Cyanopsitta

The **Loro Parque Fundación** newsletter

2021
120

CONSERVATION HEROES

DISCOVERY IN COLOMBIA

15 YEARS HELPING TO PROTECT GIBRALTAR'S ORCAS

Poema del Mar AQUARIUM

FUNDACIÓN Canary Islands - Spain WE CARE

LORO PARQUE ANIMAL EMBASSY

Cyanopsitta # 120 - 2021

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Orca in the Strait of Gibraltar (Photo: Circe)
Image obtained with authorisation from the Ministry for the Ecological Transition and the Demographic Challenge.

EDITORIAL OFFICE:
Loro Parque Fundación. Avda. Loro Parque s/n,
38400 Puerto de la Cruz, Tenerife, Islas Canarias, Spain
Tel.: +34 922 373 841 (ext.: 281)
E-mail: lpf@loroparque-fundacion.org

EDITORIAL COMMITTEE:
Javier Almunia
Christoph Kiessling
Rafael Zamora Padrón

PRINTING:
Canarias 7

VISITA NUESTRAS WEBS:
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LORO PARQUE FUNDACIÓN WE CARE

Dear friends,

The world is no longer in any doubt that we are in the midst of the sixth mass extinction, since the publication in 2019 of the United Nations Global Assessment Report on Biodiversity and Ecosystem Services (IPBES). The role of zoos and conservation centres is clearly becoming ever more necessary in the face of this reality.

At Loro Parque Fundación, we have perceived, first-hand, and through our projects, how the pandemic has had a direct impact on nature. Our researchers in the field have reported an increase in deforestation and poaching, given that governments have had to make the health emergency their priority. According to a WWF study, deforestation rates have increased by 150% in one year alone! The planet is at a high risk of seeing years of conservation work gone to waste in a short period of time.

This year will be remembered for the regrettable loss of Gonzalo Cardona, an experienced field agent of the mountains that are home to the yellow-eared parrot in Colombia. We were able to meet him in person in 2019, when he proudly spoke about how he had spotted more than 700 yellow-eared parrots in the same grove. He claimed to be the world's leading expert on this parrot. To express our deep sorrow, we have dedicated an article to him that reflects his perseverance and the importance of his work.

On a more positive note, we are celebrating the 15th anniversary of the work of the Loro Parque Fundación for the protection of the small population of orcas in the Strait of Gibraltar. During this time, the commitment of LPF and the research carried out with orcas at Loro Parque have enabled scientific advances that now allow us to better understand their diet and the threats they face, enabling the creation of a protected marine area for them in the south of the Iberian Peninsula. Work will continue this year with the use of modern techniques, including video cameras, which have been previously tested in Orca Ocean, in order to better understand the hunting techniques of this group of orcas. While we're in the ocean, the Poema del Mar aquarium is also developing pioneering work on sharks, which may help us protect them from extinction in the near future.

And with the recent and long-awaited re-opening of Loro Parque, we have come to realise the importance of relationships with living creatures. Our visitors contribute to the enhancement of our animals' environment, giving rise to changes, sounds, looks and unexpected situations. An entire set of benefits that directly affect animal welfare and gives us lots of energy to continue with our work, through their valuable participation.

WE CARE

Christoph Kiessling.
President of Loro Parque Fundación

IUCN

2011-2020 United Nations Decade on Biodiversity

Conservation heroes

Biologist Maikel Cañizares (right) and his team in Cuba make forays into the jungle to monitor protected species. Simply getting to the conservation points involves huge challenges. Photo: M. Cañizares / LPF

Colombia "the best protector of yellow-eared parrots in the world", as he told us himself, when we visited the project in Colombia. Threatened by former paramilitaries who saw him as a menace because he knew his way around the mountains perfectly, counting every parrot he saw, he was always proud of his work for the protection of the species. Someone like him is very difficult to find, but he set an example for the people who knew him and this will undoubtedly leave a mark locally for the protection of this parrot. Gonzalo gave his life for this cause and his memory will live on.

In all the countries where we have staff working for the protection of parrots and other species, those workers have had feelings of unease and fear with regard to this virus; however, they have not hesitated to go out into the field to continue with the census and control of the areas that require such work.

