sold more than 45 tons of their shade-grown, wildlife friendly coffee crop – nearly equal to their combined sales during the first six years of the initiative! The coffee sales generated an income of more than PGK255,000 (approx. US\$80,000) for families in YUS to support children's school fees, health expenses, and home improvements. YUS Coffee is available for purchase at Seattle's Caffe Vita (www.caffevita.com), Melbourne, Australia's Jasper Coffee (www.jaspercoffee.com), and at Woodland Park Zoo's ZooStores (zoostore.zoo.org). ■



Clockwise from left: Children in Yawan village. Photo by David Gillison. Nancy Philip, Village Birth Attendant (volunteer midwife) and Health Peer Educator, with her dog in Yawan village. Photo by David Gillison. Clouds moving up a valley in YUS. Photo by David Gillison.

Communities Uniting for a Sustainable Living Landscape

The Tree Kangaroo Conservation Program works together with local communities, responding holistically to the needs of wildlife, people, and the ecosystems on which they depend.

Together with the communities and landowners of YUS, TKCP developed five strategies to guide the efforts of TKCP and its partners to ensure the sustainable health and prosperity for the living YUS landscape including its biodiversity, people, and culture.



ONE: Managing the YUS Conservation Area

The YUS Conservation Area was created to protect wildlife and biodiversity. TKCP works with the PNG government and YUS community to support its effective management through YUS Conservation Ranger patrols, ecological monitoring, and mapping of the landscape. Local communities are engaged in the protection and management of the YUS Conservation Area.

TWO: Applying Our Research

Scientific research of species and ecosystems helps TKCP to better understand conservation threats and guides priorities in YUS. A broad range of research topics are investigated by TKCP, partners, and outside researchers. In addition to TKCP's ongoing studies of tree kangaroo ecology, research studies examine ecological and social questions to guide local initiatives and contribute to the global scientific knowledge of the species, ecosystems, and anthropology of YUS.

THREE: Sustainable Resource Management

The people of YUS depend upon their land and natural resources for food, water, shelter, and livelihoods. TKCP assists communities in land-use planning to ensure long-term sustainability and access to resources. Managing the responsible use of the forest products, wildlife, and water across the YUS landscape will ensure the communities' continued commitment to protecting the YUS Conservation Area.

FOUR: Supporting the YUS Communities

The people of YUS are an integral part of the living YUS landscape. TKCP works with communities to address their need for sustainable livelihoods, access to health, education, and skills training. In partnership with the government, businesses, and other NGOs. TKCP builds connections to provide YUS communities with alternative opportunities which build local resilience and reduce conservation threats.

FIVE: Operating the Tree Kangaroo Conservation Program

The protection of the YUS landscape relies on the effective management, expertise and local leadership of TKCP's efforts. TKCP is committed to building resources and staff capabilities in PNG to maintain long-term support for the landscape and people of YUS.





Managing the YUS Conservation Area

The YUS Conservation Area (CA) is managed in partnership among TKCP, the YUS community, and the PNG government. To ensure the effectiveness of the YUS CA, TKCP manages the YUS Conservation Ranger team and the Ecological Monitoring Program, conducts community awareness-raising and mapping, and facilitates the YUS Conservation Area Management Committee.

YUS Conservation Area Rangers

Established in 2012, the local YUS Conservation Area Ranger team is responsible for patrolling and monitoring wildlife in the YUS Conservation Area. Nominated by their communities and trained by TKCP, the YUS CA Rangers record the presence or absence of priority indicator animal species key to achieving conservation goals, raise community awareness regarding conservation in YUS, and check for potential violations of the bylaws governing the YUS Conservation Area. The 16-person team spends one week each month patrolling areas and conducting ecosystem and species monitoring within the YUS CA.



Throughout 2017, TKCP's Karau Kuna and Daniel Solomon Okena provided the YUS CA Ranger team with a series of trainings and field-based support in the use of Spatial Monitoring and Reporting Tools (SMART), a globally-used approach based on a set of common principles for the effective management of protected areas (<http://smartconservationtools.org>). TKCP equipped the YUS CA Rangers with Nautiz handheld field computers which are designed to support data collection using SMART software, tailored specifically to the monitoring protocols for the YUS Conservation Area. In comparison to the previous

paper-based system for data collection and transfer, data collected using the SMART devices can be transferred and consolidated electronically to substantially reduce the time required for analysis.

The integration of SMART methodology and tools into the YUS CA Ranger program enhances the ability of TKCP and the YUS Conservation Area Management Committee (CAMC) to receive and analyze data collected through the monthly Ranger patrols, allowing for more responsive, data-driven management decisions to mitigate conservation threats. Additionally, the data and analyses gathered through SMART will facilitate additional tracking of localized trends in the presence of key species to inform both YUS CA management and community decisions regarding their ward-level land-use plans. In 2018, a SMART specialist will visit TKCP to review the SMART database and monitoring protocols, providing training for the YUS CA Rangers, and advise Okena in the system's ongoing management and administration. The SMART methodology is being modeled by TKCP for potential use by PNG's Conservation and Environment Protection Authority (CEPA) in other protected areas throughout the country.



Left to right:

TKCP's Chris Max, Hemon Yangeng, and Stanis Max practice entering data into a SMART field computer at a training in Gogiok village. Photo by Daniel Solomon Okena, TKCP. YUS Ranger Geno Yuwoc (second from right) demonstrates the use of a SMART field computer during a training in Lae. Photo by Karau Kuna, TKCP. Field data collection for the YUS Ecological Monitoring Program. Photo by Daniel Solomon Okena, TKCP.

Governing the YUS Conservation Area

YUS CA BOUNDARY MAPPING AND CONSERVATION AREA AWARENESS

As of the end of 2017, TKCP's Mapping Officers Victor Eki and Matthew Tombe have mapped a total of 59,151 hectares of land pledged to the YUS Conservation Area. In addition, 809 hectares of reforestation zones have also been established in the process to make up for habitat loss and provide sustainable sources of wood for subsistence use. As a result of TKCP's successful Land-use Planning process and benefits received from participation in TKCP's community-based programs, landowners continue to

pledge land to the YUS CA to expand protection and improve ecosystem connectivity across the landscape.

Effective in 2018, Eki and Tombe were promoted from Mapping Officers to Conservation Officers. TKCP promoted long-time YUS Ranger James Jio from Uruwa Zone and hired Sanangke Yape from Yopno Zone as Mapping Officers to continue GPS mapping of pledged areas.

YUS CONSERVATION AREA MANAGEMENT COMMITTEE

As required by the PNG Conservation Areas Act, the YUS Conservation Area Management Committee represents all stakeholders in decision making for long-term management of the protected area. The committee's members include:

- Landowner representatives from the YUS Conservation Organization
- President of the Yus Local Level Government
- President of the Wasu Local Level Government
- Kabwum District Administrator
- Morobe Provincial Government representative
- Conservation and Environment Protection Authority (CEPA) representative (National Government)
- Program Manager of Tree Kangaroo Conservation Program

The YUS Conservation Area Management Committee (CAMC) is responsible for facilitating communication among the various stakeholders of the YUS Conservation Area, from the grassroots level to the national government's Ministerial level. The committee meets twice a year to provide strategic direction for and oversee management of the YUS Conservation Area.

In March, the YUS CAMC met in Lae to review proposed signage for demarcation and awareness-raising regarding YUS Conservation Area boundaries and bylaws, discuss the extent of landscape boundaries in the marine zone, review YUS CA Ranger patrol findings from 2015-2016, and receive updates on the progress of the pending Protected Areas Bill. The 2nd CAMC meeting for 2017, which was to be held in YUS in September, was cancelled due to scheduling conflicts among several Committee Members.

Through the five-year project, "Strengthening the Management Effectiveness of the National System of Protected Areas," the United Nations Development Program and PNG's Conservation and Environment Protection Authority conducted a Management Effectiveness Tracking Tool (METT) assessment of the YUS Conservation Area to identify management strengths and areas for improvement. TKCP and YUS received positive ratings overall, and will discuss its action plan further with YUS CAMC during its next meeting in 2018.

YUS Ecological Monitoring Program

The YUS Ecological Monitoring Program was first established in 2011. During 2016-2017, TKCP's Research and Monitoring Coordinator Daniel Solomon Okena led the second round of field data collection for the YUS Ecological Monitoring Program. The team gathered data regarding the status of priority indicator species including the Matschie's tree kangaroo and other macropod species, possum species, and dwarf cassowary for comparison with previous findings from 2011. Through Okena's fellowship with the Zoological Society of London's Evolutionarily Distinct and Globally Endangered (EDGE) program, TKCP incorporated monitoring of the critically-endangered long-beaked echidna (*Zaglossus bartoni*) into the YUS Ecological Monitoring Program. Okena surveyed areas within the monitoring transects for signs of the echidna's presence utilizing "nose pokes" left in the soil from the echidna's foraging activities. Like the Matschie's tree kangaroo, the echidna is extremely elusive and difficult to observe in the wild.

TKCP is collaborating with Thomas Luypaert, a graduate student in Tropical Biodiversity and Ecosystems at the University of Florence, Italy, to complete analyses of the Ecological Monitoring data for comparison with findings from 2011. Luypaert also supported TKCP in testing the effectiveness of alternative monitoring methods by piloting the use of camera traps to detect the presence of key species in YUS.

The Ecological Monitoring Program results will provide TKCP and the YUS community with valuable insight into the effectiveness of the YUS CA in protecting wildlife and serving as a wildlife bank to sustain local resource use.

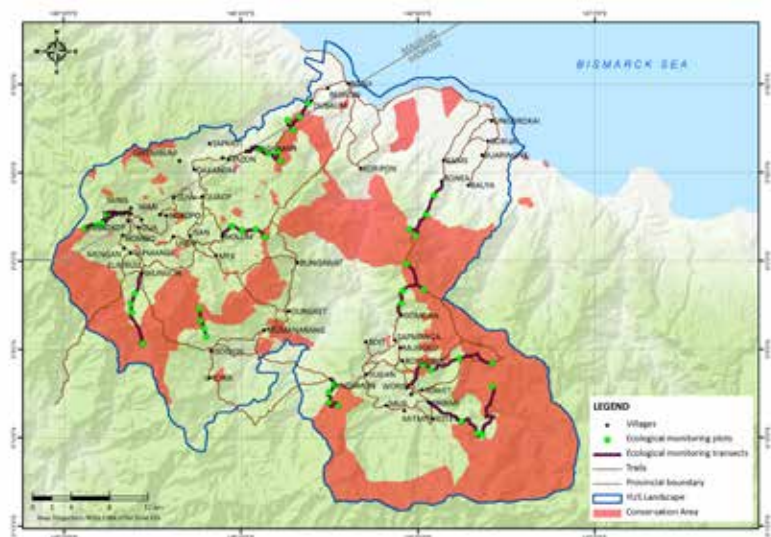


Matschie's tree kangaroo mother with joey in pouch is captured on a camera trap at night. Photo by Thomas Luypaert and TKCP.

