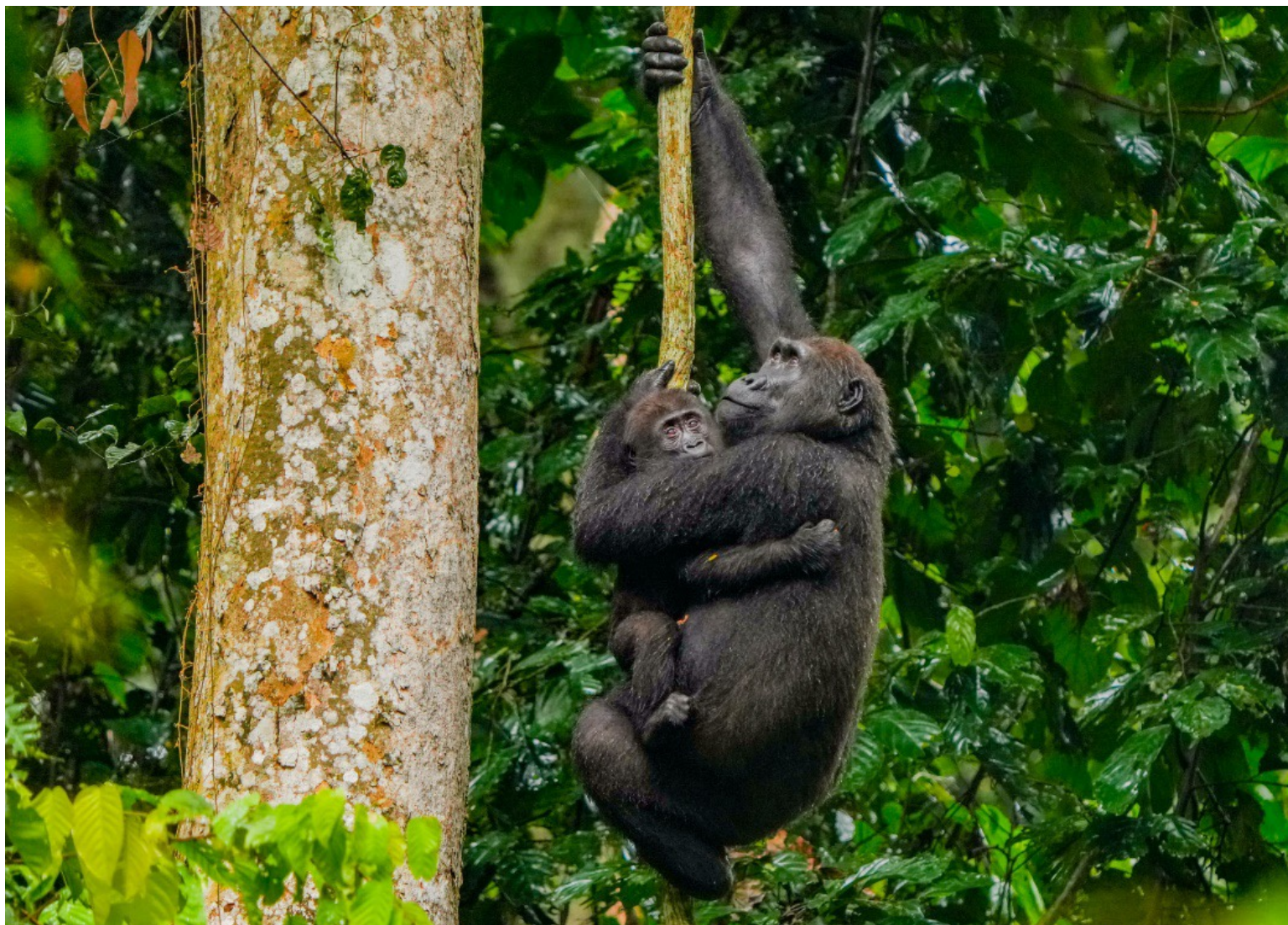


IMPACT REPORT

2024-2025



Center for the Conservation of Congo Apes

Background Summary

The Center for Conservation of Congo Apes (CCCA) is an evolution of the WildCare Institute's 21-year partnership with the Goualougo Triangle Ape Project, which began in 2004 with the establishment of the Saint Louis Zoo WildCare Institute. The CCCA primarily focuses on research and conservation efforts within the Congo Basin and primarily in the Republic of Congo (ROC). Landscapes such as the Sangha Trinational (TNS) and Tri National Dja-Odzala-Minkébé (TRIDOM), UNESCO World Heritage sites, are the centerpieces of science, conservation and land preservation in this region. The CCCA includes research and conservation efforts at the Goualougo Triangle Ape Project (GTAP) and Mondika Gorilla Project (MDK) stations, which involve research and habituation of chimpanzees (*Pan troglodytes troglodytes*) and gorillas (*Gorilla gorilla gorilla*) inhabiting intact forests to support tourism as tools to help safeguard apes in and around the Nouabalé-Ndoki National Park. These field-based conservation activities thereby protect wildlife, preserve pristine forests, and improve livelihoods of Indigenous Peoples employed by the Congo Apes Project (CAP) and living in local communities.



Figure 1: A shy and not yet habituated adult female gorilla and offspring of the “Mabaku” group, peer down at the habituation team. Observations where the individuals peer curiously at the habituation team are indication they are becoming more accustomed to the presence of humans.

CAP has cultivated unwavering support of conservation initiatives over the past 30 years. The challenge today is developing such similar trust and interest in communities located in the periphery of protected areas where multi-use of natural resources takes place often at unsustainable levels. The Republic of Congo's recent authorization of the creation of Community Reserves by local communities facilitates local ownership and monitoring of forests, which is an essential step in developing more sustainable management.

Results from our long-term monitoring of coexisting chimpanzees and gorillas inform the development of evidence-based strategies to mitigate conservation threats facing these endangered and critically endangered species. While many other protected areas have suffered encroachment and declines in wildlife, the Sangha Trinational area (spanning Republic of Congo, Cameroon and Central African Republic) has remained a stronghold of biodiversity.