At Loro Parque Fundación, we wish to acknowledge and thank all the conservation heroes who have been, and continue to be, an essential pillar in our projects. Those who save species from becoming extinct. ■

You can view the images of our project in Cuba using the following QR code **(remember to activate the subtitles)**:

The pandemic has been and continues to be fatal for the conservation world. Many of our projects have reported that, regrettably, the authorities have had to focus on health matters, leaving environmental issues hopelessly neglected. Something that impacts natural resources directly. Poachers have made the most of this situation, taking advantage of both the fauna and the flora.

The virus has also affected the presence of park rangers in the reserves due to restrictions on movement. And not only has the virus wreaked havoc, there have also been *tremendous losses such as the death of* ***Gonzalo Cardona*** *in*

Gonzalo Cardona in Anaime, Colombia. 2019. Photo: R. Zamora / LPF

Ebrima Jarju in Toche / Colombia, during a LPF expedition. Photo: LPF

Macaws know how to use tools

Macaw pushing different stones to get a nut. The research was carried out at the Max-Planck Comparative Cognition Research Station at Loro Parque - Animal Embassy, Tenerife, in collaboration with the Loro Parque Fundación.
Photo: LPF

This has been demonstrated and published by scientists from the Max Planck Institute of Ornithology, who are carrying out research at the headquarters of the Loro Parque Animal Embassy.

Macaws are capable of using various stones as a substitute for the function of a stick tool. Amazing!

Scientists working non-stop at the Loro Parque facilities have come to the conclusion that this behaviour is probably the result of the macaws introducing an innovation, through learning by trial and error. This could open up more lines of research on how many animals can innovate with the use of tools in the wild.

Under laboratory conditions, certain parrot species (such as the Kea) are able to make and use stick tools to manipulate objects that would otherwise be out of reach. However, it is not yet clear to what extent these birds understand all the functions of the tools. The experiment sought to investigate if other parrot species could recreate the function of a stick tool with multiple smaller components.

Tests were carried out using two macaw species whose beaks are very large and curved, which makes it difficult to manipulate a stick tool like other bird species might.

They were shown how a stick tool could be used to pull a reward out of a horizontal tube. They were then offered the same tube but with several smaller stones to be used for pushing the reward out of the tube. To get the reward, the parrots had to insert several stones (4 or 5) into one end of the tube, one after the other, to get it out the other end. One of the parrots was able to do this consistently immediately after observing the stick tool's function, while two more were able to do so after they were shown that a single stone could push a reward out of a shorter tube.

The lead author, Laurie O'Neill, said: "I was impressed with the parrots' success as they had to perform many consecutive actions to get the assorted range of stones they needed. The macaws could understand the causal connection between the stones and how they connected to each other to get the reward."

Parrots are true explorers and willing to combine and interact with objects in their environment. ■

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Researcher Alex Koch with one of the macaws participating in the animal cognition research at the Loro Parque Animal Embassy.
Photo: A. Azcárate / LPF

Cockatoos are capable of using tools to solve problems.
Photo:Alice Auersperg

59 parrots have already been released in Ecuador!

Moment of the release, in which the first red-masked parakeet flew to their meeting with nature.
Photo: F. Jocotoco

The reintroduced specimens adapted perfectly to the environment.
Photo: F. Jocotoco

Once again, the successful release of 20 more red-masked parakeets took place in Ecuador, within the project supported technically and financially by the Loro Parque Fundación, in unison with the Fundación Jocotoco.

Thanks to this project, 20 parrots were released in 2018, 19 in 2019 and now 20 more have been set free. 59 in total. *The birds received an exhaustive veterinary check, and were fitted with microchips and rings for long-term identification.*

All the birds had been confiscated by the authorities, from the illegal market for wild animals. They were trained for a year with the collaboration of the Arenillas Zoo, where they recovered flight and prepared for their reintegration into nature.

These parrots, who are victims of species trafficking, have been fortunate to be rescued and rehabilitated. Their adaptation to the habitat was carried out in the Buenaventura Reserve, from where biologist, José León, coordinates the monitoring of their reinsertion into the natural environment. ■

You can see the images of this release using this QR code **(remember to activate the subtitles)**:

SMARTPHONES, allies for conservation

New technologies are turning out to be decisive in conservation projects. The identification of animal and plant species no longer depends solely on a few field experts. We can all take part in this process thanks to the extended use of new technologies in practically every corner of planet earth.