TKCP's Daniel Solomon Okena trialed methods of monitoring the highly endangered long-beaked echidna into the YUS Ecological Monitoring Program, supported by his Fellowship with the Zoological Society of London's EDGE program. Photo by Daniel Solomon Okena.

A dwarf cassowary is captured on a camera trap in YUS. TKCP partnered with graduate student Thomas Luypaert to pilot alternative monitoring techniques in YUS. Photo by Thomas Luypaert and TKCP.

Thomas Luypaert (left), Daniel Solomon Okena (right), and TKCP's Ecological Monitoring field data collection team. Photo by TKCP.



Marine Ecosystem Protection

To support the continued expansion of YUS Conservation Area Ranger marine patrols and the integration of marine monitoring into the overall YUS Ecological Monitoring Program, Australia-based natural and cultural resource management specialists Anne O'Dea and Steve Winderlich with Windydeya Professional Services and Consultants (Australia) traveled to the coastal areas of YUS in February and October. Winderlich and O'Dea provided training for TKCP's two YUS Conservation Area Marine Rangers in monitoring methods, community awareness-raising, and the process for identification of sensitive sites. Based on findings from TKCP's marine evaluation in 2016, the consultants established and initiated periodic surveying of key species and habitats including nearshore reefs, seagrass, mangroves, dugongs and marine turtles. The surveys will be further incorporated into TKCP's monitoring processes during 2018. ■



📍 Ecological Monitoring transects and YUS Conservation Area. Map by Karau Kuna, TKCP. A seagrass bed habitat for endangered dugongs (*dugong dugon*) near Singorokai village. Photo by Steve Winderlich.

Buoys have been installed to demarcate protected reefs within the YUS Conservation Area. Photo by Steve Winderlich.

Seagrass identification training for marine monitoring in YUS. Photo by Steve Winderlich.



Applying Our Research

TKCP is committed to science-based conservation. TKCP works to advance scientific knowledge of Papua New Guinea's wildlife and rain forest habitat so that the YUS Conservation Area can be managed in an ecologically sound and sustainable manner. TKCP conducts research on tree kangaroo ecology, facilitates collaborative research partnerships, and promotes YUS as a site for environmental and social research.

Tree Kangaroo Ecological Research

Building on more than a decade of research on the feeding ecology, behavior, and habitat use of Matschie's tree kangaroos, TKCP Director Dr. Lisa Dabek and TKCP Research and Conservation Manager Daniel Solomon Okena collaborated with Microsoft engineer Doug Bonham to develop a new type of technologically advanced tracking collar capable of collecting previously unavailable information. Whereas TKCP's standard tracking collars utilized VHF radio frequencies requiring trackers to physically locate the collared animal and record its location, the new collars are equipped with GPS devices which automatically convey the animal's location via satellite despite the thick forest canopy.

As a result, a tree kangaroo's location and movement can be recorded much more frequently, accurately, and without human disturbance of the animal. Additionally, the new collars have sensitive altitudinal and motion sensors which record the animal's vertical movements throughout the day, providing valuable insight into its time budget and the frequency and amount of time spent at different levels of the trees as well as on the ground.

First initial testing of the collars was done on Elanna, one of Woodland Park Zoo's tree kangaroos, in collaboration with WPZ Animal Care staff in Seattle. Then, Dabek and Bonham traveled to TKCP's Wasaunon research camp in September



along with Okena and veterinarian Carol Esson to deploy the collars. Three tree kangaroos were fitted with the advanced GPS collars, and an additional two were fitted with standard VHF radio collars. Under Dr. Esson's care, she was also able to collect samples from the animals as part of the tree kangaroo health assessment. TKCP Research Assistant Nicholas Wari and lead tracker Stanley Gesang were stationed at the Wasaunon research camp to coordinate with the local research team to retrieve the data and monitor the collared tree kangaroos. The GPS collars were scheduled to be removed in April 2018, and will support the development of an improved 2nd generation collar.

Jonathan Byers also joined the research team in September to film the tree kangaroos and cloud forest to tell the story of TKCP. With the help of Byers and Pontecorvo Productions, TKCP released "A Life in the Clouds," a 10-minute film highlighting the YUS Conservation Area and tree kangaroo research efforts (<http://youtu.be/9cXdtS8qNnc>). Byers was also able to capture drone footage to use as part of mapping the forest. He is working on a master's thesis focused on tree kangaroo movement and forest structure.



Clockwise from top left:

TKCP's Nicholas Wari and Stanley Gesang download data from tree kangaroo GPS collars at Wasaunon research site. *Photo by Daniel Solomon Okena, TKCP.*

A tree kangaroo is released into a tree after being fitted with a tracking collar. *Photo by Lisa Dabek, TKCP.*

TKCP's Lisa Dabek (left) and Nicholas Wari (right) observe as field veterinarian Dr. Carol Esson (center) conducts a health assessment of a tree kangaroo at Wasaunon research camp. *Photo by Doug Bonham.*

TKCP research partners Doug Bonham, Jonathan Byers, Falk Huettmann, and Dr. Carol Esson discussing the capabilities of TKCP's next-generation tree kangaroo research collars. *Photo by Lisa Dabek, TKCP.*

Microsoft software engineer Doug Bonham with TKCP's Nicholas and David, preparing for the deployment of TKCP's new generation of tree kangaroo research collars. *Photo by Lisa Dabek, TKCP.*

Tree Kangaroo Distribution and Abundance

TKCP, its partners, the PNG Government, and the YUS communities are highly interested in determining an accurate, up-to-date analysis of the population and abundance of the Matschie's tree kangaroo in the YUS Conservation Area and across its range on the Huon Peninsula. Due to their elusive nature and the extremely rugged landscape, traditional counting methods are not suitable. TKCP was introduced to the innovative predictive modeling methods developed by Dr. Falk Huettmann, Associate Professor in Wildlife Ecology with the Institute of Arctic Biology at the University of Alaska Fairbanks, and the success of those models among a wide range of species

and challenging habitats. In 2017, TKCP has partnered with Huettmann to undertake a three-year study to conduct comprehensive analyses of distribution and abundance of the Matschie's tree kangaroo across the YUS landscape and the Huon Peninsula. Huettmann joined Dabek and team at TKCP's Wasaunon research camp in September to gather information and commence data collection. Following the visit, a preliminary GIS map was created with more than 100 data layers reflecting the consolidated results of a wide range of research factors. Huettmann will visit YUS again in 2018 to investigate further and gather additional data to inform the predictive analyses. ■



Matschie's tree kangaroo. Photo by Daniel Solomon Okena.

Page 19, top to bottom:

Jonathan Byers (left) films as Lisa Dabek, Daniel Solomon Okena (center), Falk Huettmann (right), and TKCP's field research team discuss the Matschie's tree kangaroo to be collared. Photo by Doug Bonham.

A drone takes off from Wasaunon research camp to film the YUS landscape and forest canopy. Photo by Lisa Dabek.

Field veterinarian Dr. Carol Esson preparing a tree kangaroo for a GPS collar. Photo by Doug Bonham.

TKCP's Stanley Gesang, Nicholas Wari, and Daniel Solomon Okena search for a signal from a GPS-collared tree kangaroo. Photo by Lisa Dabek.

Jonathan Byers demonstrates the use of an Unmanned Aerial Vehicle (drone), which he used to collect aerial images of the YUS forest canopy. Photo by Lisa Dabek, TKCP.





Sustainable Resource Management

Protecting the biodiversity and habitat of YUS requires coordinated commitment and action across the entire landscape, both in and around the YUS Conservation Area. To meet the needs of local communities, the natural resources and services provided by the environment beyond the protected area must be maintained for the benefit of current and future generations. TKCP facilitates the development of Land-use Plans and community-based monitoring plans to ensure long-term sustainability and access to resources.

Ward-level Land-use Planning and YUS Landscape Management

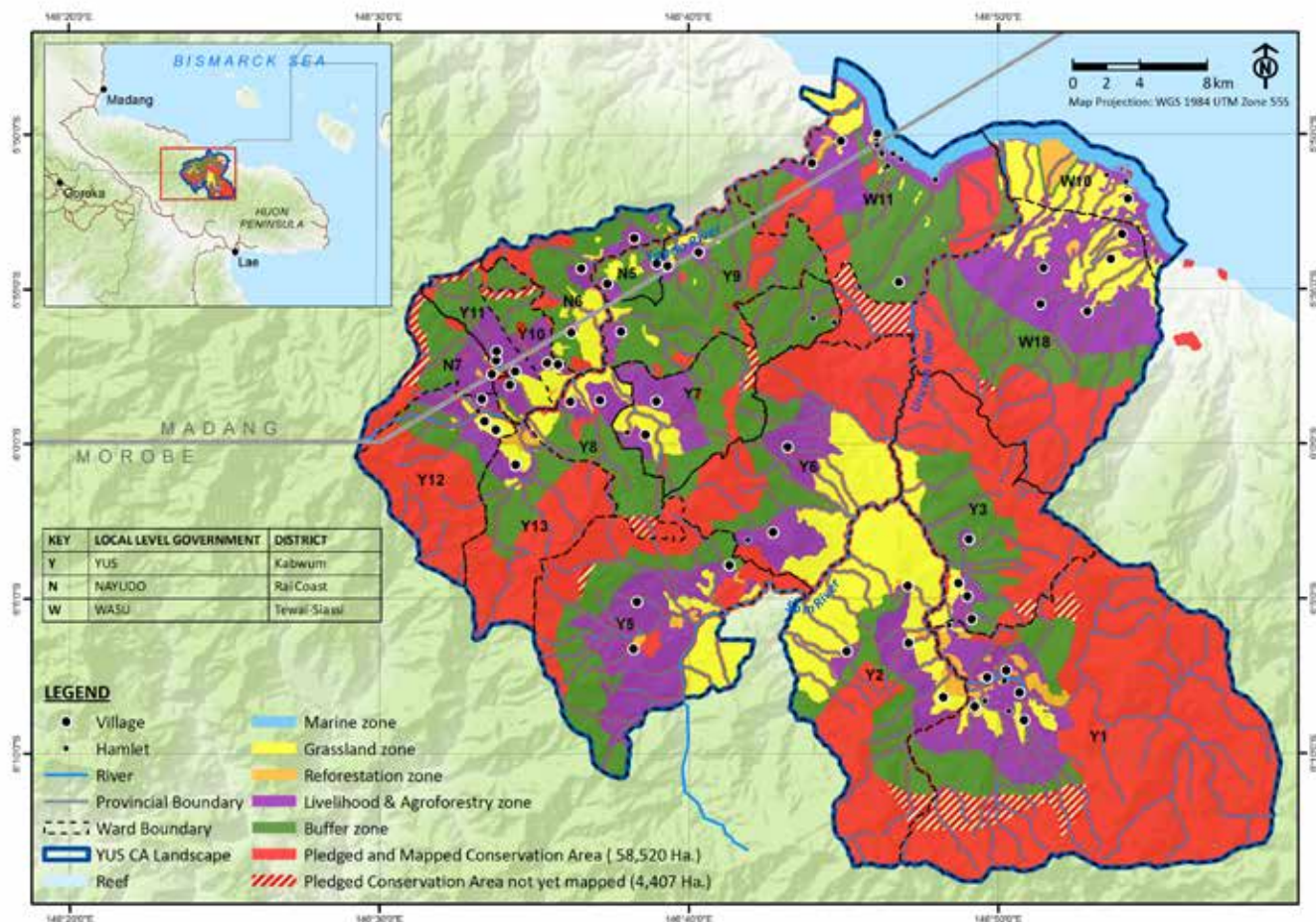
Since 2011, TKCP has worked with villages throughout YUS to develop Land-use Plans (LUP) which outline community priorities for conservation and development. The plans establish zoning maps to guide local resource management decisions, and describe specific community activities relating to local goals. TKCP's Land-use Planning process has been widely recognized in PNG as a model for engaging communities in conservation efforts. In fact, the National Government of Papua New Guinea has incorporated TKCP's LUP process into its Protected Areas Policy which guides the management of protected areas throughout the country. In accordance with this new policy, TKCP will collaborate with YUS landowners and the PNG government to re-gazette the YUS Conservation Area at a landscape level. The re-gazettal will effectively double the size of the YUS CA, incorporating the buffer zones, livelihood areas, and villages. The zoning maps and resource management decisions defined in the ward-level Land-use Plans will be further incorporated into the broader framework for management of the YUS CA.