Building on this success and lessons learned in other regions, the Republic of Congo's governmental agencies are interested in Non-governmental organizations (NGOs) like CAP and the Wildlife Conservation Society (WCS) to play critical roles in research and nature-based tourism to support local protected areas and communities. Apart from the Nouabalé-Ndoki National Park in Republic of Congo, effort and support has been invested also in the Odzala-Kokoua National Park (OKNP), which is part of the Tri-National Dja-Odzala-Minkébé landscape (TRIDOM) 200 km south of Sangha Trinational area. In the TRIDOM and TNS landscapes, the Kamba Conservation Company has partnered with both African Parks Network (APN) and WCS. In TRIDOM, they also collaborate with Sabine Platner African Charities which has successfully implemented high end tourism at three lodges since 2015 and has now committed to expanding their operations to supporting the development of gorilla tourism at the Mondika station in the Nouabalé-Ndoki National Park (NNNP). However, it is also recognized that such positive conservation gains can be negated by the risks of unsustainable health protocols related to tourism.

As a conservation science project focusing on great apes, we recognize the necessity of identifying and addressing present day threats associated with such development. In fact, the CAP is uniquely positioned to assist our regional partners in providing training and analysis to systematically monitor the potential impacts of development on wildlife and associated forests. To accomplish this, we leverage our expertise in ape behavior, health, forest ecology and best practice guideline development to expand partnerships with governmental partners, NGOs, timber industry partners, tourism operators and local stakeholders. One of our growing areas of research includes conducting field activities that assesses the security of wildlife and local communities within the context of economic development, while also establishing synergies between conservation and wildlife-based tourism. From the outset, the Saint Louis Zoo WildCare Institute has been an integral partner in this initiative.

