

LORO PARQUE 50th Anniversary

GREAT ENVIRONMENTAL SUCCESS

SENSATIONAL SUCCESS STORY OF REINTRODUCTION

CANARY ISLANDS, EPICENTRE OF WORLD CONSERVATION



2022







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Dear friends,

I would like to congratulate my father and his wife on the 50th anniversary of Loro Parque. For the great achievement of their tireless work and sacrifice with which they have dedicated their lives to conservation and excellence in tourism.

It is a great honour to represent a company that is appreciated and recognised worldwide. Loro Parque has taken a leading position among the zoological and scientific centres focused on conservation in the Canary Islands.

Loro Parque's efforts in collaboration with government institutions and Canary Islands universities in the field of conservation are leading to ground-breaking research and findings that put us at the forefront of these areas of science.

Over the last fifty years we have witnessed an enormous evolution in zoos and aquariums as they adapt to modern times, becoming tools for the conservation of biodiversity, improving their relationship with science and academia, and reinforcing their role as educational resources for a society that is increasingly detached from nature and animals.

And this is a significant year, as Loro Parque celebrates its 50th anniversary with a cascade of important events for the world of nature and its ecosystems. We have enjoyed the 10th International Parrot convention with an extraordinary turnout of experts from around the world. The international meeting of the World Conservation Specialist Group was also held on the Canary Islands and hosted by our group. Experts who work and design species conservation strategies at an international level.

Loro Parque has also hosted the annual meeting by the World Association of Zoos and Aquariums (WAZA). When more than 300 members of the most renowned zoos and aquariums in the world met face-to-face to share experiences and continue contributing to wildlife conservation.

All of these have been high-profile encounters that have added to Loro Parque's recognition as one of the centres at the forefront of the shift of zoos towards a more modern and progressive model. In this context, the important commitment that saw the creation of the Loro Parque Fundación is a core element, but it is also important to highlight that nothing would have been possible without the support of a business system oriented towards sustainable tourism which is always based on offering the highest quality to its visitors, with animal welfare and protection as its cornerstone.

This year we have reached the figure of 8 billion people on earth. A number that ecosystems will find hard to bear if there is no commitment to sustainability and care for the environment and all its living beings. Our efforts are focused on these objectives and have borne fruit because, thanks to the Loro Parque Fundación, 12 species have now been saved from extinction. Two new parrot species have had their threat category changed thanks to our continued support over time. This is great environmental news because it shows it can be done.

We would like to highlight the birth of a Lear's macaw, the offspring of parents who were born in Tenerife under our care and who were successfully reintroduced in Brazil. This is a huge piece of news for conservation as it demonstrates once again the great importance of zoological organisations in the effective protection of species.

Enjoy reading and we are counting on you to continue this work.

WE CARE

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Christoph Kiessling. President of Loro Parque Fundación





50 years Loro Parque

On 17th December 1972 the history of Loro Parque began. A total of 25 enthusiastic people, led by Wolfgang Kiessling, 150 parrots and 13,000 square meters were enough to lay the foundations of the most respected zoological institution in the world from the Canary Islands. This animal and plant sanctuary has grown and evolved under the premises of animal welfare, research, conservation, education, and the protection of biodiversity.





After 50 years of experience, thanks to Loro Parque it has been possible so far to save 12 species of parrots from imminent extinction. currently participating in studies by universities and national and international organisations.

Throughout these years, more than 52 million visitors have been able to see thousands of animals with their singularities and their situation in nature. Even more importantly, it is now possible to see the clinical, laboratory and behavioural research handling of the animals in the public facilities of the Animal Embassy. Loro Parque has maintained a meteoric trajectory full of challenges and advances. It stands out for presenting the largest representation of parrots in the world, creating cutting-edge facilities for large and small primates, for marine mammals or unique facilities on the planet such as Planet Penguin.

The exhibits that the park has developed steadily and without pause over the years have attached to them the care and attention to



The first show in Europe to showcase the amazing skills of parrots was at Loro Parque. Photo: LP

detail, ensuring that the animals have everything they need to develop a full life in which they can even breed on a regular basis. Many of these species are endangered in the wild and thanks to accredited centres such as Loro Parque they have been saved from extinction.

For the 50th anniversary celebration, Loro Parque invited the

residents of Puerto de la Cruz to enjoy their facilities. 30,000 tickets to visit the park that has twice been named the best zoo in the world on

Tripadvisor. Its founder Wolfgang Kiessling, president of Loro Parque and his family wanted to express their deepest gratitude to the people of Puerto de la Cruz for their unconditional support during all these years.