Following the completion of LUP review and re-confirmation with all 18 wards across YUS during 2015-2016, TKCP Conservation Strategies Manager Karau Kuna produced LUP posters to prominently display the communities' collective plans and decisions regarding land-use and resource management during 2016-2020 under a grant from the

Whitley Fund for Nature. Notably, there were very few changes to increase village and livelihood zoning boundaries; most of the adjustments involved the expansion of no-take zones and reforestation areas. Additionally, after years of nonparticipation, Bugara village joined the YUS CA in 2017 by pledging land and reefs for protection. This is a positive indication that the LUPs have improved peoples' understanding and perceptions of sustainable resource use.

In addition to strengthening adherence to the agreed plans, the LUPs significantly enhance the communities' ability to advocate for public funding and support according to local needs. Funding from the Provincial government is allocated according to Ward and Local Level Government (LLG) plans. A booklet containing all 18 updated ward-level LUPs will be shared with the Yus LLG and other YUS CAMC members in 2018.

To support communities in managing the implementation of their 2016-2020 LUPs and to better understand the impact of local conservation efforts, TKCP is facilitating the development of community-based monitoring plans. Kuna introduced participants to project management concepts and tools, and facilitated community members in developing key monitoring questions relating to their conservation and development priorities. TKCP will pilot the implementation of the community-based LUP monitoring plans in 2018 in preparation for its roll-out among all wards in YUS.



In the past, we used to travel long distances for find animals in the forest. Sometimes we had to hunt in areas belonging to other clans without their consent because we could not find enough in our traditional land to feed our families. With the creation of the YUS Conservation Area ‘wildlife bank’ and the support for conservation throughout YUS, I am seeing a huge change. I am seeing animals just on the edges of the villages, the gardens and even within village boundaries. I now serve as an advocate in the communities to share about the importance of conservation. More and more YUS villages are pledging areas of their customary land for conservation so that they can contribute and benefit from these changes as well.

Matthew Tombe – TKCP Conservation Officer



Clockwise from top left:

KCP's Karau Kuna facilitates a Land-use Planning workshop in the coastal zone of YUS. Photo by TKCP.

YUS community members review their Ward's Land-use Plan and discuss their area's conservation priorities. Photo by Karau Kuna, TKCP.

Mosaic of ward-level Land-use Plans comprise a fully zoned map of the YUS landscape. Map by Karau Kuna, TKCP.

Land-use Plan review workshop participants identify their ward's priorities for conservation and development, and reflect on their progress to date. Photo by Karau Kuna, TKCP.



There has been a lot happening within the YUS Conservation Area and tree kangaroos are recovering in numbers, since declaring the area as a conservation area restricted from hunting. Activities and signs of cuscus and birds are everywhere as they continue to increase in numbers as well. Plenty of recovery and regrowth is taking place and shaping the forest from what it was like before – the change is noticeable, and improvements are moving closer and closer to the village.

Bob Sapa – YUS landowner, Weskokop village



Left to right:

The Yawan community performs a sing sing to welcome visitors for the Participatory 3-D Mapping workshop. Photo by Karau Kuna, TKCP.

The 3-dimensional topographical map of ward I is constructed by community members in Yawan village. Photo by Karau Kuna, TKCP.

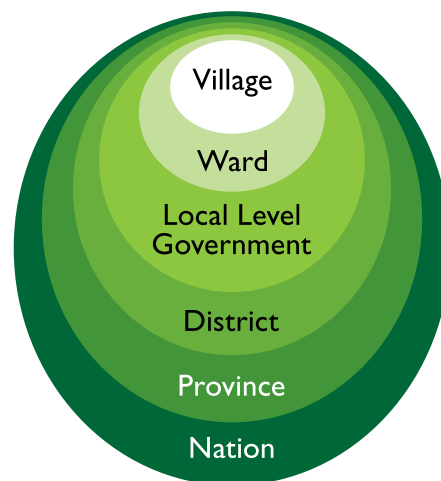
Left: The 3-dimensional map is painted to reflect the land-use zones as defined in each ward's land-use plan, designating protected areas and indicating the boundaries for agricultural and buffer zones. Photo by Karau Kuna, TKCP.

Community members and 3D Modeling workshop participants pose proudly with the map they created to help in managing their ward's land and resources. Photo by Karau Kuna, TKCP.

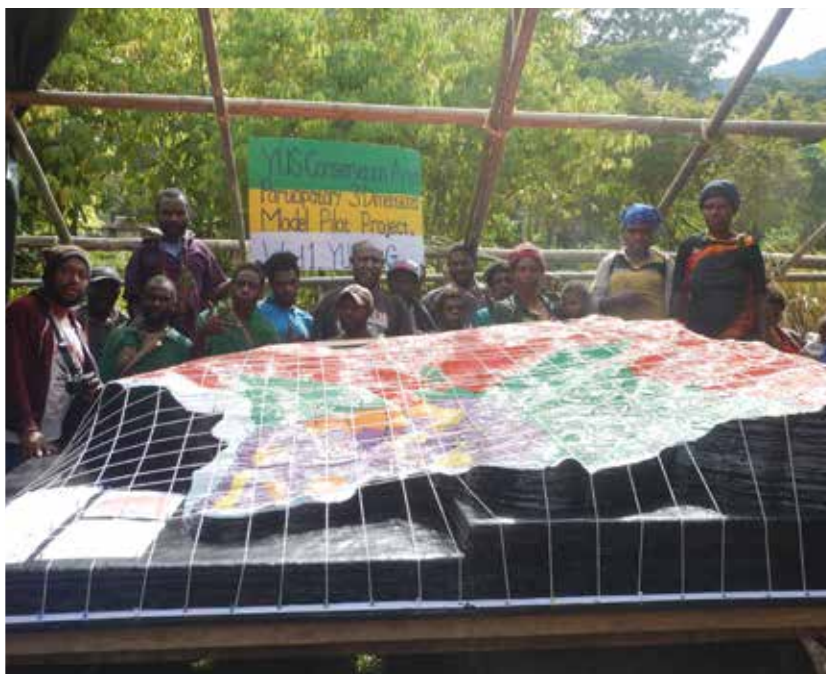
Participatory 3D Modeling

TKCP recognizes the importance of capturing the various perspectives and priorities of the many groups within the YUS community regarding their needs and uses of natural resources. By understanding those considerations, TKCP and community leaders are better equipped to mobilize local efforts in support of sustainable resource management. Building upon the progress made in developing ward-level LUPs across YUS, TKCP collaborated with PNG-based Partners With Melanesians (PWM) to pilot the use of Participatory Three-Dimensional Modeling. In November, Kuna co-facilitated a two-week community workshop together in Yawan village with PWM's 3D Modeling specialists Kenn Mondiai and Patrick Vuet to create a large 3D relief model of the entire Ward 1 landscape. The model was constructed with layered cardboard and painted to reflect the ward's LUP zoning map, with various community representatives invited to share their perspectives and demarcate the ways in which they use their land and resources. The 3D Modeling process was very well received by participants and community members, and the relief model already serves as a valuable resource for discussions regarding local resource management decisions. TKCP intends to replicate the process throughout YUS, as the workshops have proven to be effective in soliciting input and perspectives from a broad range of community groups and the relief maps strengthen the community's ability to manage local land use. 3D maps are a major step forward in visualizing land-use planning and promoting pride and ownership as conservation stewards. ■

STRUCTURE OF GOVERNANCE IN PAPUA NEW GUINEA



The multiple levels of governance in PNG. TKCP works with all levels for the management and sustainability of the YUS Conservation Area.





Supporting the YUS Communities

To ensure the long-term sustainability of the YUS Conservation Area, local communities must participate in and benefit from its protection. To encourage community engagement and sustainable development, TKCP builds partnerships to address local needs for livelihoods, health, education, and skills training. These partnerships provide increased access to essential services, access to markets and technical knowledge, and support for local leadership of conservation efforts.

Livelihoods

YUS CONSERVATION COFFEE

2017 was a year of many major milestones for TKCP's YUS Conservation Coffee initiative. Nearly all villages in the coffee-producing areas of YUS are now participating and selling under the banner of conservation, with the remaining villages actively rehabilitating their coffee trees in order to join in the near future. More than 600 coffee farming families from Yopno, Uruwa, and Som Zones contributed coffee for export in 2017, leading to the sale of more than 45 tons of parchment coffee. With a gross revenue of more than PGK386,000 (approximately US\$120,000), YUS Conservation Coffee farmers collectively earned over PGK255,000 (approximately US\$80,000) in profit. This profit represents a substantial injection of cash into the local YUS economy, enabling families to pay for their children's school fees, cover health expenses, make basic home improvements, establish savings, and reinvest in their livelihoods. YUS Conservation Coffee is now sold to Seattle's Caffe Vita in the United States and now also to Jasper

Coffee in Melbourne, Australia. Both buyers are committed to responsible, farm-direct sourcing and place great value on the commitment the YUS communities have made to conservation. Caffe Vita invested in the YUS Conservation Coffee project since its inception.