Location and Focal Species

The CAP's two research stations are located in the Goulougo and Djéké Triangles of the NNNP, Republic of Congo. The NNNP is part of a UNESCO World Heritage site including the Dzanga Sangha Trinational (TNS) Protected Areas program with neighboring projects in the Dzanga-Ndoki National Park and Reserve managed by World Wildlife Fund (WWF) in the Central African Republic. The TNS landscape is internationally known for its important concentrations of endangered species and particularly large populations of western gorillas and central chimpanzees. The creation of the NNNP in 1993 was just the first step toward the preservation of key ape habitats in this remarkable landscape. Over the last five years, CCCA has also invested in supporting research and collaborative efforts to standardize data collection in the Odzala-Kokoua National Park (OKNP), which is part of the Tri-National Dja-Odzala-Minkébé landscape (TRIDOM) 200 km south of the NNNP.

Targeted species and other animals that may benefit from the project: Western lowland gorillas (*Gorilla gorilla gorilla*) and Central chimpanzees (*Pan troglodytes*

troglodytes), which are considered Endangered and Critically Endangered by the Endangered Species' IUCN Status.

Toward our mission, this past year we expanded our research objectives including exploring factors impacting local human communities, their health, wildlife and managing their forests to serve multiple needs in a sustainable manner.

Publications

Halloran, A, Funkhouser, J., Poirier, S., Proctor, D., Griffis, C., Conners, S., Cooley, A., Morgan, D., & Sanz (in revision) "Freedom of choice supports social complexity in chimpanzees" *ISCIENCE*.

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Funkhouser, Jake A., Stephanie Musgrave, David Morgan, Severin Ndassoba Kialiema, Delon Ngoteni, Sean Brogan, Philip McElmurray, and Crickette Sanz. "Chimpanzees Employ Context-Specific Behavioral Strategies within Fission-Fusion Societies." *Primates* 65, no. 6 (November 1, 2024): 541-55. <https://doi.org/10.1007/s10329-024-01165-1>.

Cooksey, Kristena E., Crickette Sanz, Jean Marie Massamba, Thierry Fabrice Ebombi, Prospère Teberd, Gaston Abea, Gaeton Mbebouti, et al. "Predictors of Respiratory Illness in Western Lowland Gorillas." *Primates* 65, no. 6 (November 1, 2024): 557-69. <https://doi.org/10.1007/s10329-022-01045-6>.

Abea, Gaston, Sydney Thony Ndolo Ebika, Crickette Sanz, Prospère Teberd, Thierry Fabrice Ebombi, Sean Brogan, Myriam de Haan, Colleen Stephens, and David Morgan. "Long-Term Observations in the Ndoki Forest Resolve Enduring Questions about Truffle Foraging by Western Lowland Gorillas." *Primates* 65, no. 6 (November 1, 2024): 501-14. <https://doi.org/10.1007/s10329-024-01151-7>. Musgrave, Sydney Thony Ndolo

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Morgan, David, Samantha Strindberg, Philip McElmurray, Alice Zambarda, Igor Singono, Sarah Huskisson, Stephanie Musgrave, et al. "Extending the Conservation Impact of Great Ape Research: Flagship Species Sites Facilitate Biodiversity Assessments and Land Preservation." *Primates* 65, no. 6 (November 1, 2024): 571–91. <https://doi.org/10.1007/s10329-023-01080-x>.

Morgan, David, Claudia Stephan, and Crickette Sanz. "Twenty-Five Years of Primate Research in the Ndoki Forest, Republic of Congo." *Primates* 65, no. 6 (November 1, 2024): 433–38. <https://doi.org/10.1007/s10329-024-01159-z>.

Mayoukou, W., D. Morgan, S. Strindberg, P. McElmurray, C. Abedine, and C. Sanz. "Great Ape Surveys and the Implications of Long-Term Monitoring in the Djéké Triangle, Republic of Congo." *Primates* 65, no. 6 (November 1, 2024): 457–68. <https://doi.org/10.1007/s10329-024-01157-1>.