The development of data collection applications makes it possible to identify and locate species in a reliable way, with the chance to analyse them quickly, thus avoiding having to make notes on paper and the typical inaccuracies of a field trip.

Smartphones can help with direction, through the compass, and provide information including altitude, maps, photographic and sound records, as well as GPS location, data sending and exchange between field researchers.

All of this has allowed for Loro Parque Fundación projects to advance impressively in recent years, thanks to the work carried out in past decades. The precision that can now be achieved based on experience and knowledge is impressive, to say the least. In our projects in Africa for the protection of lions in Zimbabwe or the yellow-fronted parrots in Ethiopia, the applied use of smartphones represents a major advance. ■

LPF ranger, Admasu Assefa, in Africa geolocating trees reforested in previous years.
Photo: Nabu

Sustainable reforestation in Ethiopia

Reforestation crops use a sustainable system that does not require protective plastic. Photo: Nabu

Yellow-fronted parrots have benefited greatly from the growth of native plants. Photo: Nabu

A future for the yellow-fronted parrot and many other species in its habitat: that is the purpose of *this project carried out in the KAFA Reserve, in Ethiopia, where the alliance with NABU and Loro Parque Fundación is supporting a project for planting more than 12,000 native tree seeds to cover the needs of thousands of animals.* They will benefit directly from the restoration of 25 hectares of degraded forest that are starting to look like a true paradise again.

The planting system, protected with palm leaves, which avoids the use of plastic, is having remarkable success. Reforestation is combined with local awareness campaigns among the different regions where the communities contacted by the project rangers participate directly in the counting of the birds that are protected.

In this case, the yellow-fronted parrot already feeds in the reforested areas close to the nurseries where its plant future is developing.

Growing native plants is an investment for these communities who see their environment being enriched in a meaningful way, with the species that were so abundant in the past returning once again.

New technologies also play a key part in the projects of the Loro Parque Fundación. In this case, the use of smartphones with a specific application that allows the recording of any contact with the biodiversity under study means great progress in detecting the strengths and weaknesses of the regions.

The participation of the local population has made it possible to detect, by area, the actual presence of yellow-fronted parrots in an emblematic habitat, a biosphere reserve in southwestern Ethiopia which stands out for its great diversity of species, including 300 mammals, more than 244 plants that include Wild Coffee (*Coffea arabica*) and more than 110 endemic tree species. An area where more than 230 bird species come together, which is why it has also been declared an Important Bird and Biodiversity Area (IBA). ■

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From left to right: Admasu Assefa (LPF Ranger), Dr. Luis Santiago Cano Alonso (Trainer for bird monitoring) and Abebe Belachew (LPF Ranger). Photo: NABU

Asaye Alemayehu (Natural Resources Management Officer). Photo: Nabu

STOP poaching in Africa

The presence of rangers effectively prevents poaching. Photo: Panthera

Lenin Ncube, LPF Ranger during monitoring. Photo: Panthera

The surveillance team detects and removes deadly snare traps. Photo: Scorpion APU

Through the KAZA project supported by the Loro Parque Fundación in the Kavango Zambezi Transfrontier Conservation Area, *during 2020, 90 mammal snare traps, 70 bird traps and two trap clambs were removed and 5 poachers responsible for killing a leopard were arrested.*

This successful project includes the Scorpion Anti-Poaching unit that patrols large areas of the lion's territory. *The lion, so well-known, is a species that has seen its populations decrease by 43% during the past 21 years, leaving about 20,000 lions throughout the African continent. A dramatic decline for the king of the jungle.*

The use of new technologies, such as smartphone applications, has made it possible to efficiently record the actions of poachers, who have seen their activities frustrated thanks to the presence of rangers and the monitoring of their usual poaching areas.

The rangers seek to prevent the use of poisonous substances, the hunting for bushmeat for human consumption and the poaching for elephant ivory.

Loro Parque Fundación's contribution so far to this project, managed by the Panthera organisation, amounts to USD 379,940. This allows for the education and training of patrols that are increasingly effective.