With the departure of Livelihoods and Community Services Manager Benjamin Sipa in April to pursue public office, TKCP contracted Karl Aglai to facilitate the 2017 export of YUS Conservation Coffee and support the initiative's continued development. Formerly an extension officer with PNG's Coffee Industry Corporation (CIC), Aglai has been providing technical and logistical assistance for YUS farmers since the project's early years. In preparation for the 2017 export, TKCP's WPZ-based Program Manager Trevor Holbrook visited YUS with MTC International Coffee Group's Head of Buying & Supply Chain Development,





Clockwise from top left:

YUS Conservation Coffee cherries awaiting harvest. Photo by TKCP.

Wet coffee beans in a bilum, ready to be dried. Photo by Mikal Nolan, TKCP.

Coffee farmer Alphonso in Sapmanga village turning his beans as they dry in the sun. Photo by Lisa Dabek, TKCP.

Coffee cherries are hand-picked for quality by YUS farming families and carried in bilum bags to be processed.

Photo by Mikal Nolan, TKCP.

Coffee from individual farmer groups is sampled for quality analysis at New Guinea Highlands Coffee Exports in Goroka. Photo by Trevor Holbrook, TKCP.

YUS coffee farmers in Keweng village admire Jasper Coffee's "Kopi YUS" packaging, which highlights the coffee's impact for people and nature in YUS. Photo by Trevor Holbrook, TKCP.

Caffe Vita coffee bag sold in the U.S. Photo credit Caffe Vita.



Daniel Shewmaker, Holbrook, Shewmaker, and Aglai visited 12 villages in the Som and Yopno Zones, accompanied by TKCP Conservation Officer and interim President of the YUS Conservation Coffee and Cocoa Cooperative Namo Yaoro. Shewmaker and Aglai provided valuable guidance and recommendations for farmers regarding coffee husbandry, garden management, and quality control including drying and storage processes. Holbrook and Yaoro shared and solicited feedback regarding the continued development of the YUS Cooperative, and discussed TKCP's plans for streamlining the management of coffee production, transport, and farmer payments.

With the rapid growth in production and sales of YUS Conservation Coffee – from 3 tons in 2014 to 45 tons in 2017 – TKCP has recognized the need to establish record-keeping systems and logistical solutions capable of managing larger production volumes supplied by farmers across more than 25 villages. Holbrook, Aglai, and Yaoro redesigned the record-keeping systems used by TKCP and the YUS Coffee inspectors, incorporating duplication and reconciliation at several key points including at the village, airstrip, and mill. Additionally, in collaboration with CIC and the Morobe Government Provincial Services Improvement Program's freight subsidy program, TKCP and Shewmaker redesigned arrangements for transporting coffee from YUS to New Guinea Highlands Coffee Exports mill in Goroka. Prior to 2017, coffee was flown intermittently from YUS to Lae and transferred to Goroka in small lots. Under the new arrangement, all YUS Conservation Coffee is consolidated and transported via charter planes from YUS airstrips and transported immediately to Goroka in bulk using CIC container trucks. The additional cost of charter flights is offset by the Morobe Provincial Government's freight subsidy program, and the resulting arrangement is capable of supporting the continued growth of the YUS Conservation Coffee initiative.



CONSERVATION COCOA

Through a partnership with PNG's Queen Emma Chocolate Company (a subsidiary of Paradise Foods), YUS Conservation Cocoa continues to be purchased directly from farmers in the low-lying coastal areas of YUS. Queen Emma produces and sells the chocolate as a premium, single-origin bar labelled "YUS Kakao." With the company's recent expansion and its completion of a larger production facility, YUS Kakao is available through multiple outlets across PNG including the Port Moresby airport and grocery outlets in Lae and Port Moresby.

In 2018, TKCP will engage a cocoa specialist familiar with the standards, regulations, and market dynamics for the production and sale of cocoa in PNG. The specialist will conduct a broad assessment and analysis of the conditions in YUS regarding cocoa production, quality management, and sales to guide the development of a strategic project design aimed at increasing access to specialty markets for YUS Conservation Cocoa.



YUS CONSERVATION COFFEE AND COCOA COOPERATIVE

The YUS Conservation Coffee and Cocoa Cooperative received its certificate of incorporation from the Morobe Provincial Division of Commerce in early 2017, formally establishing its role in representing the interests of more than 600 farming families in YUS. An interim management committee has been nominated to oversee the continued development and operationalization of the Cooperative, ultimately resulting in its independent management of the coffee business on behalf of its member farmers. To support the Cooperative's organizational development, TKCP contracted Anand Aithal, a specialist with extensive experience in establishing agricultural cooperatives. During 2017-2018, Aithal is supporting the new Cooperative in formulating its constitution, structure, membership criteria, and plans for business operations and financial management. Aithal accompanied Aglai to Sapmanga village in September to meet with cooperative members in order to solicit information and recommendations, and to outline his plans for the year. Aithal will visit YUS several times throughout the next year in preparation for the Cooperative's elections in September 2018.



Left page:

Mr. Mangkera of Dungket village inspects his coffee as it dries. *Photo by Daniel Shewmaker.*

MTC International Coffee Group's Daniel Shewmaker inspects coffee beans for quality and moisture content during his visit to YUS. *Photo by Trevor Holbrook, TKCP.*

YUS Conservation Coffee waits at an airstrip. While the cost of transport from YUS is a major barrier, the high quality and conservation impact of YUS Conservation Coffee still earns farmers a significant premium over standard local rates in PNG. *Photo by Mikal Nolan, TKCP.*

Right page:

Cocoa pods grow at lower elevations in YUS, primarily near the coastal villages. *Photo by TKCP.*

Queen Emma Chocolate Company (a subsidiary of Paradise Foods) produces and sells in PNG a premium single-origin chocolate bar using YUS Conservation Cocoa. *Photo credit: Queen Emma Chocolate Company.*



Healthy Communities

HEALTHY VILLAGE, HEALTHY FOREST

In early 2017, TKCP completed the analysis of its comprehensive YUS health baseline survey which was carried out in 2016, gathering more than 540 responses from community members, Community Health Workers, Village Birth Attendants (VBAs; volunteer midwives), and other stakeholders. The survey, designed in accordance with the Population-Health-Environment model, sought to determine the knowledge, attitudes, and practices prevalent throughout YUS. The analysis identifies a broad range of issues and needs in terms of health education and access, which will inform the continued development of TKCP's health strategy and partnerships.

In July, TKCP welcomed Francisca Yagama to take leadership of the program's health-focused initiatives in her new role as Healthy Community Coordinator. Francisca brings more than 12 years of experience developing and managing community-based health projects including Maternal, Newborn, and Child Health and Nutrition (MNCHN) and a strong commitment

to addressing the health needs of remote communities. Additionally, she graduated as one of Morobe Province's four trainers on its Village Health Volunteer (VHV) module under the National Department of Health.

In order to solicit additional guidance and recommendations regarding its EcoHealth approach, TKCP invited Dr. Christopher Golden, Research Scientist with Harvard University's Department of Environmental Health and



Clockwise from top left:

YUS Peer Educators, Village Birth Attendants (volunteer midwives), and Community Health Workers attend a training facilitated by TKCP's Francisca Yagama (front row, far left). *Photo by TKCP.*

TKCP's Francisca Yagama shares information about hygiene and healthy behaviors with YUS Peer Educators during a workshop in Sapmanga village. *Photo by Lisa Dabek, TKCP.*

Village birth attendants (volunteer midwives) join a Healthy Village, Healthy Forest training in Tapmange/Keweng 2 village to learn about topics including prenatal care and childbirth. *Photo by TKCP.*

Community Health Worker Hesing Wayain assists in a Village Birth Attendant training session with TKCP's Francisca Yagama. *Photo by Lisa Dabek, TKCP.*

Children learn the importance of regular hand-washing at a demonstration station equipped by TKCP. *Photo by Francisca Yagama, TKCP.*



Associate Director of the Planetary Health Alliance, to visit YUS. Yagama and TKCP's Mikal Nolan accompanied Golden on a trek from Gogjok to Tepetep, visiting Dunket, Isan, and other villages along the way. Golden and Yagama interviewed community members and inquired about the condition of local health facilities throughout the journey, and expressed major concern regarding the inaccessibility and lack of staffing and resources at the village health clinics. Golden provided TKCP with valuable recommendations for strategizing and prioritizing its response to the vast health needs of the YUS community, noting opportunities to improve health-seeking behaviors, hygiene practices, nutrition, and ante- and post-natal care.

Yagama spoke with VBAs and YUS Peer Educators during the trek, noting a strong desire among women, in particular,

for increased access to family planning resources. While she was highly impressed and humbled by the dedication and care demonstrated by the VBAs, Yagama expressed concern regarding the limited supplies and the conditions in which most women deliver babies. These observations and recommendations will be incorporated into TKCP's health training response, volunteer physician visits, and efforts to form partnerships providing health assistance for YUS.

In September and October, Yagama organized meetings with VBAs and YUS Peer Educators from Som, Uruwa, and Yopno Zones to discuss and assess current healthcare practices. Birthing kits were used as tools for short-term training surrounding early newborn childcare practices, and an emphasis was placed on the need for both a clean and safe space for childbirth as well as the importance of ante-natal care. Attendees noted their appreciation for the meeting, and enjoyed the opportunity to share, learn, and collaborate between the VBAs and YUS Peer Educators.

TKCP also made great progress in establishing partnerships with health-focused organizations in PNG. Recognizing that the health needs in YUS far exceed TKCP's capacity and expertise, these partnerships connect the YUS communities with a broader range of knowledge, resources, services, and support. Yagama developed and strengthened the following key partnerships developed and strengthened during 2017:

- Morobe Provincial Health Department
- Susu Mamas International
- PNG Women in Agriculture
- PNG Cancer Relief Society
- World Vision PNG
- Colgate-Palmolive

TKCP will continue to expand these partnerships in 2018. In order to align TKCP's EcoHealth approach and health-focused initiatives in YUS with the PNG Government's plans, Yagama will collaborate with the National Department of Health to incorporate its "Healthy Island Concept" which aims to empower and equip individuals, families, and communities to take ownership of their own health and to seek community support for health improvement for humans and the environment.