Center Impact

Objective 1: Enable Goualougo and Mondika stations to continue to serve as centers of discovery and platforms for promoting applied standardized science and tourism across the region.

Outcomes: The Goualougo is the only field station where chimpanzees and gorillas can be followed on a daily basis. During the past year, researchers spent 177 hours making direct observations of chimpanzees and 164 hours making direct observations of gorillas. Daily field teams this past year in Goualougo spent an average of 25 days per month with gorillas and 22 days per month with chimpanzees. In total, the team collected

1,375 health scans on chimpanzees and 1,174 health scans on gorillas.

At Mondika, gorilla habituation of the Mabaku group continued to improve as research teams spent 796 hours with the group during 173 contacts. The silverback and a majority of juveniles and subadults in the group are now habituated. Not surprisingly, research teams spent more hours, 1,378 hours with the fully habituated Metetele group, during 255 contacts this past year. Importantly this past year, the lead male of the "Buka" gorilla group passed away after nearly two decades of being habituated to humans. Before Buka's passing and group disintegration, the research team spent 1,300 hours with the group during 210 contacts. Direct contacts with the two gorilla groups resulted in 1,890 behavioral scans of Metetele individuals and 526 scans of Mabaku individuals. (Figures 2 and 3)



Figure 2: Juvenile gorilla displaying his courage.



Figure 3: These two juvenile gorillas often play together and are very close in age.

Objective 2: Co-create conservation initiatives with Indigenous communities that build on their Traditional Ecological Knowledge (TEK) at Nouabalé-Ndoki National Park (NNNP) and Odzala-Kokoua National Park (OKNP).

Outcomes: This past year, significant strides were made towards promoting TEK and the capacity of Indigenous team members' abilities to make, record, and share observations at NNNP at the Goulougo and Mondika field stations. CAP researchers at both stations continued to compile all the local and scientific names of plants recorded in an effort to verify and update our current feeding lists for both species of ape. Once finalized, these data will be compared directly with observations at partnering field stations in Dzanga Sangha Protected Area (Bai Houkou station), Central African Republic and Ngaga Station (OKNP). Former GTAP chimpanzee tracker Mr. Davy Koni (Bomassa village origin) continued in his influential role as a Botanical Research Assistant, the first position of its kind with WCS-Congo and a key part of CAP's botanical program. In this role, Mr. Koni continues using his expertise in taxonomic identification of flora. His knowledge is particularly important in identifying unidentified plants by field staff at both Goulougo and Mondika stations. In total, Mr. Koni reviewed the local and scientific names in the CAP database numbering 87,921 direct observation records made over the last ten years. This is an impressive dataset collected by multiple team members from different ethnic groups and villages in the region. Verification of these data is an essential but time-consuming aspect in developing and establishing the TEK database. In addition, Mr. Koni also assisted in maintaining the phenology circuits at Mondika, Goulougo and Mbeli Bai Gorilla research station. The tagged phenology trees (which exceed 750 individual stems at each of the field stations at Mondika and Goulougo) have been monitored for production monthly since 2017 and 2003 respectively and are among the three longest-running botanical circuits in Western Central Africa.

Odzala-Kokoua National Park (OKNP) is among the largest national parks in all the Congo Basin and is managed by two NGO's; Sabine Plattner African Charities (SPAC) and African Parks Network (APN). This year we made significant progress towards initiating a collaboration with SPAC and the newly formed Biodiversity Research team. Mr. Ashley Vosper took on the new role of Research Coordinator for SPAC with direct oversight and management of the internationally recognized Ngaga Gorilla Project located just outside of OKNP. A Memorandum of Understanding between SPAC and CAP's project is being finalized and will include the sharing of observational data, including gorilla feeding from the Goulougo, Mondika and Ngaga research program. SPAC has provided raw data on the observations of Ngaga gorilla feeding, and initial summaries suggest these gorillas may consume over 350 species of plant—of which 85% have local names associated with them. Ongoing efforts to compare the observations of Ngaga gorilla foraging with those at Goulougo and Mondika are moving forward.