Two sensational new exhibits have also been inaugurated for this year's celebration. The "Gruta": in which the fruit-eating bats of South America perform their nocturnal aerial evolutions in front of visitors in a unique cavern setting. And Oceania: a space where Australia's multicoloured parakeets make their flights in an immersive environment where the public can appreciate the peculiarities of the Australian landscape from which they originate.

There is always a reason to visit Loro Parque and even more so now in its celebration.

Wolfgang Kiessling founded Loro Parque with a hundred parrots. Photo: LP



Wolfgang and Brigitte Kiessling at the opening of the dolphinarium. Photo: LP



Great environmental

The 10 species saved from extinction have been joined by two more, thanks to the continuous action and commitment of the Loro Parque

SUCCESS

Fundación Few institutions in the world have managed to save a single species from extinction. When a species is threatened with extinction, it can usually take decades to change the level of threat in the wild, and often this is not even achieved, with fatal consequences for the entire ecosystem in which the species lives.

The Foundation has provided and will continue to provide technical and financial support to develop conservation projects for parrot species whose chances of survival have been very low. Of some species, such as the vellow-eared parakeet in Colombia, there were not even 100 living specimens 20 years ago. Today, thanks to these efforts, there are several thousand specimens and the species continues to spread, while field biologists continue research to ensure that the species is conserved and continues to improve its endangered status.

One of the species whose threatened status is changing is the Yellowshouldered Amazon or Venezuelan Yellowshouldered Amazon. For more than two decades, the Foundation has worked with the local organisation Provita, whose scientists go to the nests of these parrots to protect and monitor them. Today, it is listed on the IUCN (International Union for Conservation of Nature) Red List as a non-threatened species.

The second species saved from extinction is the Fuertes parrot, the rarest parrot in Colombia and one of the least known in the world. Its cryptic habits in the cloud forests of the Colombian high jungle made it disappear silently. The alteration and fragmentation of its habitat, which is the reason for its low numbers, is being reversed thanks to direct research in its habitat and raising awareness of its protection among the local population. Actions that Loro Parque Fundación is actively

carrying out in the country together with

Fundación Vida Silvestre.



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SAVED lorhynchus lear FROM EXTINCTION 2018 - 10.000 Exemplars LORO PARQUE **FUNDACIÓN** tacula eque 2018 - 10.000 Exemp Mauritius Scientific and social work in Colombia allows the Fuertes parrot to thrive. Photo: Fundación Vida Silvestre

> Constant monitoring of nests in the arid environment of Margarita Island in 🕨 Venezuela is an important part of the project's success. Photo: Provita





Sensational reintroduction success of the lear macaws

Flight of the first Lear's macaw chick in the wild, offspring of parents born in the Loro Parque Fundación.

Since the 1990s Loro Parque has been involved in the conservation of a rare blue macaw of which only a few dozen were known in the wild. In 1983, only 60 specimens were counted, making them extremely rare and in critical danger of total extinction. In Brazil, different experts participated in meetings aimed at conserving and restoring this small population located in a remote part of

In 2006, the Loro Parque Fundación received two pairs of Lear's Macaws from the Brazilian government. They were two illegally trafficked pairs that had been seized and placed in a Brazilian zoo.

The foundation accepted the challenge of receiving these pairs, in order to try to get them to reproduce. Despite knowing that breeding them was not easy as they are a species adapted to extreme habitats in their country of origin.

The entire conservation team did intensive work on dietary studies and environmental enrichment. They searched for the palm fruits that similar to those consumed by the species in their natural environment and offered them to the new arrivals, who immediately adapted to a comfortable environment that lacked for nothing. The nests were camouflaged behind an artificial rock screen and had all kinds of natural elements at their disposal to enhance their We noticed that the pairs alternated their calls

between each other. And this seemed to suggest they would prefer to change. Nature spoke to us and so we listened. We swapped the male from one aviary to put

unpaired female and vice versa. It took a very short time for us to see how well they hit it off.

Six months after the arrival of both pairs, the first egg was laid and the first hatchings were not long in coming. It

was a particularly exciting time. This would be the first of 40 Lear's Macaw chicks born in Tenerife to date, 19 of which have been returned to Brazil to continue the project, in which Brazilian institutions are involved, both in human care and in the wild.

