

DARWIN200 
CHANGE THE WORLD



The Colours That Paint The Landscape

**In partnership with: ECOFIVE; IPEEC-CONICET;
GLOBAL PENGUIN SOCIETY.**

**by Clara Borba de Cerqueira
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Report 3

Mix of colors, watercolor of the future

Faced with so many challenges, at first glance it is difficult to know the best direction to follow. To awaken people's desire to protect and conserve a species, first, it is necessary to raise awareness in some way. Being captivated by small plants, full of thorns, with tiny flowers that monotonously color the landscape, can be difficult, but with a closer look you can see their magic and let yourself be captivated.

A good start to making people understand the importance of conserving native vegetation is through association with already known charismatic animals. More robust studies regarding the use of native vegetation by the Magellanic penguin population in the El Pedral region can be carried out, investigating aspects such as:

Possible questions:	How to monitor?	Is it possible to integrate more than one team into studies?
In fact, all nests with eggs and chicks live only under the protection of bushes?	Identification of all nests with eggs and chicks; Recurrent trips to the field; Installation of trap cameras to check possible displacements.	Yes, vegetation team to identify plant species.
If a nest is built in the open field, what is the success rate?	Identification of the nest in question; Recurring trips to the field to check.	No
Is there a preference for any specific native vegetation?	Separate the area into parcels (more or less close to the coast); Identify nests and main resting points; Make correlation graph.	Yes, vegetation team to identify plant species.
If there is a preference, can she change from chicks to adults?	Select groups with chicks and carry out long-term follow-up.	Yes, to assist in monitoring and identifying possible plant species.
Can the conservation status of vegetation affect the choice of penguins?	Choose an area with good conservation status that is frequently inhabited and change its conservation status.	Yes, depending on the state of conservation of the bush, which may be more or less dense, the penguin may choose to no longer inhabit that location.

The same can be done for small mammals and all the fauna that inhabit this region, following the example:

Possible questions:	How to monitor?	Is it possible to integrate more than one team into studies?
How representative is the ingestion of endemic plants such as piquillín by guanacos? And other species?	Collection of biological material (feces); Composition analysis in the laboratory.	Yes, vegetation and zoology team (?) – someone who studies these mammals.
What is the seed germination success rate after dormancy break due to contact with the animal's gastric juice?	Instead of throwing away the sample from the previous stage, it is used for physical-chemical and germination tests.	No.

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These forms of integrated research strongly tend to benefit both groups that can work together. In addition to the exchange, there is the integration of information, helping to produce more robust scientific data and more tangible solutions for society.

Studies that aim to understand the physiology of these native plants, such as those carried out by the Laboratory of Ecophysiology and Plant Biochemistry (ECOFIVE) - IPEEC-CONICET, are the key to optimizing germination processes and ensuring the successful propagation of these plant species.

Due to its uses for human nutrition and health benefits, in addition to research focusing on plant ecophysiology, directing laboratory studies that investigate medicinal and nutritional properties that were already known and used by indigenous people in the past, seems to be a good alternative to return the value economic and cultural for these plant species. It is even possible to generate income for the community by investing in techniques for the sustainable use and management of resources.

This way, instead of cutting wood to obtain fire, this population will have a more sustainable alternative to obtain income. Environmental education needs to be a priority, as it will act as the main tool for changing the population's mindset.

In a province that seems to value the beauty of its gardens, rediscovering and investing in the uniqueness of native vegetation for landscaping purposes can solve some problems. As it is already adapted to local climatic conditions, it can be a good alternative to the growing expansion of cities and the insertion of exogenous plants, as in addition to contributing to the maintenance of ancient customs and uses, such plants do not require water consumption as high as the exotic ones.

Combined with the sustainability plan, work on local historical botanical knowledge in schools, aiming to encourage appreciation and recognition of the potential of having endemic species with diverse uses. With these initiatives, the brush is now in the hands of the future generation... and the positive expectation of more colorful pictures for the landscape of Mount Patagonian, its animals, people and native vegetation is growing.

In the case of the great connected web that is planet Earth, the conservation of a species is never related only to itself, in nature the common thing is just the opposite. When it comes to native vegetation, an entire ecosystem is at play.

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