Besides advancing on comparing datasets, CAP also moved forward with supporting the initiation of a new research project at OKNP that includes better understanding of the local TEK in the region. As planned, Mr. Prosper Teberd (former Mondika Gorilla Research Assistant and current graduate student) completed his first year of academic training at CWU, USA in his pursuit of a Masters in Primatology. During this grant period, he developed his research interest and thesis aims. The research design and study site selections were done in collaboration with Congo-Apes scientists, Professor Lori Sheeran, his advisor at CWU, as well as collaborating scientists with Cincinnati Zoo and Botanical Garden where Mr. Teberd is a Coexistence Fellow. Drs. Lily Maynard and Mahi Puri of the Coexistence Program provided valuable guidance in developing a questionnaire aimed at exploring local people's Traditional Ecological Knowledge (TEK) in and outside of the Odzala-Kokoua National Park (OKNP).



Figure 4: Mr. Prosper Teberd (second from left in blue jacket) is enrolled as a Masters student at Central Washington University, Ellensburg WA. This summer he is collecting his dissertation data in Odzala-Kokoua National Park in northern Republic of Congo. Half of his dissertation work will include partnering with the Imbalanga Gorilla Research station in the eastern sector of the park to better understand gorilla ecology as well as the habituation process.

Mr. Teberd’s (Figure 4) thesis titled “Preliminary interviews with people living near a planned gorilla tourism site in the Republic of the Congo” will include a detailed investigation of gorilla ecology and behavior paired with a questionnaire aimed at developing a preliminary understanding of village residents living in or in proximity to OKNP.

In terms of further community outreach, CAP collaborated with the WCS Community Development (DEVCO) and One Health Program’s technical advisors in initiating the Knowledge, Attitudes, and Practice (KAP) surveys this past grant period (Figure 5). This included identifying twelve villages in four logging concessions bordering the NNNP to conduct the KAP surveys in the Ndoki Landscape.

The team committed to surveying 20% of the households, or roughly 1,131 villagers, which will allow the study to achieve statistical significance in respondents’ replies. The estimates in population sizes were made possible with the newly published population census results generated by the Congolese government this year. We also ensured support and collaboration of CIB-OLAM logging and agriculture company as an industrial partner in the survey effort. The CIB-OLAM Community Development team agreed to support the work by providing two surveyors to augment the six individuals we hired to conduct the surveys. Training of the survey teams and certification is taking place at the Park Headquarters and CIB-OLAM Headquarters the first and second weeks of September.



Figure 5: Community outreach events around the NNNP typically occur in the village square and are started with a brief opening dialogue to inform residents in a group setting of the aims of the educational or survey activity.

Objective 3: Inform new market-based incentives to reduce climate change emissions and deforestation with sustained funding to protect forests.

Outcomes: To protect high conservation forests and coexisting great apes, we need to understand in greater detail the myriad and severity of risks driving potential downturns in the species we choose to conserve. The last six months facilitated building on a more informative and geospatially detailed database that includes