After the appropriate periods of training and the selection of the most suitable specimens, both genetically and for their behavioural characteristics, 8 individuals were sent for reintroduction into the wild. These Tenerife-born macaws were prepared in a large aviary immersed in their natural habitat to face the harsh conditions of the Brazilian caatinga. Where there are no rivers or lakes, only scarce rainfall and where

predators are on the prowl. Each macaw can gain only a small amount of water from each hard date seed

native to its habitat In a remote part of Brazil, there were two isolated individuals of which there had been no descendants in recent decades. And this is where they were reintroduced. They adapted successfully and almost four years later one of the pairs has managed to raise the first chick on

their own. The breeding pair has found for itself a cliff where the reproduction



The nest is located in an inaccessible cave in the cliffs. Photo: Fernanda-Riera

+ info

of the species historically occurred. A 7-year-old male and a 10-year-old female. They are the undisputed stars of this great conservation story.

They have raised a healthy chick and they are still feeding it until it becomes independent under the watchful eye of the project's field biologists.

This is a sensational historic milestone and the beginning of an unprecedented conservation success story. It takes up to a decade for a pair of these macaws to begin viable breeding.

The fact that ex-situ (under human care outside their natural habitat) and in-situ (in their natural habitat) breeding is being achieved effectively and in parallel clearly explains the importance of the knowledge and work of accredited zoological institutions. They are essential for the recovery of endangered species in their natural environment.

When we received the great news of this birth in Brazil, Wolfgang Kiessling commented: "It is perhaps a small step for the species, but a giant leap for biodiversity." And so it is, as in most reintroductions of macaws born under human care, confirmation of reproduction in the wild is very difficult, especially when dealing with a trophic specialist such as the Lear's macaw. A large parrot, linked to a very specific habitat. The adaptation from a controlled environment to such an extreme wild environment was already complex. That this has been achieved through scientific methods and animal care is a window of opportunity for so many more species in need.



The pairs born on Tenerife are already starting to defend their breeding cliffs. Photo: Thiago-Filadelfo





When we received the great news

that a Lear's macaw descended from

Fundación was flying with its parents in

the reintroduction area in Brazil, the 41st

chick was also born in our facilities.

Second generation of Lear-Aras of LPF

It is the offspring of a hitherto unbred pair, newly formed during the previous year, that laid a fertile egg that has developed into an energetic chick. Its parents were also born at the foundation. one of the pairs born in the Loro Parque

This breeding success, both in the wild (in-situ) and under human care

(ex-situ) is a powerful conservation tool to ensure the future of this species. One of the 12 that has been saved from extinction thanks to the work of the Loro Parque Fundación in conjunction with Brazilian institutions

For the project, which is now in the recovery phase in an area where the species has historically been present and where there were only two nonbreeding specimens left, these births are of great value as they provide stability for a second generation of this species in the programme, guaranteeing its permanence.



Newborn Lear's Macaw chick at LPF in August 2022 Photo: M. Weinzettl / LPF



Biologists Rafael Zamora and Matthias Reinschmidt with the latest Lear's macaw (No. 41) born at LPF simultaneously with the one in the wild. Photo: LPF

Rescuing the ultramarine lorikeet on Ua-Huka

French Polynesia

In this programme which aims to protect this critically endangered species, the Loro Parque Fundación is collaborating with the Polynesian Ornithological Society (SOP) and the German University of Giessen to promote the conservation of the species

This parrot, with its orange beak that stands out against its blue and white plumage, is a true jewel of nature, and it is critically endangered, as this group of islands in Polynesia has lost part of its natural heritage due to invasive species such as rats that, in addition to transmitting diseases, kill the endemic species and prey on the nests of many birds

At present, the ultramarine lorikeet is found only on

one small island in French Polynesia, Ua-Huka Island.

The aim of LPF together with the Polynesian Ornithological Society is to ensure the survival of this critically endangered species, and to repopulate the islands it once

inhabited. This is in addition to a biosecurity strategy, as the project focuses on the impact of highly invasive species that have been introduced and that are endangering this species.

The training of dogs that can locate the presence of rats in harbours prevents their entry onto the island. In fact, the programme to protect these birds includes a campaign aimed at

encouraging the island's inhabitants to control pests that can affect their fauna.

The project promotes forest conservation through habitat conservation and increasing community awareness by informing them about deforestation and teaching them how to encourage the presence of ultramarine lorikeets in their communities. Another key has been for the inhabitants to recognise the species as part of their own culture.

