



# NEWSLETTER

## Gephyreus Project



### EPIGENETIC CLOCK APPLIED TO LAHILLE'S BOTTLENOSE DOLPHIN

A groundbreaking article has just been published applying epigenetics to better understand the demographics of Lahille's bottlenose dolphin. Developed through cooperation among members and institutions of the Gephyreus Network, the study describes the first-ever application of an "epigenetic clock" in an endangered cetacean population. The technique, based on DNA methylation patterns, was calibrated with the Lahille's bottlenose dolphin population from the Patos Lagoon estuary, which has been monitored for over 50 years in southern Brazil. This advance, which reveals the population's age and sex structure, is a crucial step toward understanding its dynamics and projecting its future trajectory.

[Learn more](#)



### WORKSHOP ON CETACEAN CONSERVATION MANAGEMENT PLANS IN LATIN AMERICA

At the end of June 2025, the Scientific Committee of the International Whaling Commission (IWC), in partnership with the Brazilian Government, held a workshop in Santos (SP) focused on the discussion of six Cetacean Conservation and Management Plans (CMPs) in Latin America, including the CMP for Lahille's bottlenose dolphin. The event brought together experts and decision-makers.

The Gephyreus Project team shared updated results on the species' threat status in South America and highlighted the main socio-environmental challenges to its conservation, reinforcing the importance of trilateral cooperation for implementing coordinated research and conservation actions.

[Learn more](#)

### LAUNCH OF THE DOCUMENTARY GARBO



Released in April 2025, the documentary Garbo portrays the cooperation between Lahille's bottlenose dolphins and fishers in the Laguna estuary (Santa Catarina, Brazil), a unique interaction studied for decades by LAMAq/UFSC. The production weaves together science, culture, and conservation, combining research and stories of this remarkable relationship.

[Learn more](#)



## Project Assesses Impacts of Climate Emergencies on Threatened Aquatic Mammals in Rio Grande do Sul, Brazil

The Gephyreus Project is part of a network of institutions engaged in the study “Assessment of the Effects of Climate Change on Threatened Aquatic Mammals in Rio Grande do Sul” (2025–2027), coordinated by the National Research and Conservation Center for Aquatic Mammals of the Chico Mendes Institute for Biodiversity Conservation (CMA/ICMBio), with the participation of Kaosa and several local institutions.

The initiative aims to evaluate how the climate emergency that struck Rio Grande do Sul in 2024 affected local populations of Lahille’s bottlenose dolphin (*Tursiops gephyreus*), franciscana (*Pontoporia blainvillei*), and South American sea lion (*Otaria flavescens*), all threatened species in southern Brazil. Activities are concentrated in Rio Grande (RS, Brazil) and surrounding areas, focusing on three main fronts:

### 1. Assessing changes in distribution and health conditions

Boat-based monitoring in the Patos Lagoon estuary and adjacent coast will track shifts in the distribution of Lahille’s bottlenose dolphin and South American sea lion. Tissue samples from dolphins will also be analyzed for organic contaminants, comparing pre- and post-flood data from May 2024. These activities are carried out by the Botos da Lagoa dos Patos Project and the Núcleo de Educação e Monitoramento Ambiental (NEMA).

### 2. Assessing impacts on mortality

Beach monitoring, carcass sampling, and mapping of stranding sites are conducted in partnership with the Laboratory of Ecology and Conservation of Marine Megafauna (ECOMEGA) and NEMA, aiming to detect changes in mortality patterns, frequency, and causes over time.

### 3. Assessing changes in fisheries dynamics

Monitoring the effects of flooding on artisanal and semi-industrial fisheries, with a focus on potential changes in incidental capture risks for aquatic mammals.



## The Gephyreus Network Partnership

The Gephyreus Network supports CMA/ICMBio by conducting two monthly boat-based monitoring surveys led by the Botos da Lagoa dos Patos Project team. Activities planned for 2025–2027 will generate critical data to evaluate the impacts of climate emergencies on threatened species in Rio Grande do Sul. The results will guide the development of public policies that integrate extreme climate events into biodiversity conservation strategies.

[Learn more](#)

# 10 Complete Cycles of Synchronized Monitoring of Lahille's Bottlenose Dolphins

Between February and May 2025, we successfully completed the 10th cycle of synchronized monitoring of Lahille's bottlenose dolphin — a strategic initiative of the Gephyreus Network that began in 2018 and covers multiple areas of the species' range.

Originally conducted twice a year, since 2024 the monitoring has shifted to annual campaigns, bringing together institutions and researchers to align field efforts across the entire distribution of the Brazil-Uruguay subpopulation.

This integrated approach allows scientists to investigate the movement of photo-identified individuals across monitored areas, while also estimating key population parameters such as abundance, temporary emigration, and survival rates.

During the 10th cycle, more than 100 field surveys were carried out in nine occurrence areas, spanning from the coast of Santa Catarina, Brazil, to Uruguay and Argentina. To date, the Gephyreus Network has accumulated 540 field surveys, totaling 2,054 hours of observation and recording 2,252 dolphin groups. The consolidated database now holds over 200,000 photographs and more than 350 photo-identified individuals, representing the most comprehensive historical dataset ever obtained for the species.

This collaborative effort marks a milestone in advancing scientific knowledge on Lahille's bottlenose dolphin ecology and strengthens the foundation for coordinated conservation strategies throughout its entire range.



540 field surveys



2054 hours of effort



2252 groups



200526 photos





## NEW PARTNER IN SANTA CATARINA, BRAZIL

Biosonar has now joined the Gephyreus Network with the launch of monitoring activities in the Baía Sul of Florianópolis (SC, Brazil), expanding the Network's geographic coverage. The work investigates occurrence patterns and habitat use by Lahille's bottlenose dolphin, a region where information has so far been scarce. These efforts will contribute to a better understanding of the species' movement between nearby areas and help strengthen conservation strategies.


[Meet Biosonar](#)

## MONITORING RESUMES IN ARGENTINA

After ten years, monitoring of Lahille's bottlenose dolphins has resumed in Bahía San Antonio, Río Negro Province, Argentina. Supported by Fundación Azara and Yaqu Pacha, the initiative aims to update abundance estimates, assess habitat use, and evaluate the population viability of the species—key actions outlined in the Lahille's bottlenose dolphin CMP. Expanding the Network's reach even further, Fundación Cethus has started monitoring Lahille's dolphins in Bahía Blanca, Buenos Aires Province, in partnership with Kaosa and with funding from the Whitley Fund for Nature.



 [www.gephyreus.org](http://www.gephyreus.org)

 +55 53981201467

 [projetogephyreus@gmail.com](mailto:projetogephyreus@gmail.com)

 @projetogephyreus

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