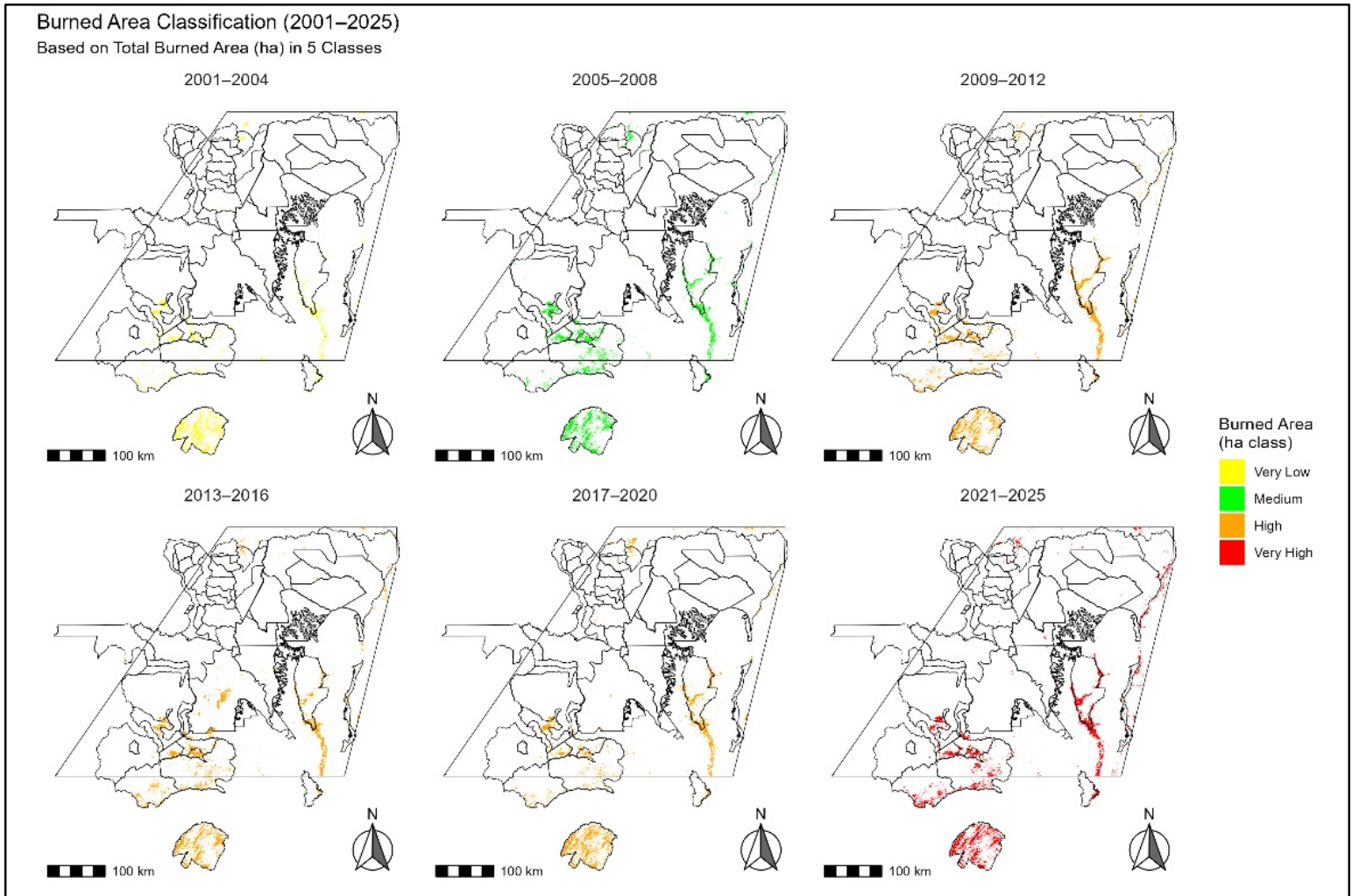


Figure 6: Three-year time periods of burned area and severity across northern Republic of Congo. Spatially located land management areas (parks, concessions, community reserves) where fires were assessed from 2001 to 2025 are identified by polygons providing the foundations for complex spatial analyses.

anthropogenic disturbances such as; human settlements down to the individual building level, location of individual agricultural crops, and access routes including paved, primary and secondary road networks for the northern Congo study area. This region spans roughly twelve and a half million hectares including the TNS and TRIDOM protected areas and neighboring multi-use logging concessions. The data also span from 2001 to 2025, a period of significant environmental and demographic transition in the north of the country. Spatial data on human induced and naturally occurring fires for the study region were also compiled for 2001 to 2025 using MODIS (500 m) resolution satellite imagery (Figure 6). Fires in the tropics are of great

environmental significance and often associated with humans including route construction, and typically occur in proximity to village settlements. Such analyses have yet to be assessed in a holistic way in our study area and will be an important area of monitoring going forward, particularly in terms of climate and environment.