Hwange National Park, in Zimbabwe, is home to one of the largest known lion populations, and to leopards. It is where this project is carried out, which includes an educational programme called 'children in wild areas' that teaches the little ones to understand the importance of their environment and how to take care of it. One of the activities carried out by the schoolchildren involves growing small orchards. They have had such good results that they have secured sufficient production to cover the cost of the daily diet in these schools. ■

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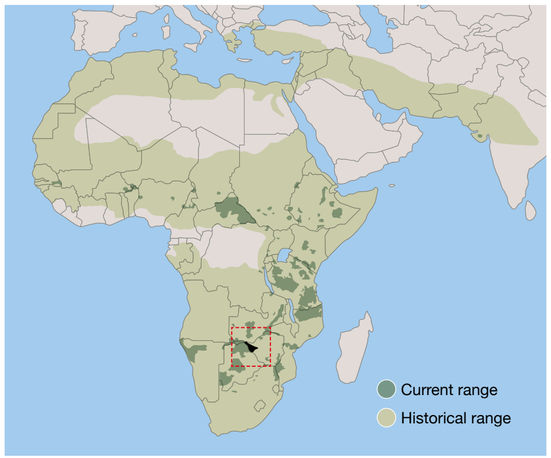
School orchards are an important resource for pupils. Photos: KAZA



The current distribution of lions in Africa has been reduced to small patches on the continent. The area shaded in black is the one that corresponds to the Hwange National Park, one of the most important lion environments in the world.

15 years helping to protect Gibraltar's orcas

Orca in the Strait of Gibraltar in the vicinity of the boats that usually operate in the area. Photo: Circe (Image obtained with authorisation from the Ministry for the Ecological Transition and the Demographic Challenge)

In 2021, the Loro Parque Fundación is collaborating on a project to mark orcas with a temporary marking system that includes video/audio recording and movement monitoring. In the images, Dr. Renaud de Stephanis, Project Manager, placing and recovering one of the markers. Photo: A. Azcárate / LPF

The study of the group of orcas that visits the waters of the Strait of Gibraltar each year has been one of the priority objectives of the Loro Parque Fundación since 2006. The initial project had two sides: on the one hand, the field work with the orca population in the sea, and on the other, the experiments with controlled diets in Loro Parque. This approach yielded a *pioneering result, in providing an estimate of the diet of the different orca family groups, through skin biopsies.* Following this, the Loro Parque Fundación has continued its work in Gibraltar, always supported by the NGO CIRCE (Conservation, Information and Research on Cetaceans) dedicated to researching cetaceans in Gibraltar and the Gulf of Cádiz since it was founded by Dr. Renaud de Stephanis, back in 2000.

In addition to this pioneering work based on the study of stable isotopes, over these past 15 years, the different projects carried out with CIRCE have allowed them to continue the photo-identification work started 20 years earlier, obtain biopsies with which to carry out genetic and ecotoxicological research, carry out satellite observations to determine the use of space by orcas in the area and, ultimately, keep up the monitoring of a population that was provisionally considered to be critically endangered due to its small size and its dependence on bluefin tuna.

Thanks to these years of collaboration, 17 scientific papers have been published, including articles in peer-reviewed journals and presentations at technical congresses.

Although probably the most important achievement was the approval, in 2017, of the Conservation Plan for the orcas of the Strait of Gibraltar and Gulf of Cádiz, which includes protection measures to actively manage said population through promoting and implementing specific measures that facilitate their survival and ensure their good state of conservation. These actions are aimed at the protection, conservation and recovery of both the orca population and their habitat, on the basis of the best available scientific information and taking account of the environment's socioeconomic characteristics.

The collaboration between Loro Parque Fundación and CIRCE will continue in 2021, with a new project intended to analyse the energy cost for orcas involved in hunting bluefin tuna in deep waters, which is based on high-speed underwater pursuits that leave the tunas exhausted. *In order to estimate the energy that orcas consume in this type of hunt, temporary markers will be used, which adhere to their skin by suction cups to avoid any damage or discomfort.* The markers are equipped with accelerometers and gyroscopes (such as those found in Fitbit devices used to record sports activities), as well as a hydrophone and a video camera, and they are released automatically after a few hours. With this information, it will be possible to reconstruct the course of the animals, their speed, acceleration, changes of direction, etc. Based on all this information, it is possible to calculate the energy expenditure required by applying mathematical models. This information is of enormous interest, given that the energy balance (energy obtained from food minus energy consumed in hunting) of orcas must be sufficiently positive to allow them to survive and reproduce adequately. If the food density is scarce and the balance is negative, the population could stop reproducing and their numbers could even fall.

