

| Mar del Plata, Argentina

February 27, 2026

### THIRD PROGRESS REPORT

**Title:** “A Non-Lethal Tool for Monitoring Fish Health of Wetlands from South Pampas in Argentina”

**Director:** Lic. Gastón E. Ojeda Rossi

#### Summary

Between December 2025 and February 2026, the sampling campaigns run in Los Cueros Creek (Mar Chiquita District), Corrientes Creek and Los Padres Lake (General Pueyrredón District) were successfully conducted. In addition, we arranged a meeting with the secretary of Public Management of Balcarce Municipality, and we run the sampling campaign in Balcarce District. In summary, seven sampling campaigns were carried out. All the graphical material obtained during these activities will be shared on [this Google Drive Folder](#), organized by sampling sites. If access is unavailable, please click the Drive link above. The following section is intended to present the sampling campaigns that were conducted.

#### 1) Sampling campaign of Los Cueros creek (Mar Chiquita)

The samples were collected successfully on January 19th, as had been scheduled in a previous report. That day, the staff of the Mar Chiquita Municipality, along with local residents, waited with great enthusiasm for the project to start. Once there, we provided a comprehensive explanation regarding the project's purpose, its objectives, the foundation providing endorsement, and any associated matters to the neighbors and the trained staff.

The sampling campaign was carried out satisfactorily. We were able to obtain the required samples, and concomitantly, other species were identified. We took this opportunity to show the children and technicians the other species inhabiting the creek and we discussed the importance of knowing and conserving its fauna before releasing them. The species collected were *Australoheros facetus* (adults and juveniles), *Jenynsia lineata*, *Characidae spp.*, *Cryptograpus angulatus*, *Rhamdia quelen*, and *Corydora paleatus*, among others. The staff at Mar Chiquita expressed their enthusiasm for participating in the project and seeing the results of the analysis.

Upon completion of the sampling campaign, we will analyze the blood samples, calculate condition indexes and determine the pollutants found in surface water. Simultaneously, we will continue to sample other sites.









Pictures taken during the sampling at Los Cueros Creek. (Visit the [Google Drive Folder](#) for more content)

**Visit the post shared by the Environmental Department of Mar Chiquita on Instagram:**

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## **2) Sampling campaign of Corrientes creek and Los Padres Lake (General Pueyrredon)**

The sampling was carried out in three locations across General Pueyrredón as previously stipulated. In view of the extent of the Corrientes stream throughout Mar del Plata city, we sampled two sites with different environmental conditions. One site near the coast and the other far from the coast. On the other hand, we sampled Los Padres Lake and its tributary Los Padres stream.

We started out in Corrientes stream (first site, near the coast), a waterbody situated within the Alfar neighborhood, which exhibited high levels of visible human impact and a good assemblage of fish. Nonetheless, we were able to successfully sample this site and obtain the fish required for the analysis. Subsequently, the samples will be analyzed in the laboratory.

In the second site (far from coast), Corrientes stream passes through a private neighbourhood continuing alongside rural houses and some buildings, such as supermarkets and municipal dependencies. In addition, surface water was sampled for PPCPs and pesticide residues for its later analysis. We attempted to locate *Australoheros facetus* specimens, yet none was found. In fact, this second site exhibited minimal floating riparian vegetation, a high diversity of aquatic insects and only three species of fish recorded: *Jenynsia lineata*, *Cnesterodon decemmaculatus* and *Corydoras paleatus*. The population of fish here is less abundant in comparison to the first site. However, this discovery did not discourage us. On the contrary, this issue raised further questions about the underlying factors contributing to low diversity and the measures that can be implemented to support these ecosystems. Furthermore, surface water was sampled for PPCPs and pesticide residues for its later analysis.









*Pictures of the Corrientes sampling. Visit the [Google Drive Folder](#) for more content.*

Los Padres Lake is located far from the Mar del Plata city, in the countryside. We went to an area with a high concentration of trees, riparian vegetation and floating vegetation on the south side of the lake, where we had previously been advised of the presence of *A. facetus*. We obtained the water samples and all the biological samples. Also we sampled the tributary stream to Los Padres Lake, called Los Padres stream. We not found *A. facetus* specimens, in consequence only sampled water for PPCPs and Pesticides determination.







Pictures of the sampling at Los Padres Lake. Visit the [Google Drive Folder](#) for more content.

### 3) Presentation of the project in Balcarce Municipality

As mentioned in a preceding report, laboratory members partake in active communication with the Balcarce Municipality team. We had the opportunity to interview the secretary of Public Management, who demonstrated his interest in the conservation of fish species and wetland environments.

He communicated to us that the Municipality is dedicated to the conservation of wetlands and addressing the concerns. By the same token, the presence of *Austroloebias spp.* and *Titanolebias elongatus* in Balcarce was noted. These species belong to a particular group of annual fishes that have been categorized as nearly threatened or endangered according to the IUCN Red List. We explained the importance of the project to protect wetlands potentially inhabited by these species, as well as to support decision-making. Ultimately, he stated that he would establish contact between us and municipality technicians and he expressed his interest in holding an educational workshop to showcase the diversity of species present in our wetlands and the techniques employed to study fish without compromising their wellbeing.



*Pictures of Lic. Gaston Ojeda (left) and secretary of Public Management Ing. Luis G. Torres (right) during the meeting.*

We started the sampling campaign in El Peligro stream, the tributary of La Brava Lake. Unfortunately, due to the poor condition of the road, we only got access by walking the last 2.5 km near the stream site. For that reason, we only sampled water for pesticides and PPCPs determination. However, we take this opportunity to sample another sites of interest as El Pantanoso stream and Vivoratá stream.

We went to El Pantanoso stream but, due to lack of rain in summer, this stream was almost drought, with some puddles of water connected by small channels. We will wait to a rainy days to get there again and try to search *A. facetus* specimens. However, we took water samples from the puddles for pesticides and PPCPs determination. In addition, we conducted the sampling in Vivoratá stream. Unfortunately, no *A. facetus* specimens were found. However, we find a significant cover of

vegetation, and a high diversity of fish species and invertebrates, that would evidence a good health status of this wetland. We only sampled water for pesticides and PPCPs determination again.













*Pictures of the sampling at El Peligro stream, El Pantanoso stream and Vivorata stream. Visit the [Google Drive Folder](#) for more content.*

**Table resuming the samples obtained in each campaign:**

| District                  | Site                                 | Water samples | Fish samples   |
|---------------------------|--------------------------------------|---------------|----------------|
| <b>Mar Chiquita</b>       | Los Cueros stream                    | X             | X              |
| <b>General Pueyrredon</b> | Corrientes stream (1 <sup>st</sup> ) | X             | X              |
|                           | Corrientes stream (2nd)              | X             | n.f.           |
|                           | Los Padres Lake                      | X             | X              |
|                           | Los Padres stream                    | X             | n.f.           |
| <b>Balcarce</b>           | El Peligro stream                    | X             | n.s. (pending) |
|                           | El Pantanoso stream                  | X             | n.s. (pending) |
|                           | Vivoratá stream                      | X             | n.f.           |

n.f.: not found; n.s.: not sampled