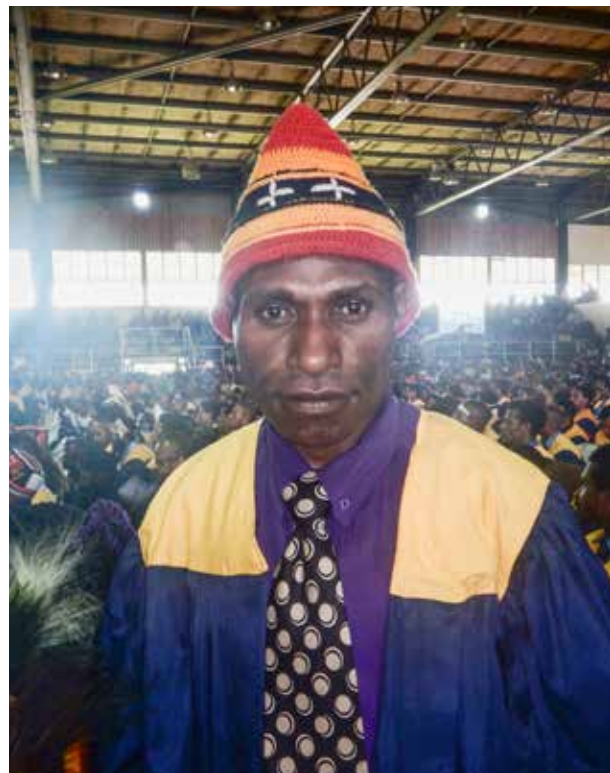


Education and Capacity-Building

BALOB TEACHER'S COLLEGE SCHOLARSHIP FOR YUS STUDENTS

For more than 15 years, TKCP has provided financial support for successful student candidates from YUS seeking teaching certificates through Balob Teacher's College in Lae. Originally established in partnership among TKCP, Yus LLG, and Balob Teacher's College, the program was created in response to an alarming shortage of teachers in YUS which had forced the closure of many village primary schools. Due to the success of the program in supporting YUS students in earning teaching certificates—and with the commitment of Yus LLG, Kabwum District, and Morobe Provincial governments—primary schools throughout YUS have been staffed and reopened, providing children in YUS with greater access to educational opportunities. In August, TKCP and Balob Teacher's College renewed their Memorandum of Understanding to ensure the program's continuation for another 10 years. In addition to the financial scholarship provided through TKCP, the agreement also provides several dedicated enrollment allocations for self-funded students from YUS.

Since 2002 TKCP's teacher scholarship program has helped 33 students graduate as qualified teachers, who return to fill vacant teacher postings and promote environmental education at one of the 16 schools in YUS. Mr. Wycliffe A. Muprie from Mangan village successfully completed the three-year program in 2017 and has been assigned to teach at Ozusage Primary School in YUS. Three new YUS students have been accepted into the Balob Teacher's College three-year program in 2017.



Left page, top to bottom:

TKCP's Francisca Yagama highlights the importance of oral hygiene. In collaboration with Colgate-Palmolive PNG, TKCP distributed hygiene kits through its YUS Peer Educator network. Photo by TKCP.

TKCP collaborated with PNG Cancer Relief Society to raise awareness in YUS of the risk factors, symptoms, and preventative measures regarding common types of cancer. Photo by Francisca Yagama, TKCP.

Right page, top to bottom:

Balob Teacher's College Scholarship recipient Wycliffe Muprie attends his graduation from the three-year certificate program. Photo by Gibson Gala, TKCP.

Posters hang in a classroom in Worin village, YUS. Photo by Doug Bonham.



Clockwise from top left:

Windydea's Steve Winderlich discusses one of the YUS Junior Ranger Program's learning modules with volunteer Junior Ranger teachers. *Photo by Gibson Gala, TKCP.*

Volunteer YUS Junior Ranger Program teachers and community members learn how to play the TKCP Card Game, designed specifically for the YUS Junior Ranger Program. *Photo by Gibson Gala, TKCP.*

Children and youth reading Sy Montgomery's "Quest for the Tree Kangaroo" book as part of the YUS Junior Ranger Program. *Photo by Gibson Gala, TKCP.*

TKCP's Gibson Gala leads a training session for volunteer YUS Junior Ranger Program teachers. *Photo by TKCP.*

From left: Windydea's Anne O'Dea and Steve Winderlich with TKCP's Gibson Gala. *Photo by TKCP.*

Right page:

A volunteer YUS Junior Ranger Program teacher facilitates a lesson for pre-primary aged Junior Rangers. *Photo by Steve Winderlich.*

A volunteer YUS Junior Ranger Program teacher leads primary-aged Junior Rangers in species identification and data collection. *Photo by Steve Winderlich.*





YUS JUNIOR RANGERS

TKCP's Junior Ranger Program seeks to support positive youth development and conservation leadership across the YUS landscape by equipping community members with the knowledge and skills to serve as stewards of the YUS Conservation Area. The initiative aims to inspire leadership and instill an appreciation for the environment among youth in YUS, who will become the future customary landowners and stewards of their landscape.

In collaboration with environmental education specialists Anne O'Dea and Steve Winderlich (Windydea Consultants, Australia), TKCP began piloting the YUS Junior Ranger Program for post-primary aged youth (ages 13-17) in Weskokop and Yawan villages. Winderlich, O'Dea, and TKCP's Education and Leadership Coordinator, Gibson Gala, trained community volunteers to serve as Junior Ranger Program facilitators. The volunteers were familiarized with the curriculum and key messages regarding community stewardship and conservation management practices. In addition to the progress in piloting the post-primary program, Gala consulted with communities in Yawan and Teptep villages regarding the development of the primary-level (ages 7-12) program. Winderlich and O'Dea visited the coastal village of Singorokai to explore interest and priorities regarding youth leadership and stewardship in order to assess opportunities for introducing the Junior Ranger Program in the area. During 2017, a total of 110 community volunteers were trained to facilitate Junior Ranger Program activities. The first cadre of pre-primary (ages 3-6) Junior Rangers graduated from the program in Teptep and Weskokop villages, receiving certificates and preparing to transition into the primary-level program in the upcoming year.

During his visits to observe and support the volunteer Junior Ranger Program facilitators, Gala noted the community's eagerness in taking ownership of the program as well as their excitement about the program's benefits for the younger generation. Community elders took pride in

making presentations and participating in some of the sessions. The lesson, "Kalsa – Pasin Bilong Yumi" (Culture – Our Way of Life) provided the elders with an opportunity to share their views on the effects of globalization on their culture and environment, and expressed the importance for the next generation to protect and celebrate the YUS culture. Through the lesson, participants also learned more about the connection between the YUS environment and culture, and its significance to the traditional songs, dramas, and dances they have learned from their parents.

As a result of the YUS Junior Ranger Program, I am already noticing exciting changes in the community. Prior to the program, motivation was an issue for some village youth who did not feel respected or appreciated and were therefore not involved in community efforts. But, I can see that this attitude is beginning to change, and young people are beginning to realize their role in the community as future leaders. Likewise, the broader community has shown their appreciation for youth interest in upholding cultural values in connection with the YUS environment.

*Gibson Gala – TKCP Education
and Leadership Coordinator*

Operating TKCP

Long-term sustainability of the YUS landscape ultimately belongs to the local communities and the government of Papua New Guinea. To support this, TKCP builds local capacities for the leadership and management of conservation efforts. The program serves as a model for community-based conservation, with our approaches and lessons shared for the benefit of local institutions, partners, and the practice of conservation.

TKCP Management and Staff

2017 was a year of change for the TKCP team, as we welcomed several new staff, promoted team members, and bid farewell to others as they pursued new opportunities.

- Gibson Gala joined TKCP as its Education and Leadership Coordinator, overseeing the continued development of the YUS Junior Ranger Program and facilitating TKCP's Balob Teachers College Scholarship for YUS Students.
- Francisca Yagama joined the team as TKCP's Healthy Community Coordinator, and will lead in establishing partnerships and implementing an EcoHealth approach supporting the health of people, wildlife, and the environment in YUS.
- Nadine Paira joined TKCP as its Administrative Coordinator, responsible for office and program administration including continuous improvement to the organization's systems and procedures.
- TKCP hired Research Assistant Nicholas Wari to focus full time on tree kangaroo research and to coordinate the research team at the Wasaunon field site.
- TKCP contracted Olivia Kuringi to provide bookkeeping services and support the organization's financial management systems in collaboration with the Lae accounting firm Kapi & Clarke.
- TKCP contracted Karl Aglai to provide operational and logistical support for the export of YUS Conservation Coffee and to facilitate the program's capacity-building efforts for the YUS Cooperative.
- Daniel Solomon Okena was promoted to Research and Conservation Manager, expanding his areas of responsibility in overseeing TKCP's research and ecological monitoring programs and assuming leadership of the YUS Conservation Area Ranger program and supervision of Conservation Officers.





- Mapping Officers Victor Eki and Matthew Tombe were promoted to Conservation Officers, responsible for community liaison and program coordination in upper Uruwa and lower Yopno Zones, respectively.
- Timmy Sowang, former YUS CO President and long-time advocate for conservation in YUS, was hired as Conservation Officer for lower Uruwa Zone.
- Conservation Officer Dono Ogate assumed a new role as Coordinator for the YUS Conservation Organization, providing support for its upcoming elections and fostering community engagement in its local conservation initiatives.
- Livelihoods and Community Services Manager Benjamin Sipa left TKCP to pursue public office in PNG's 2017 elections.
- After six years with TKCP, Mikal Nolan left Papua New Guinea in October to pursue travel and further education.
- Consultant Steve Winderlich provided valuable support and management oversight to the team during his time as interim manager, and Rick Passaro assumed leadership as Program Manager in early 2018.

The entire TKCP team is thrilled to welcome the new expertise, experiences, and perspectives brought by its new staff, and wishes its outgoing team members all the best in their future endeavors.

Professional and Organizational Development

TKCP's local non-governmental organization, TKCP-PNG, continues to assume greater responsibility for the management of the program in PNG. While a substantial portion of TKCP's program funding for PNG is still received and managed through Woodland Park Zoo, TKCP-PNG received direct grant funding for several projects implemented during 2017. WPZ-based Program Manager Trevor Holbrook continued to provide guidance and project management capacity-building for the staff responsible for those projects, resulting in successful delivery and compliance. TKCP completed implementation of its first direct grant, from the UNDP-GEF Small Grants Programme, focusing on marine protected area management and coastal livelihoods. In addition, TKCP-PNG managed the implementation of projects funded by the National Geographic Foundation for Science and Exploration - Asia, Whitley Fund for Nature, Zoological Society of London's Evolutionarily Distinct and Globally Endangered (EDGE) Fellowship grant, and Morobe Provincial Administration.