The ultramarine lorikeet is one of the most endangered parrot species, it is Critically Endangered because the species' range is very small, there is only one population and habitat quality is declining. In addition, the species has disappeared from three of the

Photo: SOP

four islands in its range in the last 20 years. It is believed that in the past it probably inhabited the entire Marguesas archipelago.



The collection of samples is essential to identify diseases that may adversely affect the species. Photo: SOP



Monitoring with trained dogs to detect rats before they enter the island is key to the project. Photo: SOP



Ultramarine-lorikeet frequent banana flowers to obtain their nectar.



Oceanía, the new experience at Loro Parque



A new experience in the Oceanía habitat with the colourful parakeets of this part of the world. Photo: M.Pérez/ LPF

Enjoy the multicoloured flight of small and medium-sized parrot species and travel to the farthest reaches of the Earth to see some of the species included in this group. Thanks to their continuing reproduction at the Loro Parque Fundación, the largest living genetic reserve of this variety of parrots in the world, it has been possible to offer visitors to the Loro Parque Animal Embassy a unique experience in which visitors can appreciate their behaviour including the aerial displays of a wide number of species from Oceanía.

A new installation has been opened to the public during this special year. Its spacious dome system allows an exceptional representation of the environments in which these birds live.

In Oceanía, the ground surface is very important because many of these species regularly forage at ground level.

Managing this type of aviary involves working with young birds as some species can be very territorial during the mating season. The progressive adaptation of juvenile birds is very important as it will ensure the harmonious coexistence of the various inhabitants.

Large aviaries allow the birds living in them to be athletic and fit. While the most interesting aspect is that changes occur throughout the day making each visit a different experience.

These Australasian parakeet species face several dangers in their place of origin. Inclement weather, fires and deforestation are some of the complex problems that are occurring all too frequently in this part of the world. Maintaining

a stable and sustainable reservoir under human care that the public can learn about is one of the keys to providing a safety net for these species.



Oceanía allows visitors to observe the different species and their natural behaviour. Photo: M.Pérez/ LPF



Critically endangered species on the Canary Islands



In addition to the technical conferences, a photographic exhibition of the critically endangered snails on Tenerife was held in the García Sanabria Park room. From left to right: Dr. Javier Almunia (LPF Director). Carlos Tarife (Councilor in the Santa Cruz de Tenerife City Council). Patricia Delponti (Professor at the ULL) and Raquel Marín (Director of the OTRI at the ULL) Photo: M. Pérez / LPF

The University of La Laguna and the Loro Parque Fundación participated in the International Meeting on Critically Endangered Species on the Canary Islands, which was attended by renowned scientists and experts from different countries, as well as technicians from the Canary Islands Government, Tenerife Council and several municipalities on the Canary Islands.

The International Union for Conservation of Nature (IUCN) Centre for Species Survival project organised two scientific-technical workshops on the conservation of critically endangered terrestrial snails and molluscs (gastropods) on the Canary Islands in collaboration with the Sustainable Santa Cruz Foundation, Santa Cruz de Tenerife City Council, and the Canary Islands Government Regional Ministry for Ecological Transition.

The conference was held at the University of La Laguna's Faculty of Sciences, Biology Department, to assess the situation faced by the six Tenerife species that were sampled last February by invertebrate experts from the IUCN. **The programme included a field trip to two** areas, the laurel forest in Las Mercedes and the coastal xerothermic shrub vegetation in the east of Santa Cruz. Within the

framework of this meeting,

Insulivitrina reticulata, endangered species according to the IUCN, endemic to Tenerife



The "Santos-snail", (*Hemicycla plicaria*), one of the endemic species on Tenerife classified as Critically Endangered on the IUCN Red List. Photo:M. Pérez / LPF

Mario Jesús Aponte Navarro and Elena Cadavic Melero made a public presentation on the Paleobiological Collection of Terrestrial Gastropods belonging to the Palaeontology Department at the University of La Laguna. A round table discussion was also held with Pedro Millán (Director of the Sustainable Santa Cruz Foundation), Dr. Javier Almunia Portolés (Director of the Loro Parque Fundación), Dr. Carolina Castillo (Professor at the ULL) and Dr. Arnoldo Santos (Former Director of the La Orotava Botanical Garden).

