



ETHICS STATEMENT

Ethical Concerns

The Duke Lemur Center (DLC) understands and appreciates concern regarding the historical beginnings of our colony; the need for long-term work in Madagascar to ensure scientific, humanitarian, and conservation stewardship; and the importance of serving as a leader in ethical practices of captive primate research centers. We recognize that living lemurs are the natural and cultural heritage of Madagascar, and as an institution based outside Madagascar, we recognize that we have an obligation to give back to conservation and development efforts in Madagascar.

The DLC's Historical Beginnings

The DLC, originally known as the Duke University Primate Center, was established at Duke University in 1966. The original colony was comprised of various primate species transferred from Yale University by one of the Center's co-founders, Dr. John Buettner-Janusch. From the 1960s to the early 1990s, Duke and DLC administration worked with Madagascar's government to legally capture and export 137 wild-born individuals from 25 lemur species. Full and proper authorization was obtained from the Malagasy governmental authorities for each individual, and full permitting was also obtained for U.S. importation. The current colony is a result of decades of breeding between these founders, their descendants, and captive-born individuals transferred in from accredited zoological facilities across the U.S. and Europe.

Stewardship in Madagascar

The DLC is strongly committed to investing in conservation, humanitarian, and scientific efforts in Madagascar and has a long history (35+ years) of working with Malagasy scientists, governments, and communities. In Fiscal Year 2023, the DLC invested \$324,756 in Madagascar Programs. The work is too expansive to describe in detail, but the following activities represent the diversity and scope of projects:

Long-term conservation program in the SAVA region: The mission of DLC-SAVA Conservation is to conserve biodiversity in Madagascar, specifically in the SAVA region, by supporting the livelihoods of rural people in forest-bordering communities and through collaborations with researchers, local environmental organizations, and governmental institutions. We collaborate with local Malagasy people and regional government agencies to promote environmental education, reforestation, sustainable agriculture, rainforest protection, family planning, and conservation-oriented lemur research, and we have an extensive collaboration with CURSA, the regional university in the SAVA. With CURSA, the DLC provides training workshops, supports students at the graduate level, and supplies laptop computers and other equipment. The DLC-SAVA Conservation program was established in 2011 and, over the course of the past 13 years, has built a strong working relationship with Malagasy communities. To provide a few examples of these initiatives and their results:

- Five communities engaged in co-created landscape restoration projects with the DLC and CURSA. At each site, the DLC contributes technical, financial, and resources support to communities to facilitate their goals. Tree nurseries were installed striving for 25,000 seedlings planted per site per year. Seedling survival is monitored annually, with approximately 50% of trees surviving the first year and 25% surviving after two years.
- Since 2019, more than 1,580 farmers have been trained in agroecology and climate-smart agriculture, specifically focusing on market vegetables and agroforestry. 50% of participants in market vegetable workshops adopt the new techniques in the first 1-2 years, and 95% of adopters report better results



than using their previous techniques.

- More than 40 Malagasy students have actively engaged in DLC-SAVA projects, and nine teachers and associates at the regional university are currently engaged, mentored, and financially supported in their graduate degrees, research, and teaching. Over 250 students have engaged in field training workshops, including on lemurs, rainforest ecology, and agroecology.

Veterinary internship program: The purpose of this program is to share and expand DLC expertise with veterinarians in Madagascar and to provide opportunities for international collaboration between Malagasy veterinarians, North Carolina State University veterinary staff and students, and Duke University staff and researchers. The goals are to promote cross-cultural understanding, expand career opportunities for Malagasy veterinarians, and create lasting impacts on human, animal and ecosystem health in Madagascar. Since 2018, the DLC has invested more than \$100,000 in this ongoing program. Current DLC funding for this program is from the FS Foundation. All of the funds are allocated to Malagasy veterinary students.

Initiatives to decolonize science: In 2021, we launched the DLC's Madagascar Research Program. This program spans geographical regions and fields of study, is rooted in cross-disciplinary collaborations with in-country experts, and offers funding and mentorship opportunities for Malagasy students and early-career scientists. For example, the Aid for Articles program provides mentoring and \$750 in funding to early career Malagasy researchers to assist in the completion of their research through (first-authored) publication. Field Improvement Grants provide \$1,500 to early-career Malagasy researchers conducting field work on lemur ecology, behavior, or conservation in Madagascar. The awards are intended to complement established funding to either extend a mission, add a new project component, or hire additional staff to assist with data collection. This program is funded directly from the DLC operating budget.

In collaboration with the University of Antananarivo (Madagascar), the DLC recently completed construction of a field station in a private reserve in Anjajavy, Madagascar to increase research infrastructure for use by Malagasy scientists and students. The DLC is sponsoring a Malagasy student's three-year PhD program already underway at the site, and a 13-year MOU has been established between the DLC, the University of Antananarivo, and the Anjajavy reserve to ensure opportunities for students for years to come. The field station and associated research projects of Malagasy students are funded through donor support and directly from the DLC operating budget.

Education and outreach: Since 1992, the DLC has partnered with the Madagascar Fauna & Flora Group and the Malagasy government to protect Madagascar's biodiversity through conservation, research, and education. A significant activity of this partnership is husbandry, veterinary, and educational outreach support for staff and local residents at Parc Ivoloïna (a captive lemur facility in Tamatave, Madagascar where many animals free-range). The goals of this work are to collaborate in developing husbandry and veterinary best practices, increase local capacity, and implement biodiversity conservation in the surrounding areas. Currently, DLC work at Parc Ivoloïna and additional private reserves in Madagascar has funding from the Margo Marsh Foundation and the Trent Foundation. Funds include providing infrastructure (equipment and other materials) to Parc Ivoloïna.

Serving as a Leader in Ethical Practices of Captive Primate Research Centers

The DLC is proud to serve as a model institution for conducting high-quality research while prioritizing welfare and well-being of each individual in our care; to this end, the DLC is the only facility in the world



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that holds accreditation with both the American Zoological Association (AZA) and the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). The DLC is world-renowned for its expertise in lemur husbandry, breeding, and veterinary medicine, and frequently consults with other zoological facilities, across the U.S. and internationally, to collaborate and provide expertise. The DLC is proactive in expanding and promoting ethical practices, with both an internal Animal Welfare Committee and Research Committee; the research program is also overseen by a Research Advisory Committee and Duke IACUC. The DLC enforces a strong policy of do-no-harm research and utilizes positive-reinforcement training to engage the lemurs in voluntary research participation.

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