With the support of Holbrook, Woodland Park Zoo Finance Director Valerie Krueger, and accounting firm Kapi & Clarke, TKCP conducted a thorough review of its financial management systems, policies, and procedures in 2017. Based on the review findings, TKCP enlisted Kapi & Clarke to facilitate the updating and development of the organization's Financial Policies and Procedures Manual. The updated policies ensure TKCP-PNG's comprehensive control and oversight of all accounts, including effective accounting procedures for management



Clockwise from bottom left:

TKCP's Dono Ogate (left) and Lisa Dabek. *Photo by David Gillison.*

The Tree Kangaroo Conservation Program team. *Photo by TKCP.*

Steve Winderlich kindly served as TKCP's interim program manager prior to Rick Passaro's arrival in PNG. The team is grateful for his leadership and support during the transition. *Photo by TKCP.*

Tamalis Akus, National Coordinator for the United Nations Development Program's GEF Small Grants Program, visited YUS with TKCP to monitor the progress of the YUS Conservation Organization's nursery and reforestation project. *Photo by TKCP.*



Top to bottom, left to right:

TKCP's Daniel Solomon Okena and Mikal Nolan speak with attendees at the Lae Rainforest Habitat's World Environment Day event about the importance of conservation. *Photo by TKCP.*

Visitors to the Lae Rainforest Habitat during its World Environment Day event on June 5th. *Photo by TKCP.*

A woman carries firewood and poses for photographer David Gillison's "Voices of YUS" book project. *Photo by David Gillison.*

Kit Finlay shows portraits to community members in YUS, part of photographer David Gillison's "Voices of YUS" book project. *Photo by David Gillison.*

Photographer David Gillison captures a portrait of Nancy Philip. Gillison and his colleague, Kit Finlay, conducted interviews with dozens of YUS community members regarding their lives, families, and hopes for the culture and landscape of YUS. *Photo by Lisa Dabek, TKCP.*

of funds held on behalf of the YUS Conservation Coffee and Cocoa Cooperative. In addition to strengthening the financial management capacity of TKCP-PNG, this effort also aims to establish a straightforward accounting framework for eventual handover to the YUS Cooperative.

As part of his Evolutionarily Distinct and Globally Endangered (EDGE) Fellowship through the Zoological Society of London (ZSL), Daniel Solomon Okena met with the global cohort of EDGE Fellows in London, U.K. and participated in a four-

week training workshop. Okena presented his long-beaked echidna monitoring methods, progress, and initial findings to the group, receiving targeted guidance from ZSL scientist and the other Fellows. The lessons, feedback, and technical recommendations were of great help to Okena as he prepared to complete his analyses and wrap up his two-year EDGE Fellowship. ZSL has offered to continue providing technical support and guidance into 2018, and encouraged publication of Okena's research results.

Public Engagement and Outreach

TKCP actively pursues opportunities to advocate for environmental sustainability – in YUS, throughout PNG, and internationally. In June, TKCP celebrated World Environment Day together with U.S. Ambassador to Papua New Guinea Catherine Ebert-Gray at the Lae University of Technology's Rainforest Habitat. During the event, TKCP staff represented the program and spoke to attendees about the value of PNG's environment and biodiversity. Speaking to more than 200 youth, the U.S. Ambassador said, "We must find ways to live smarter and be more sustainable and focused on managing earth's biodiversity. We don't inherit our land; we borrow it from our children." Ambassador Ebert-Gray is highly supportive of TKCP's work and assists in promoting its contribution to national-level conservation efforts in PNG.

The unprecedented commitment of the YUS communities in pledging more than half of their customary land for the creation of the YUS Conservation Area is an outstanding example of community-based conservation, and the most impactful stories are those told directly from the YUS perspective. TKCP is eager to provide channels and amplify the voices of the YUS people, sharing their messages throughout PNG and across the

globe. In partnership with photographer and documentarian David Gillison, TKCP is collecting portraits and stories of impact from YUS community members to be published as a book, "Voices of YUS," in commemoration of their tremendous contribution to the health and resilience of YUS, Gillison and his colleague, Kit Finlay, photographed and interviewed dozens of people during their first trip to YUS in 2017, assisted by Timmy Sowang. They will return for a follow-up visit.

TKCP-PNG BOARD OF DIRECTORS

TKCP-PNG thanks its Board of Directors for their guidance throughout 2017:

- Dr. Lisa Dabek, *Woodland Park Zoo, Board Chair*
- Dr. Bruce Beehler, *Smithsonian Institution*
- Mr. Zachary Wells, *Conservation International*
- Ms. Mikal Nolan, *ex officio, TKCP-PNG*
- Mr. Francis Hurahura who rotated off of the Board in 2017
- Dr. Sangion Tiu, *Research and Conservation Foundation of PNG*, who joined the Board in 2017



Publications, Media and Storytelling

“A Life Among the Clouds”

<http://youtu.be/9cXdtS8qNnc>

In collaboration with wildlife film producer Joe Pontecorvo (Pontecorvo Production, LLC), TKCP released a 10-minute film highlighting YUS and the Tree Kangaroo Conservation Program's groundbreaking research efforts. The film provides excellent exposure for audiences to understand the value of PNG's biodiversity and serves as an excellent example for the development of future films regarding community-based conservation in PNG. TKCP and Pontecorvo will collect additional footage in 2018 to further highlight the essential conservation roles of the YUS communities as well as the importance of sustainable livelihoods for long-term conservation success.



YUS Junior Ranger Program

“The Littlest Things,” Wildlife Australia, Spring 2017

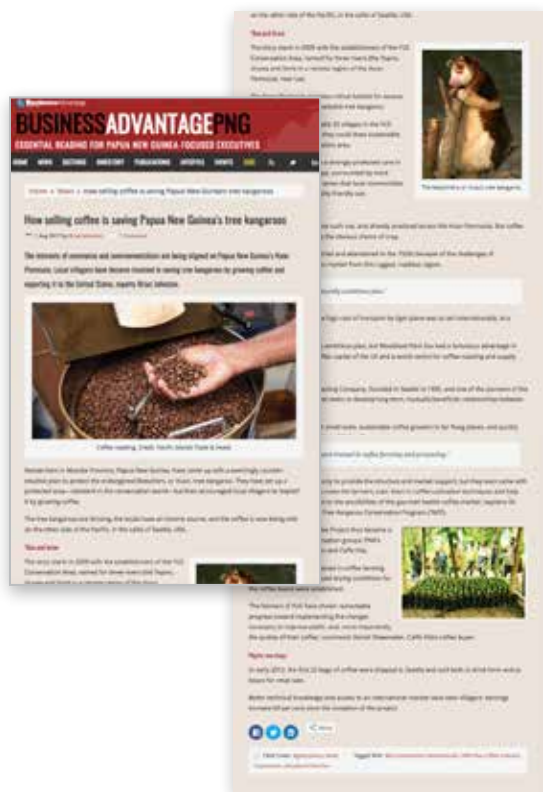
TKCP's partners Anne O'Dea and Steve Winderlich with Windydeea Professional Services & Consultants wrote an article for Wildlife Australia magazine about their experience collaborating with TKCP and the communities in YUS to develop the Junior Ranger Program.

YUS Conservation Coffee Initiative

Zoos Victoria's Zoo News Member Magazine, June and December 2017

Zoos Victoria in Melbourne, Australia promotes a holistic approach to conservation which benefits both wildlife and people. Since 2014, TKCP's partnership with Zoos Victoria has focused on the YUS Conservation Coffee initiative and its role in encouraging community conservation action. With the help of Conservation Partnership Manager Chris Banks and Zoos Victoria in connecting TKCP with Jasper Coffee, coffee lovers in Melbourne can now enjoy a cup of “Kopi YUS.” Coinciding with the opening of their new Kangaroo Country exhibit at Healesville Sanctuary, Zoos Victoria featured the YUS Conservation Coffee initiative in their June and December Zoo News member magazine.





How Selling Coffee is Saving Papua New Guinea's Tree Kangaroos

Business Advantage PNG, August 2017

The continued growth of the YUS Conservation Coffee initiative is catching the eye of the business community in PNG! Business Advantage PNG highlighted the story of TKCP's unique collaboration among a zoo, a coffee roasting company, and remote communities in the mountains of PNG which is producing a win-win-win for the people of YUS, specialty coffee drinkers, and Matschie's tree kangaroos. TKCP is excited to promote the growth of sustainably-produced specialty coffee and responsible sourcing practices throughout PNG's coffee industry.

www.businessadvantagepng.com/how-selling-coffee-is-saving-papua-new-guineas-tree-kangaroos

Tree Kangaroo Conservation Coffee: IUCN Mainstreaming Biodiversity Fact Sheet, 2017

The International Union for the Conservation of Nature (IUCN) featured TKCP's YUS Conservation Coffee initiative in its "Mainstreaming Biodiversity" fact sheet series which highlights notable conservation success stories. IUCN shares TKCP's view that long-term species protection requires innovative solutions which are sustainable and fair for all stakeholders. TKCP received a grant through IUCN's Save our Species program in 2012.



Support

TKCP depends on a global network of people and organizations to help us accomplish our work in YUS. Many of our donors are long-term partners and friends, and we sincerely thank you for your enduring support. Together, we have achieved a great deal of success over the years. We wish to thank our donors throughout the years and thank the following friends of TKCP for their financial and in-kind support in 2017.

\$100,000 and above

Global Environment Facility via UNDP

\$50,000 - \$99,999

Rainforest Trust

Whitley Fund for Nature

\$10,000 - \$49,999

Doug Bonham

Detroit Zoological Society

Morobe Provincial Administration

National Geographic Foundation for Science & Exploration – Asia

Microsoft Corporation

Robert Plotnick and Gay Jensen

San Diego Zoo Global

Shared Earth Foundation

John F. Swift

Taronga Conservation Society Australia

UNDP-GEF Small Grants Programme

YUS Local Level Government

Zoological Society of London EDGE Program

Zoos Victoria

\$5,000 - \$9,999

Beauval Nature

Columbus Zoo and Aquarium

Merrick and Lorraine Darley

Overton and Katharine Dennis Fund

Betsy Dennis

National Zoo and Aquarium, Australia

New England Biolabs Foundation

Cyndi Wolfe



\$1,000 - \$4,999

Jane Alexander (in memory of Edwin Sherin)

Arizona Center for Nature Conservation

The Boeing Company

Cleveland Zoological Society/Cleveland Zoo

Rob and Marti Liddell

Ruth and Terry Lipscomb

Anne Mize

Santa Fe College Foundation

Spessard Holland Elementary School

Mark Ziembecki's photography fundraiser

Up to \$999

Anonymous

Harriet Allen

Glen and Susan Beebe

John Brooks*

Caffe Vita Coffee Roasting Company

John Cibinic

Janice and William Fischel

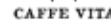
Greater Kansas City American Association of Zoo Keepers

The Hoffmann Family

Kaleb Klug

Sedgwick County Zoo

Suzanne Tomassi and Mike Kaputa



The YUS Conservation Endowment

TKCP and WPZ are proud to have established the YUS Conservation Endowment with Conservation International. The endowment provides annual funding support for the management and protection of the YUS CA in perpetuity. TKCP is grateful to all of our supporters who have helped us invest over \$2 million for the creation of the YUS Conservation Endowment. We thank the WPZ Board of Directors for managing the endowment. The investment continues to grow, and since 2013 has partially supported TKCP's annual operating expenses in Papua New Guinea.