In addition to the continuation of the project with the orcas of the Strait of Gibraltar, 2021 will almost certainly be the year of the International Symposium on orcas in Tarifa (Cádiz), organised by CIRCE and sponsored by Loro Parque Fundación, and which had to be delayed due to the COVID-19 pandemic. This international event will bring together orca experts from around the world, who will be able to behold the exceptional population of the Strait of Gibraltar and take advantage of the great amount of scientific knowledge and the benefits for the conservation of the species that these 15 years of joint work have provided. ■

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New discovery for science

Fuertes's parrot is perfectly camouflaged in the environment where it feeds. Spotting them is quite a challenge. Photo: J. C. Noreña / FVS

From the Campoalegre Soil Conservation District, located in the Central Colombian Andes of the municipality of Santa Rosa de Cabal, department of Risaralda, located between 2,790 and 3,200 metres above sea level, our tireless collaborator, Juan Carlos Noreña, has reported a major scientific discovery in relation to a parrot that the Loro Parque Fundación has been protecting for many years and which is classified as Critically Endangered (CR). We are referring to the *Hapalopsittaca fuertei* species, also known in the region as Fuertes's parrot or the indigo-winged parrot.

This intrepid researcher walks incessantly through the Colombian mountain ranges looking for a mysterious parrot that moves between the shadows of the area's ever-present mist.

It lives in a place with a population of approximately 20 specimens. *It is considered the rarest and scarcest parrot in Colombia,* and one of the most unknown and threatened parrots in the world because of its limited range of distribution and its low density in that area, due to the destruction of its habitat and its cryptical behaviour. Furthermore, the species' diet is based almost exclusively on a hemiparasitic plant, popularly known as Mistletoe, Matapalo, or Suelda, whose scientific name is *Antidaphne cf. Andean Kuijt*. It grows attached to several species of trees that exist on the edge of the forests. In the four localities of the country where this parrot has been spotted, it has been possible to identify the same nutritional relationship, which shows the parrot's dependence on this plant.

Thanks to the follow-up and monitoring carried out on the parrot population, through the support of the Loro Parque Fundación, *it has been found that in addition to the species of this type of mistletoe, there are other nutritional species that had not yet been officially registered, such as the fruits from a climbing plant popularly called Bejuco Colorado (**Muehlenbeckia tamnifolia**) and the fruits from the Arrayan Guava (**Myrcianthes rhopaloides**).*

When the parrot is consuming fruits from the Arrayan Guava, which is in full fruit in August, it has been possible to verify their preference for green fruits, leaving aside the ripe fruits, which are also consumed but to a lesser extent. The consumption of Bejuco Colorado has only been verified on a few occasions and in a very leafy area where the opportunities to observe the parrots is quite rare.

More information on the diet of this species is crucial for its conservation. It will even help to predict its appearance depending on the presence or absence of these plants in relation to their level of ripeness.

Fundación Vida Silvestre, with the financial and technical support of Loro Parque Fundación, has implemented monitoring, awareness-raising and information activities for the species. Thanks to this support, it has become a symbol of pride for the inhabitants of Santa Rosa del Cabal, which will generate identity and a sense of belonging for this Critically Endangered species. And it is in this municipality that this new observation for the science of nutritional plants has been made, which is of great importance for further examination of the ecology and conservation of the species. ■

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Arrayan Guava. Photo: J. Noreña / FVS

The mistletoe fruit is consumed in its different forms by Fuertes's parrot. Photo: J. C. Noreña / FVS

The progress of deforestation in the habitat is one of the major challenges for this species that does not usually fly in open spaces. Photo: J. C. Noreña / FVS

Mural made in the municipality of Risaralda about Fuertes's Parrot. Photo: J. C. Noreña / FVS

Major aid for conservation

The commitment and support provided by institutions to our foundation is now more important than ever. Now is the time when many national parks and protected reserves worldwide are facing difficulties with regard to their sustainability. The financial support for our projects is paramount for many species that benefit from the protection of habitats, and the research and education of the communities that live in these environments.