The lectures were given by university lecturers Dr. Marco Neiber (University of Hamburg) Klaus Groh Dipl. Biol. (IUCN Mollusc Specialist Group), Dinarte Teixeira MSc (IUCN Mid-Atlantic Islands Invertebrate Specialist Group), assisted by Drs. Carolina Castillo Ruiz (ULL) and Penelope Cruzado Caballero (ULL) as tutors and Drs. Gerardo García (curator of invertebrates at Chester Zoo) and Arnoldo Santos Guerra.



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Specimen of Hemicycla plicaria, one of Tenerife's endemic species classified as Critically

Endangered in the IUCN Red List. Photo: M .Pérez/ LPF

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Visitors to the Loro Parque Animal Embassy can watch the experiments live. Photo: LPF



Parrots remember everything!



Researcher Sara Torres during one of the sessions with a blue-throated macaw.

This is the finding of the scientific work that is being conducted at the Max Planck Institute for Animal Cognition based at the Loro Parque Animal Embassy. In front of visitors' eyes, the researchers have managed to prove that parrots remember what they did earlier

Anyone who has had a pet parrot or who has had a brief glimpse of them in the wild might think that this could be logical. However, it had to be scientifically proven.

Most everyday human memories involve past actions, that is, memories of what you or others did in the past. Such memories of past actions affect behavior in the present and in the future. However, most studies of memory in humans and animals are based on passive recall of stimuli, without involving actions.

Episodic memory is the memory of events that have been experienced in a personal way, such as our graduation day or our first date. In this study, three bluethroated macaws born at LPF were trained to understand a behavioural signal that means: repeat what you just did. And all the individuals were able to repeat four different actions without a problem.

In a second experiment, their memory was tested by introducing a time interval between the action and the time of repeating that action. The parrots were able to remember what they had just done for up to 12-15 seconds, matching other mammal species that performed the same experiment.

The last experiment tested whether parrots were able to understand and generalise the abstract concept of repeating. To do

this, they were asked to repeat new actions for which they had never been trained and, surprisingly, all the parrots were able to use this concept in a novel situation, proving that they



Article

Photo: A. Azcárate / LPF

understood the abstract rule relating to repetition.

The fact that the macaws have been able to successfully complete this experiment demonstrates that both episodic memory and awareness of the behaviour performed have evolved, at least in the parrot group. This is consistent with the complexity of the socio-ecological environment in which parrots thrive.

These studies on cognition in parrots are of great value to science. In fact, they add to an extensive database that the Loro Parque Fundación has developed over the years, especially related to the bluethroated macaw which was officially bred for the first time under human care at the foundation and where more than 440 parrots have been born in the last few decades.







Bruno Hensel (left) hands over a cheque to help fund the conservation of macaws in South America to LPF President Christoph Kiessling (centre), together with Dr. Arne Lawrenz, Director of Wuppertal Zoo (right). Photo: C. Phillipp

The Wuppertal Zoo Company and the Loro Parque Fundación have collaborated closely for many years.

The construction of the Aralandia free-flight aviary at Wuppertal Zoo in Germany has strengthened this partnership. In connection with the construction of Aralandia - a large aviary for South American parrot species - the Wuppertal Zoo Company pledged 100,000 euros to protect macaws in their natural habitat in South America. In 2018, Bruno Hensel, President of the association, presented the first cheque for 20,000 euros to Christoph Kiessling, President of the Loro Parque Fundación. **The** Loro Parque Fundación has been a leader for several decades now with various projects to protect macaws in South America, since 2018 every year a contribution of the same

amount has continued to be given to the institution's conservation work.

As part of the lecture series "Visiting the Friends of Aralandia", which took place between September and November 2022 in the glass hall at the German institution to celebrate the anniversary of "200 years of Sparkasse Wuppertal", Bruno Hensel was able to present the last of the five cheques for 20,000 euros to the Loro Parque Fundación. And once again, it was the foundation president, Christoph Kiessling, who received it.

Afterwards, Kiessling informed the 180 guests about "50 years of Loro Parque - how a vision became reality and grew into the best zoo in the world". One of the central points of the conference also focused on the commitment to species conservation, in which the LPF is supported by the German Zoological Society. The Wuppertal Zoo Company welcomes the success of the Loro Parque Fundación in protecting macaws in South America, which has been supported with a total of 100.000 euros.

Christoph Kiessling's lecture brought the successful lecture series "Visiting the Friends of Araland" to an end.