\$100,000 and above

Anonymous
Conservation International
Estate of Lorene E. Currier

Sedgwick County Zoo
Maryanne Tagney and David T. Jones
Craig Tall
Gail Warren

Robert Bailey
Dominique Bideau
Richard Biribauer
Barbara Birney
The Boeing Company

BJ and Nayna Laird
Jacob Langley
Monica Lieb
Lincoln Children's Zoo
David and Lois Madsen

\$50,000 - \$99,999

Cammi Libby
Jeff Libby
George Meyer and Maria Semple
Robert Plotnick and Gay Jensen
John F. Swift
Swift Family Fund
Margie Wetherald, Len Barson and Robin Barson

\$1,000 - \$4,999

Anonymous
John and Andrea Adams
Adobe Systems, Inc.
Albuquerque BioPark
Jane Alexander and Edwin Sherin
Paul Balle
Anthony and Lillian Bay
Beauval Nature
Glen and Susan Beebe
Laura Bentley
David Brunelle
Mark Christiansen
Cleveland Zoological Society/
Cleveland Zoo
Michael and Lois Craig
Richard and Ginger Goldman
IBM Corporation
Sugi Kana
Glenn Kawasaki
Rob and Marti Liddell
Ruth and Terry Lipscomb
Bert and Susan Loosmore
Macbeth Family
Milwaukee County Zoo
Daniel and Meredith Morris
Greg Parrott
The Reeve Family
Patti Savoy
Adam and Catherine Schaeffer
Gary Smith and Kathleen Kemper
Lisa Tiedt
Utah's Hogle Zoo
Richard Wurdack and Gena Shurtleff
Lauren Wyckoff

Victor Bozzo
John Brooks*
Mylene Brooks
Barbara Christensen and Jeff Meyer
Leonard and Sharon Clemeson
Susan Cohen
Stephan Coonrod and Cheryl Clark
Gabriel Cronin
Kim Daly-Crews
Sophie Danforth
Brian Darley
James DeBonis
Daniel Dechert
Patrick Dessalle
Scott Dew and Colleen Hanlon
Tamara DiCaprio
Laurie Ann and C. Bert Dudley
George and Barbara Ermentrout
Donna and Steve Estes Antebi
Charles and Rose Ann Finkel
Janice and William Fischel
Harmony Frazier and Michael Breen
Deena Fuller
James Galbraith
Mary Gillmore
Madeleine Hagen
Edie and Brian Hall
Susan Hall
George and Carol Harell
Ryan and Heather Hawk
Nancy and Paul Hawkes
Sheila and Earl* Horowitz
Rochelle Howe and Jonathan Greene
Ken Katsumoto
Jenny Kim and Stephen Sun
Jeanne and Jason Kinnard
Amy Kitchener
Yoko Kobayashi
Nicole Labrecque

Lindsay Malone
Chris McFarlane and Arianne Foulks
Christine McKnight
Gary Mozel
Val and Laird Muraoka
Judy Nyman-Schaaf
Oaklawn Farm Zoo
Darrin OBrien
Anne Palaszewski
Christopher Pepin and Ken Miller
Craig Pepin
Mimi Polk Gitlin
Jeremy Potash
Helen Ralph
Helen Ramirez
Roberta Roberts
Rohrbach Family
Kimberly Sanders
Santa Fe College Foundation
Carol and Seymour Sarnoff
Benjamin Schweinhart
Ellen Scitutto
Patricia and Scott Sebelisky
Judie and Rick Steenberg
Anne Stein
Laurie Stewart
Jonathan and Tiffany Sweet
TCS & Starquest Expeditions
Steven Thornton and Nancy Ostrander
Suzanne Tomassi and Mike Kaputa
UBS Financial Services
Russ White
Kevin and Jo Wilhelm
Mike and Jan Williams
Ann P. Wyckoff
Christy Wyckoff
Stacie and Joseph Zane
Jacob Zimmerman

\$20,000 - \$49,999

Blumenthal-Edsforth Family
Columbus Zoo and Aquarium
Nina Dabek and Peggy Shannon
Microsoft Corporation
Roger Williams Park Zoo
Kevin M. Schofield
The Shared Earth Foundation
Susan Wyckoff

\$5,000 - \$19,999

Anonymous
Paul and Sarah Balle
Sonya and Tom Campion
Merrick and Lorraine Darley
Stuart N. DeSpain
Serena and Neal Friedman
Lynn Hall*
Ted and Tara Hart
Rosemarie Havranek and Nathan Myhrvold
The Hoffmann Family
Rampa Hormel, Enlyst Fund
Carol and Bruce Hosford
Leonard and Norma Klorfine
Stuart Klorfine
Klorfine Foundation
Victoria Leslie
Trish Miner
Richard Saada

Up to \$999

Anonymous (7)
Richard Abel and Roberta Berner
Hannah Ahmed
Harriet Allen
Avery and Marcia Aten



Thanks

The Tree Kangaroo Conservation Program would like to thank all of our partners, supporters, colleagues, and friends who have contributed to the success of the Tree Kangaroo Conservation Program. Your collaboration and support make a tremendous difference for the people and wildlife of YUS.

TKCP is the signature field conservation program at Woodland Park Zoo, and relies on the contributions of many departments and colleagues within the zoo. We express our gratitude to the Woodland Park Zoo Board of Directors, President and CEO Alejandro Grajal, and all of WPZ's staff and volunteers.

TKCP also appreciates the support of our partners and friends in Papua New Guinea and across the globe. We extend a special thanks to:

Anand Aithal

Australian AID's Pacific Horticultural and Agricultural Market Access Program

AZA Marsupial and Monotreme Taxon Advisory Group

Tony Baylis

Balob Teachers College for their ongoing partnership in our YUS teacher scholarship program, in particular Mr. Jerry Hendingao and Mr. Lengkepe Zongoreng

Chris Banks and Zoos Victoria

Honorable Member for Kabwum District, Mr. Patrick Basa, Kabwum District Administrator Mr. David Kitenge, and Kabwum District Health Manager Mr. Boning Goniong

Jamie Bechtel and Karl Morrison of New Course

Jacque Blessington, Kathy Russell, Deanna DeBo and the AZA Tree Kangaroo Species Survival Plan

Doug Bonham

Business Coalition Against HIV/AIDS

Jonathan Byers

Margit Cianelli

Cocoa Board PNG, especially Arnold Parapi and Anton Ningi

Colgate-Palmolive (PNG)



TKCP Director Lisa Dabek with a young Matschie's tree kangaroo at Wasaunon research camp in YUS. Photo by Jonathan Byers.

Teptep village, with clouds moving up the Yopno valley in the background. Photo by David Gillison.



Conservation International including
CI-Global Conservation Fund, Russell
Mittermeier, Jennifer Morris, Chris
Stone, Olivier Langrand, Janet Edmonds,
and Zachary Wells

Dr. Jared Diamond

US Ambassador to Papua New Guinea
Hon. Catherine Ebert-Gray and the US
Embassy

Carol Esson

Foundations of Success and the
Conservation Measures Partnership

David Gillison and Kit Finlay

Joel Glick

Kelly Hampson

Linda Heaney and the WPZ Tree
Kangaroo Conservation Cart volunteers

Marisa Howden

Dr. Falk Huettmann

James Cook University including Dr.
Andrew Krockenberger

Kari Iamba at Rainforest Habitat,
University of Technology of Lae

Junior Ranger Program volunteer
teachers

Georgia Kaipu of the National Research
Institute (NRI)

Dr. Fred Koontz

Valerie Krueger

The Leahy family

Dr. Robert Long

Ben Lohe and Daniel Kilagi of PNG's
Coffee Industry Corporation

Mike McConnell, Mason Sager, and Caffè
Vita

Bobbi Miller

David Mitchell

Dr. Jane Mogina, PNG LNG project,
ExxonMobil

Sy Montgomery

Department of Education, Morobe
Division

Morobe Provincial Government including
Honorable incoming Governor Mr.
Ginson Saono, outgoing Governor
Honorable Kasiga Kelly Naru, Mr. Robin
Kiki, Mr. Keith Jiram, and Mr. Micah
Yawing

The Nature Conservancy PNG

New Guinea Highlands Coffee Exports,
especially David Hannon, Grant
Jephcott, and Shane Ritchie

North Coast Aviation, Adventist
Aviation Services, Missionary Aviation
Fellowship, and Summer Institute
of Linguistics for air transport

Original Beans

Danni Parks, Alison Rosser and the
Whitley Fund for Nature Team

Partners With Melanesians, especially
Kenn Mondiai and Patrick Vuet

Henrietta Philips, TKCP archivist

Robert Plotnick and Gay Jensen

Papua New Guinea Red Cross

PNG Cancer Relief Society

PNG Conservation and Environment
Protection Authority with special
thanks to Minister of Environment the
Honorable John Pundari, Kumaras Kay
Kalim, John Michael, Beside Thomas,
Barnabus Wilmot, James Sabi, and
Madeline Lahari


PNG Forest Research Institute,
especially Acting Director Dr. Martin
Golman, Mr. Anton Lata, Peter Homot,
and Penniel Lamei

PNG Institute for Biological Research
(IBR)

The Research and Conservation
Foundation (RCF) of PNG

Wasu Local Level Government including
Wasu LLG President, Mr. Petrus Yasing,
the Councillors, and Magistrates

Joe and Nim Pontecorvo

 Flowers grow at TKCP's Wasaunon research
camp in the YUS Conservation Area. Photo
by Lisa Dabek.
A woman rests along a hiking trail overlooking
a valley in YUS. Photo by Mikal Nolan, TKCP.

Queen Emma Chocolates, especially David Peate and Phyllis Toleasa-Ivosa (Paradise Foods)

Vice Chancellor Albert Schram, Joy Sahumlal, Paul Nongur, and Rachael Mandali at the University of Technology of Lae. We were heartbroken at the loss of Dr. Larry Orsak; he exemplified the spirit of locally-led conservation and research projects.