President Christoph Kiessling at the Animal Embassy explaining the foundation's history and its involvement in protecting the environment. From left to right: Marta Marrero, Olatz Beatriz Güemes and the Regional Director of Banca March, Javier Galarraga, together with Javier Almunia. Photo: LPF

At the top, Bruno Hensel from the Wuppertal Zoo who handed over the donation to our representative, Wolfgang Rades, together with the Director, Silja Herberg. Photo: W. Rades/LPF

For this reason, *we deeply appreciate the support received from entities such as Banca March,* which, for 14 years, has truly supported the conservation of biodiversity thanks to the projects of Loro Parque Fundación, which, in all its actions, helps local communities through education and training, thus encouraging young people to protect their environment.

Likewise, we have again received the support of the Aralandia project at the Wuppertal Zoo, in the sum of €20,000. Our representative in Germany, biologist Wolfgang Rades, collected this important sum in person from Bruno Hensel in a ceremony held inside the new macaw aviary to promote the actions, in situ and ex situ, of Loro Parque Fundación around the world. ■

ON-LINE training Loro Parque Fundación

The first online workshop has been held at Loro Parque Fundación.

The broadcast in German of a psittacine welfare management workshop has recently been a successful tool for contact and communication with parrot lovers.

Topics *relating to breeding and advanced animal welfare techniques* were among those shared at this event, where a large team of experts also talked about nutrition and applied clinical concepts.

The participation of Dr. Ghysels from Versele-Laga, which is a company widely committed to the concepts of Loro Parque, and that of Loro Parque Fundación ambassador, Bärbel Köhler, representing the company, Abaxis-Zoetis, that also works with us, have been *key in offering their professional perspectives to promote this important workshop* for all who wish to learn about and train in advanced management of psittacines.

This event has contributed to a rich exchange of impressions, sharing up-to-date knowledge about these birds with the members of the Loro Parque Fundación. ■

Speakers Bärbel Köhler, Patrick Ghysels, Marcia Weinzettl, Nuhacet Fernández, Cristina Dreisörner and Rafael Zamora made online presentations for all German-speaking members of the Loro Parque Fundación. Photos. LPF

Conservation without pause despite COVID 19

Although global circumstances have not been favourable due to the exceptional situation caused by COVID 19, Loro Parque Fundación has continued to work incessantly to protect nature during 2020 and also in 2021. Biologists have obtained their licences in the field (in situ) to be able to carry out their research work.

In different countries, our collaborators have been able to keep up their research and protection of the species. In countries such as Ecuador, Brazil, Bolivia, Colombia, Cuba, or Nicaragua among others, with restrictions on movement in force, this has not prevented field monitoring of threatened species. *All this thanks to all our sponsors who have kept up their valuable support and to the field technicians,* who, in spite of the circumstances, and always with the required biosecurity measures in place, have been able to keep up conservation work during the pandemic.

We are grateful to all those people who have worked tirelessly for the sake of conservation; Highlighting the work carried out in places such as Ecuador, where the pandemic has complicated things considerably and yet our local collaborators have made significant progress in the conservation territories that Loro Parque Fundación has in the country. Territories where the yellow-eared parrot was once detected, and where conditions have now been improved to ensure an intact, enriched environment for the future return of this extinct species to the area.

Likewise in Bolivia, where the foundation maintains an idyllic space in Beni, home to the blue-throated macaw and our ongoing presence will enable the development of the species and its care. A place which, thanks to the continued support over so many years, has managed to keep alive the tradition of using alternative feathers in local festivities as opposed to using headdresses made from natural feathers, thus avoiding the death of thousands of macaws. Today, this is a clear reality of the Foundation's permanent presence. ■

You can see the images of the project using this QR code **(remember to activate the subtitles)**:

Technicians have carried out their conservation work in the field, adopting the required biosecurity measures. Photos: Aquasis / LPF

Miss Bolivia, Alondra Mercado, committed to the LPF message. Photo: Birds of Bolivia

In Ecuador, the monitoring of the Buffon's Macaw released successfully has continued. Photo: F. Jocotoco

IX Congress of Biology Students, University of La Laguna

On 13th and 14th of April, the Biology Department hosted the IX Congress of Biology Students. *The Congress, which was organised by the graduate students themselves and sponsored by the Faculty of Sciences and Loro Parque Fundación,* was held online (semi-presential) and was attended by numerous students of this and other degrees, as well as by the professors and the general public.