Advanced training at the **Animal Embassy**



Veterinary students participate in the procedures undertaken at the Loro Parque clinic. Photo:LPF



Veterinarian Richard Heidrich and his helper. Photo: LPF

Once again, this year a select group of veterinary students from the prestigious University of Giessen in Germany travelled to Tenerife to receive first hand training with the professionals at Loro Parque and the Loro Parque Fundación. The relationship between



Ambassador Bärbel Köhler during the training. Photo: LPF



The veterinarian Francesco Grande during one of the theoretical sessions. Photo: LPF

Loro Parque and the German university has spanned more than 30 years. On this occasion and coinciding with the dates of the 10th International Parrot Convention, they were able to attend the presentations at the meeting directly. They have described this

life and professional experience as a unique opportunity to understand the needs of the animal world at first hand. The students can interact with professionals from different zoological fields related to advanced animal care.

The theoretical part was reinforced by participation in the different animal care and clinical departments, as well as training by the foundation's biologists and veterinarians. During the technical visit. LPF ambassador Bärbel Köhler also instructed them in clinical diagnostics.

For the Loro Parque Fundación and the Loro Parque technical team as an animal embassy, it is a matter of great pride to see how, over the years, the students from the Veterinary School in Giessen have developed into experts in leading positions in the animal health sector all over the world. We wish all these young people every success and that they maintain the enthusiasm that we have transmitted to them, focused on caring for animals at all levels. ■





Training coordinators Rafael Zamora as scientific director of LPF (left) and Professo Michael Lierz from the University of Giessen (right), together with this year's group of students. Photo: LPF

LORO PARQUE

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Underwater sounds to save the oceans

The Loro Parque Fundación will carry out this scientific initiative throughout 2023. It is framed within the scope of the CanBio project. Loro Parque and the Canarv Islands Government are cofunding the project, which will cost 2.5 million euros to study the effects of climate change, ocean acidification and underwater noise on critically endangered marine species around the

Canary Islands.

This new initiative involving passive acoustics (listening to underwater sounds without introducing any sound signals into the environment) is based on a new scientific technique that attempts to characterise the state of health of ecosystems based on the sound generated by different organisms and geological agents. The concept of an underwater acoustic landscape has been developed in the last decade within the thriving scientific field of ecoacoustics. In essence, the noises produced by natural geological elements (wind, waves, the movement of stones and sand on beaches or the cracking of ice in arctic areas) are encompassed by a concept called geophony. While, on the other hand, all the sounds produced by marine organisms such as fish, invertebrates, turtles, seabirds and cetaceans constitute what is called biophony. Finally, all the sounds produced by any humanrelated element (boats, jet skis, sonar pulses, wind turbine vibrations, etc.) constitute anthropophony. The sum of all three types of

sound sources is what makes up the underwater soundscape, which is distinctive in each location. Thus, the shores along a protected marine The Loro Parque Fundación is a pioneer in the use of acoustics to protect marine biodiversity around the Canary Islands, and it is using information from projects carried out in the past on a multitude of species such as sea turtles. Photo: LPF

area will have a natural soundscape, with all the sounds coming from living organisms and geological features, without a man-made component. But, in addition, the sounds themselves will indicate that the ecosystem has not been disturbed, as well-preserved fish or invertebrate populations will create a soundscape that is characteristic of that ecosystem, where all the species present will contribute according to their abundance or loudness.

As human activity impacts on a marine ecosystem, its soundscape will change. Thus, fishing for a particular species will reduce its population and, consequently, its sound presence will also be reduced. This may lead to a greater abundance of other species, which will change the situation significantly, or it may simply reduce the biodiversity of the ecosystem, making it less complex and probably guieter. Human activities will also add characteristic

sounds to the soundscape, with the noise of boat engines, sound patterns associated with the rhythms in which humans use the sea (diurnal), and so on. Thus, the characteristics of the soundscape will serve as an indicator of change and the state of health of an ecosystem

The Loro Parque Fundación study will be a pioneer on the Canary Islands and one of the first to be carried out in the world using this novel technique. In the first

phase, the aim is to characterise the protected marine areas within the Natura 2000 network on the Canary Islands, i.e. the Special Conservation Areas (ZEC Marinas) that are under the supervision of the Regional Ministry for Ecological Transition and Demographic Challenge. The characterisation of the best conserved places in the Canarian marine

ecosystems will give us a baseline to understand what their current state is, and to verify whether soundscapes can be a good indicator of their state of conservation considering the global change we are facing. They will also allow comparisons to be made with more degraded areas, which will be essential to understanding how human activity affects ecosystems and how this is reflected in the ecoacoustic characteristics of our seas.