It has been posited this region is in the tenth year of a thirty-year drought, with this past year being the most impactful in terms of lack of water and extreme heat. This past dry season featured the lowest amount of rainfall yet recorded by the Congo-Apes Project. Not surprisingly, fires in northern Congo are increasing in size, frequency, severity and spatial coverage in this warming climate and will no doubt have an impact

on the well-being of coexisting humans, gorillas and chimpanzees in this region.

Taken together, these data will allow a more holistic and statistically valid test of the factors likely influencing the lives and well-being of the Indigenous Peoples as well. This information will be considered in relation to their responses in the KAP surveys. Placing joint attention to conservation and local community of Indigenous societies who have long coexisted within this forested and multi-use landscape is key to maintaining and, in some situations, restoring neighboring environments and the critical ecosystem services they provide for free that we all rely on. The background environmental and anthropogenic database we are developing now will be foundational to long-term monitoring, assessment, and modelling impacting many areas of conservation interests.

Stories From The Field

By far, the most impactful lessons over our 26-year history have and continue to originate from our collaboration with Indigenous Peoples. CAP is fortunate to collaborate with many ethnic groups with individuals filling different roles such as Research Assistants and trackers. Indeed, the research and conservation successes and technological advancements made at Goualougo, Mondika and areas around the NNNP would not be possible without the involvement of so many dedicated Congolese nationals. A true testament to their work is our commitment to—and success in—conducting high-quality and timely conservation and science. This was demonstrated this past year with the publication of a Special Issue in the peer reviewed journal *Primates* dedicated to “Twenty-Five Years of Primatology in the Ndoki Forests.” (Figure 7) This globally significant journal featured twelve scientific articles from Goualougo, Mondika and Mbeli along with an executive summary. Among the many achievements we are most proud of, is the number of African co-authors featured in these articles, including three manuscripts led by CAP Research Assistants such as Wen Mayoukou, Abea Gaston, and Prosper Teberd.