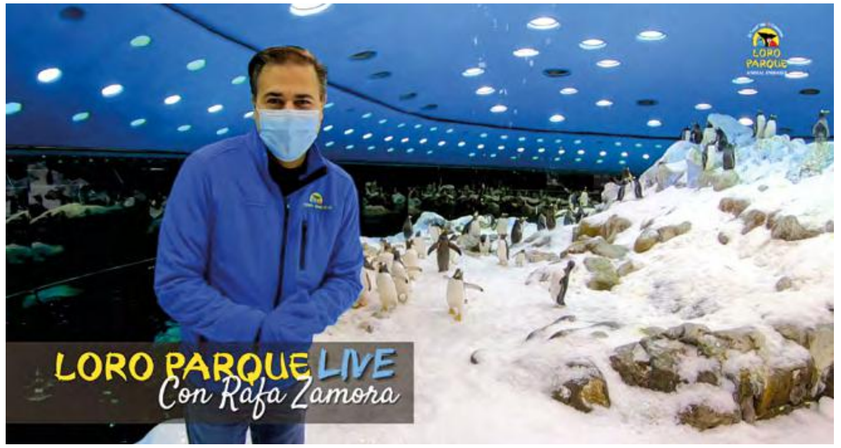
A total of 9 oral presentations and 17 posters were brilliantly presented by the Biology students, covering a wide range of topics (Paleontology, climate change, Biomedicine, pest control, artificial seeds, etc.) that gave rise to a large number of very interesting questions and comments, both among the attendees present and those who were following the event online.

Prizewinning students at the IX Congress of Biology Students. From left to right: Guillermo Sicilia Pasos, Mario Martín Almeida, Axel Adrián Delgado Brito and Javier Tuero Septién; the latter collected the award on behalf of Andrés Rufino Navarro, who presented the work jointly with him. Photo: M. Hernández

The congress also included the presentation of two plenary conferences. The first one by Dr. Jacobo Marrero, President of the NGO, Tonina, was entitled: Determination of the conservation status of the short-finned pilot whale (*Globicephala macrorhynchus*) in southwest Tenerife. The second day, Dr. Pilar Foronda, member of the University Institute of Tropical Diseases and Healthcare of the Canary Islands, gave the talk "Pathogens in our environment". In both conferences, the speakers provided an extensive review of their research over the last few years, attracting the interest of the students.

The congress ended with the presentation of *awards to the 2 best presentations on Astrobiology, the first prize, and on epigenetics, the second,* and the 2 best posters (computerisation of the TFC herbarium Pollen Database (SEGAI) and Tenerife's coastal zooplankton. ■

Great success of Loro Parque Live



The presentation of life at Loro Parque during the months of lockdown and restrictions, has enabled the exchange of information between us and our followers who have witnessed the ongoing development of the animals in the park. *With views that reached more than one million followers,* Loro Parque Live has been very well received. Now we are using a more advanced format and with more content to provide greater knowledge to our target audience. The new *Loro Parque Live already offers enriched presentations in which curious facts about the animals are explained with extra content.* Don't miss them and sign up as soon as possible. ■

You can see all the previous episodes using the following QR code:

Sensational start of the breeding season 2021

Senegal Parrot Chick (*Poicephalus senegalus*). Photo: M. Pérez / LPF

At Loro Parque Fundación, the start of the breeding season was bang on schedule. The start of the year saw the birth of the first chicks of the season. The parrots, filled with purpose and brimming with health, have made the most of the mild Canarian winter to start the spring with part of their life tasks well advanced.

In these months, ***more than 500 chicks have been born and ringed.***

Already during the year 2020, we recorded more than 1,000 births, so the forecast is that the numbers will increase even more. Great news for conservation as each of these specimens is a guarantee of the survival of their species in nature.

47-day-old Scarlet-breasted Lorikeet Chick (*Trichoglossus forsteni*). Photo: M. Pérez / LPF

Stability in controlled environments and under human care is what will allow all these represented species to have a more promising future given the levels of threat to which they are exposed in their habitats.