> In the long term, this basic research will lay the

foundations for acoustic monitoring of our marine ecosystems, for which the network of buoys being installed around the Canary Islands thanks to CanBIO will

be of enormous help. And this same scheme could be applied to species with less coastal habits, such as cetaceans, which have one of their global biodiversity hotspots in the Canary Islands and Macaronesia.

This Loro Parque Fundación project has aroused the interest of the Canary Islands tourism promotion company (PROMOTUR), which has selected it as one of the sustainability projects for the Canary Islands tourism promotion advertisements.

Thus, this pioneering initiative by the Loro Parque Fundación has become part of the videos promoting the Canary Islands as a sustainable tourist destination for 2023.



Underwater soundscapes are also very useful in identifying the presence, and estimating the abundance, of key species in the ecosystem, such as some fish species. In order to carry out this work, recordings have already been made of Canary Island marine fauna in Poema del Mar

The pictures show the movements of the two loggerhead turtles tagged by the Loro Parque Fundación: Machote (tagged at the end of 2021, but lost the transmitter a few months ago) and Pandora (tagged on 3 October and whose transmitter is still active in the south of the archipelago).



LPF awards prizes to the best papers at the ULL

As part of the traditional commemoration of the feast of Saint Albertus Magnus 2022, patron saint of the Faculty of Natural Sciences of the University of La Laguna (ULL), the Dean's Office of the Faculty organised an academic event in the Aula Magna of the Physics and Mathematics Building. During

the event, the Loro Parque Fundación prizes were awarded to the best final theses in Biology and Natural Sciences (Environmental Sciences, Physics, Chemistry and Mathematics), with a total of €6,000. Her Excellency, the

Rector of the University of La Laguna, Rosa María Aguilar Chinea, presided over the academic ceremony where various awards were presented to lecturers, students, and administrative and service staff of the faculty. On behalf of the Loro Parque Fundación, its Scientific Director Rafael Zamora presented the awards for the best final theses of the 2021-2022 academic year, **recognising the** work of 9 students (four

in Biology, two in Physics, one in Environmental Science, one in Chemistry and one in Mathematics) particularly linked to the biodiversity of the Canary Islands and its conservation. The winning works were selected from more than 35 excellent entries by a jury composed of professors from the University of La Laguna and the director of the Loro Parque Fundación.



The scientific director of the Loro Parque Fundación, Rafael Zamora presented the awards. Photo: M. Pérez / LPF



The award winners together with the Secretary of the Faculty of Natural Sciences (Pedro Alberto Hernández Leal), the Scientific Director of the LPF (Rafael Zamora Padrón), the Rector of ULL (Rosa María Aguilar) and the Dean of the Faculty of Natural Sciences (María del Mar Afonso). Photo: LPF

New research cooperations



The deans of pharmacy in Spain together with the directors of the Loro Parque Fundación. Photo: LPF

The Dean of the University of La Laguna visited the facilities of the Loro Parque Animal Embassy and the Loro Parque Fundación together with the ilust deans of the Spanish Universities of Applied Sciences of Pharmacy, accompanied by the directors of the Foundation Javier Almunia and Rafael Zamora.

A technical and recreational visit to learn in detail about the Foundation's work in research, education and conservation.

The deans were able to experience first-hand how scientists work at the Animal Embassy. Many of the activities were of mutual interest and both parties developed research lines for the near future.

Spaces such as the Max Planck Institute for Animal Cognition Research, the laboratory and the veterinary clinic, which were shown to the visitors, gave rise to fruitful discussions and new ideas for collaborations, enhanced by the Foundation's global conservation projects and its network of international scientific collaborations.

meeting.







Canary Islands, epicentre of world conservation

CPSG Annual Meeting

In October, Loro Parque hosted the annual meeting of the Conservation Planning Specialists Group (CPSG) of the International Union for

Conservation of Nature (IUCN). The event brought together scientists and experts from around the world to strengthen collaborative biodiversity networks and

discuss the latest strategies for reducing global biodiversity loss. This major gathering was held at the Hotel Botánico & Oriental Spa Garden with presentations, working group sessions and discussions on current conservation efforts. The Loro Parque and Loro Parque Fundación team actively participated in the conference. The president and founder Wolfgang Kiessling welcomed the great opportunity to discuss global collaboration, share progress and bring experience to this

The mission of the specialist group is to save endangered species



by increasing the effectiveness of conservation efforts worldwide. For 40 years, they have used scientifically sound collaborative processes that bring together people with diverse perspectives and expertise to bring about positive change in conservation. They provide expertise in species conservation planning to governments, specialist groups, zoos and aquariums, and other organisations committed to wildlife protection.