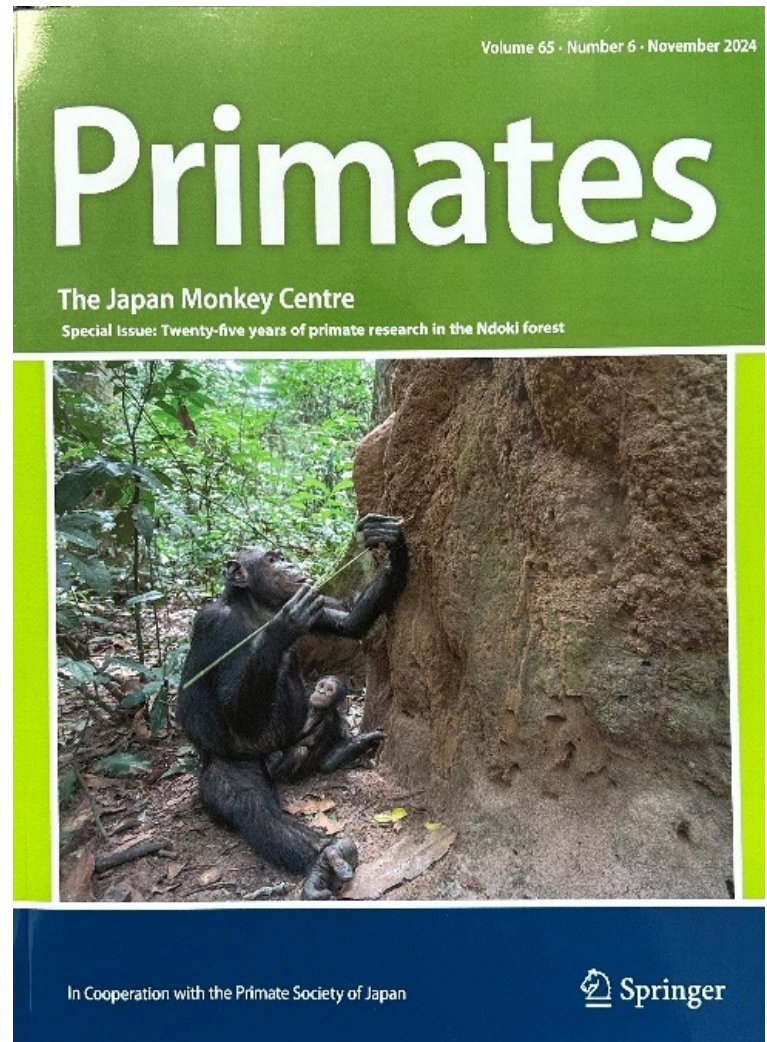


Figure 7: While Indigenous Peoples and local communities have long understood the extraordinary diversity and shifting environments of the Congo Basin, it was only 25 years ago that foreign-trained primatologists arrived in the Ndoki Forests of Republic of Congo. The initial field surveys acted as catalysts in establishing three long-term great ape field stations that continue to serve as platforms for multidisciplinary research, collaboration, and centers for capacity building. The journal “*Primates*” dedicated a special issue titled “Twenty-Five-Years of Primatology in the Ndoki Forests” featuring twelve scientific articles from Goualougo, Mondika and Mbeli research stations demonstrating examples of ongoing applied science and conservation at the Nouabalé-Ndoki National Park (NNNP). The cover of the Special Issue includes an iconic image from the Goualougo Triangle and features “Aida” of the Moto chimpanzee community who uses a modified brush-tipped fishing probe to extract termites at an epigeal (above ground) nest with her daughter. Mothers are the primary models for offspring to acquire such tool skills and maintain the high-tech chimpanzee culture in the Ndoki Forests and beyond.
Photo credit: W.Burrad-Lucas/WCS

Plans for the Future

Through the CAP, an exciting area of conservation research will come from deepening our understanding and expanding our partnerships with local communities within the Tri-National Sangha (TNS) as we explore Indigenous Peoples Traditional Ecological Knowledge and their relationships between flora and fauna. Towards this goal, Dr. Morgan contacted Mr. Antione Ede, Head of Biomonitoring and Research with the World Wildlife Fund (WWF), Dzanga Sangha Protected Area, Central African Republic. Recognizing the importance of TEK in the TNS landscape and particularly the risks of such information disappearing, Mr. Ede has agreed to partner with CAP in promoting the unique role Indigenous peoples can play in conducting gorilla research with applied conservation aims. This will be bolstered by initiating a collaboration with The Ndima Kali Association, based also in the town of Bayanga in the Central African Republic (CAR), with WWF. This association has been in existence for nearly twenty years and has a long history of working with and supporting Indigenous Peoples in the TNS landscape.

We will also work with the Lih Ngolio Association of Bomassa village just outside of the NNNP headquarters. To our knowledge, a comprehensive community field station-based project has not yet been undertaken in this region.

In addition, the WildCare Institute's Center for Conservation of Congo Apes will be expanding its commitment to gorillas by becoming a partner of AZA SAFE gorilla. As a SAFE gorilla partner, we will be providing additional support to the Dian Fossey Gorilla Fund through its program with Grauer's gorilla in the Nkuba Conservation Area in eastern Democratic Republic of Congo.

Donors

Zoo Atlanta, SAFEChimpanzee, Margot Marsh Biodiversity Fund .

Partners

See below.



Cover photo: Western lowland gorillas spend considerable amounts of time in the middle to upper story canopies feeding on leaves, bark, and fruits. Here, “Mambeli” an adult female of the Metetele group powers up a vine carrying “Gaston” her offspring in the forests of the Djéké Triangle, home of the Mondika Research station.