The conservation team, supervised by biologists Marcia Weinzettl and Lubos Tomiska, has been working these past months to ensure that each pair has everything they need during the reproduction stage, where attention to detail is the key to success. ■

You can see all the species that have bred at LPF using the following QR code:

Science and knowledge at your fingertips

In this issue of Cyanopsitta, we are giving our readers the option of obtaining an educational document of great value for animal and nature lovers.

We are giving you ***an encyclopaedia on the scientific facts related to the conservation of marine mammals.*** A fully informative document that sheds light on existing myths and realities relating to the human care for these animals and what really happens in their natural habitat.

Translated into several languages, you will be able to download these documents free of charge. They explain in detail, from a scientific basis, the most frequently commented aspects on social networks, which are often controversial topics. ■

You can access this document using the following QR code:

CanBio, a leading climate change project

The Social Council of the University of La Laguna, within the series of conferences, Encounters with the Future, organised a conference on "Climate Change and the Environment: from the climate emergency, another world is possible. The Canary Islands: review of the state of our Nature". This event was a meeting point for professionals from different areas who listed the dangers threatening the Archipelago and called on society to respond.

The event served as an opportunity for the directors of four national parks from the Canary Islands to raise awareness around the alarming situation into which the jewels of the biodiversity of our archipelago are being pushed by climate change. Some of the main researchers of different projects that the ULL is carrying out in the field of climate change and sustainability also participated, in search of technological solutions to remediate the effects of this global change.

In this sense, the PhD in Marine Sciences and director of the Loro Parque Fundación, Dr. Javier Almunia, presented to attendees the CanBIO project, co-financed by the Government of the Canary Islands, as a model example of public-private collaboration in the monitoring of climate change and the role of the oceans in regulating CO_2 concentration in the atmosphere. Dr. Almunia showed the first results of CanBIO, which have just been published in the journal, Science of the Total Environment, and which show the net sink effect of Macaronesia on carbon uptake. The measurement network created by placing state-of-the-art scientific instruments on commercial and passenger ships *has already served to integrate Spain into the ICOS* (Integrated Carbon Observation System) network and *has placed the Canary Islands at the forefront of Europe in the measurement of carbon flows between the atmosphere and the ocean.* This data will be of vital importance to improve the forecasting models at the regional level, which serve organisations such as the Intergovernmental Panel for Climate Change to make their predictions on the effects of climate change at the regional and global levels. ■

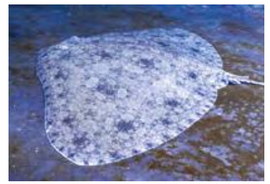
From left to right: Ms. President of the Social Council of the University of La Laguna, Ms. María Dolores Pelayo Duque, Ms. Priscila González, Director of the Fundación Diario de Avisos, and Dr. Javier Almunia Director of Loro Parque Fundación

Among the multiple investigations included in the CanBio project is the monitoring of sea turtles in Fuerteventura. Researcher Tony Gallardo analysing tracks with a drone.
Photo: LPF

Pioneering research with Butterfly Rays in Poema del Mar

+ info
(remember to activate the subtitles)

The Director of Biology at Poema del Mar, Patricia Campos, and the veterinarian, Ángel Curros, coordinating the process.



Photos: Mónica Tamayo / PDM

At the rate that certain species are disappearing today, science has not had time to discover in detail the fundamental aspects of their reproductive biology, an essential matter to be able to establish conservation plans. This is the case *of the Mantelina or butterfly ray (**Gymnura altavela**) classified as critically endangered (CR)* on the red list of species of the International Union for the Conservation of Nature (IUCN). Its last known stronghold is the archipelago of the Canary Islands and the Loro Parque Fundación is funding a related conservation project based on observation with acoustic markers. To unravel the reproductive details of this species, Poema del Mar has started a semen collection programme with the Veterinary Faculty of the University of Murcia, which will initially allow us to know more about the age (or size) of maturity in males. In the future, this research, led by the veterinarian Marta Muñoz, could serve to test assisted reproduction techniques in this species which is on the brink of extinction. ■

Also known as butterfly rays, they are currently in danger of extinction. Indiscriminate capture using fishing nets and the destruction of their habitats are some of the threats that this species is facing.
Photo: Felipe Ravina / Species of the Canary Islands

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