Nik Sekhran, Joseph D'Cruz, Johan Robinson, Tamalis Akus, Christie Mahap, Gwen Maru, and Emily Fajardo of UNDP

Daniel Shewmaker and MTC Group

Simon Simboki, Extension Officer with Wasu LLG

The SMART Partnership

TKCP Health Team including Drs. Rob and Marti Liddell, Dr. Blair Brooks, Dr. Nancy Philips, Harriet Allen, Dr. Darin Collins, Dr. Emily Transue, Dr. Joan Castro, and Dr. Susan Barkan

TKCP-PNG Board of Directors

Roy Trivedy, UNDP Resident Representative to PNG

Wells Trenfield and Jasper Coffee

The United Nations Development Programme and the Equator Initiative

Paul van Nimwegen

Trish Watson

Eli Weiss

Steve Winderlich and Anne O'Dea, Windydea Professional Services and Consultants

Wildlife Conservation Society - PNG

WPZ's Animal Health Department



WPZ's tree kangaroo team including Deanna DeBo, Beth Carlyle-Askew, Dr. Jenny Pramuk, and Wendy Gardner

Ruby Yamuna

YUS Community Health Workers, Village Birth Attendants, and Peer Educators

YUS Conservation Organization

Yus Local Level Government including Yus LLG President Honorable Epemu Kiwenu, the Councillors, Magistrates, and Manager Mr. Fidel Yapenare

YUS Teachers, Headmasters and School Board

ZSL EDGE team of Olivia Couchman, Dr. Claudia Gray, Dr. Nisha Owen, Janice Law and Kirsty Richards

All of the YUS communities, mamas, carriers, and assistants who support and make TKCP's work possible while in the field



IN MEMORIAM: Captain Thomas Keindip and Pilot David Tong

The TKCP team and the people of YUS are deeply saddened by the loss of North Coast Aviation pilots, Captain Thomas Keindip and David Tong.

Keindip, a native of Kabwum District and NCA's Chief Pilot and Flight Operations Manager, was a great inspiration for the people of YUS and throughout Morobe. He will be greatly missed by TKCP and the people of YUS.

Tong, a highly accomplished pianist, was energetic and friendly, and thrilled to be pursuing his dream of flying.

Our heartfelt condolences to the families, friends, and colleagues of Captain Thomas Keindip and Pilot David Tong. Their legacies will live on in the hearts of those that they have positively influenced and dearly served, including the TKCP team on our many flights in and out of YUS.

Most importantly, we would like to thank the people of YUS for their steadfast dedication as stewards of their environment, and for their gracious hospitality while we are visiting their villages and forests.



Left pge:

Portrait by David Gillison.

North Coast Aviation pilots Thomas Keindip and David Tong. Photo credit: Malum Nalu.

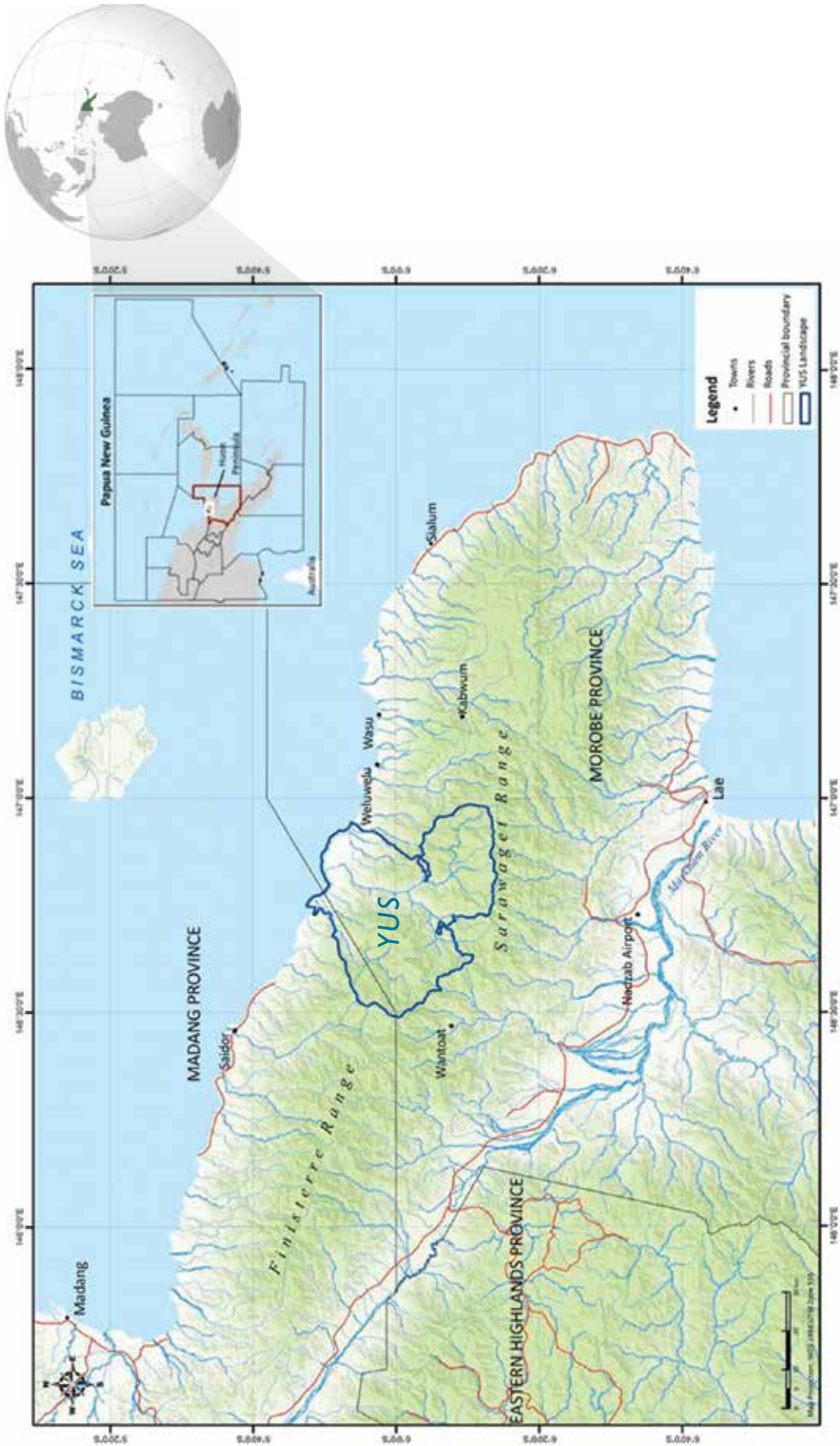
Right page:

The mountains and cloud forest of YUS. Photo by Daniel Solomon Okena, TKCP.

A well-kept garden with a view across the YUS landscape. Photo by David Gillison.

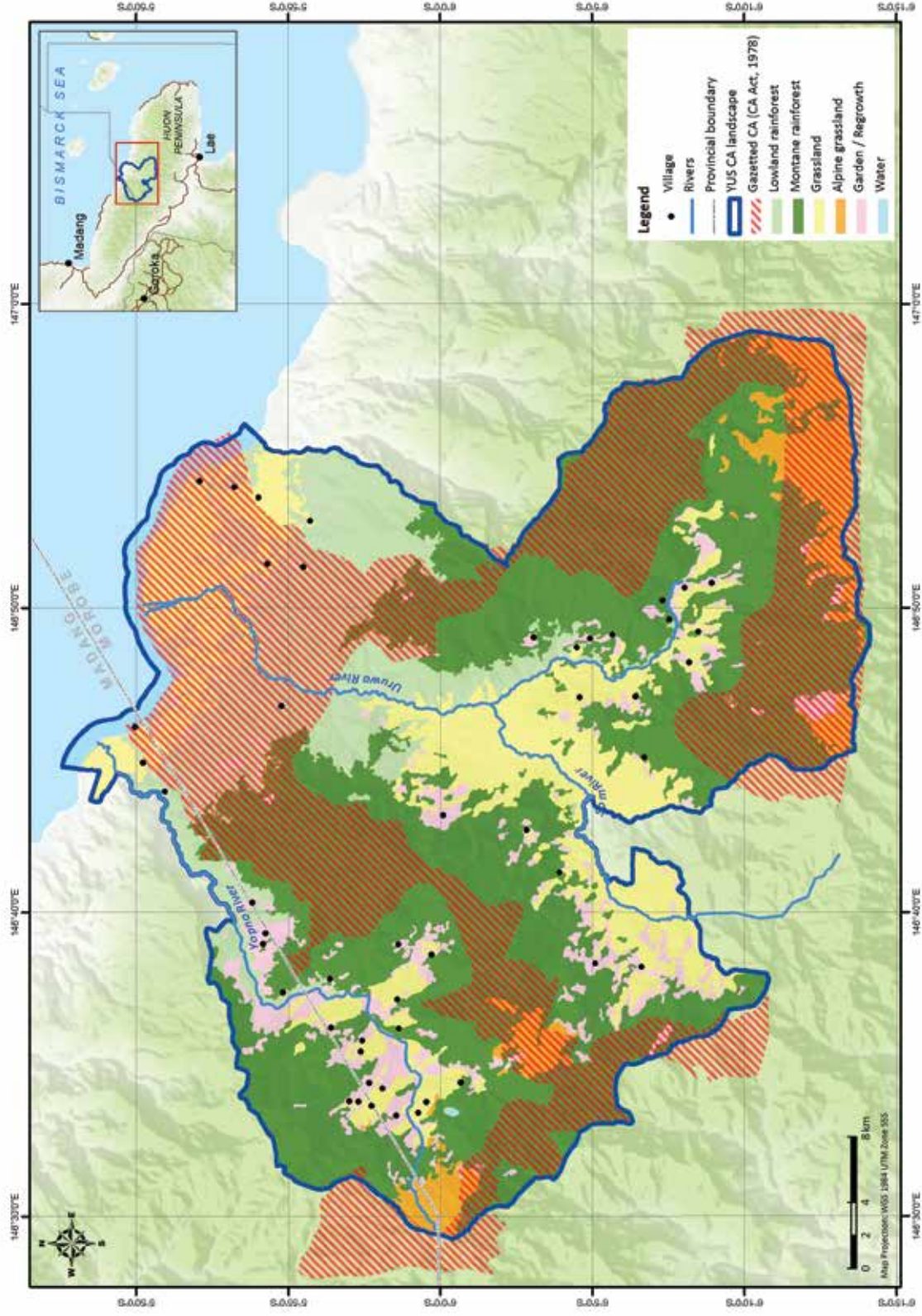


Huon Peninsula, Papua New Guinea



Map by Karau Kuna, TKCP

YUS Landscape and Conservation Area, Papua New Guinea





TREE KANGAROO CONSERVATION PROGRAM



For more information and to support
our program, please contact:

UNITED STATES

Woodland Park Zoo
5500 Phinney Avenue North
Seattle, Washington 98103 USA
T: +1 (206) 548-2623
F: +1 (206) 547-6962
E: Lisa.Dabek@zoo.org

PAPUA NEW GUINEA

5th Street Professionals Building
P.O. Box 360, Lae
Morobe Province 411, PNG
T: +675-472-7226
E: Rick.Passaro@treekangaroo.org

www.treekangaroo.org

www.facebook.com/TKCPPNG