The conference featured workshops on biobanks, the Reverse the Red project, and the Plus One Strategy to reduce the number of endangered species on the IUCN Red List. Photo: M. Pérez / LPF



The Loro Parque Fundación participated in the workshops and its President Christoph Kiessling summarised the Foundation's great successes in nature conservation. Photo: M . Pérez/LPF

WAZA Conference on Tenerife

Loro Parque hosted the 77th World Association of Zoos and Aquariums (WAZA) conference. The association, which has more than 300 members from the world's most renowned zoos and aquariums, organised this event with the aim of exchanging knowledge and experiences among experts in the field in order to continue contributing to wildlife conservation.

Participation in the event, which took place at the Hotel Botánico & The Oriental Spa Garden from 23-27 October, was a resounding success bringing together more than 240 participants from 41 countries and regions.

Topics such as sustainability, animal welfare, conservation and strategic planning were

discussed. All this alongside a wide range of speakers, such as Hugo Morán, Spanish Secretary of State for the Environment; David Ainsworth, Director of Communications at the Secretariat of the Convention on Biological Diversity; and Trang Nguyen, Founder and Executive Director of the NGO WildAct.

After two years of being held virtually because of the pandemic, the event was once again held in person. A summit that brought to



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Tenerife the leaders of the most important zoos and aquariums in the world, and which is based on strengthening the role played by zoos and aquariums in protecting the environment, in a context where the sixth mass extinction is endangering the lives of millions of living beings.

The Loro Parque Fundación gave several presentations explaining the importance of the support provided by modern zoos for conservation and animal welfare.

Modern zoos and aquariums play a vital role in combating many of the threats facing our planet. This event is a great success when it comes to protecting nature, species, the environment and animals.



The World Association of Zoos and Aquariums brought together the heads of the world's most prestigious centres. Photo: LPF



A lively programme featuring question-and-answer sessions and numerous presentations was packed with content related to animal care and its benefits for biodiversity. Photo:LPF



X International Parrot Convention – Hightlight of Tenerife!

by Rosemary Low

Nearly 800 people attended from 46 countries, and every one of them left with different highlights, having made new friends, and renewing old friendships. For many of the attendees, it was as much about the people as it was about acquiring knowledge.

The congress had a new venue - the Las Aguilas Hotel, in the hills overlooking Puerto de la Cruz - and the view of the city and the ocean was breath taking.

On the first day, Marcia

Weinzettl. bird curator at Loro Parque, spoke about sustainable breeding with a view to conservation. She talked about the recent reintroductions into the wild of Lear's macaws and Golden Conures bred under human care. Some of the Lear's macaws reintroduced in Brazil were born at the Loro Parque Fundación (41 Lear's macaws bred to date). Marcia stressed the importance of observing individuals in groups before their introduction into the wild, in order to choose those with the best leadership skills.

Reproduction under human care for release is becoming more and more important: one slide showed figures demonstrating the appalling deforestation and the growth of the human population. Habitat restoration is therefore very important, and several subsequent speakers described these initiatives.

Arriving from Panama, Jacobo Lacs described his Breeding Center for the Conservation of the Isthmus. It is home to 450 species and subspecies, 240 of which are parrots, mainly neotropical species. In 1991, he bought 753 hectares of land on the coast. It now has 720 aviaries and

suspended cages. He explained how, in order to deter rats from entering (a big problem), aluminum cones are placed on the supports to the aviaries. He described the process of

receiving three pairs of Azuero parakeets (Pyrrhura eisenmanni) in 2017 with permission from the Ministry of Environment for research and having bred six specimens so far. This represents a milestone in aviculture as it is the first time in the world.

Mauricio Herrera has been working in Bolivia for more than 20 years on Loro Parque Fundación conservation projects. He currently coordinates the blue-throated macaw programme (Ara glaucogularis), one of the most threatened parrot species in the world. Endemic to the plains of Moxos, in El Beni (Bolivia), which are covered with cattle ranches, the macaw is accustomed to the presence of humans. **The alternative** headdress project has succeeded in preventing the killing of blue-throated macaws for their tail feathers, which were used for the traditional festival costumes of 40 tribes in the region.

The current focus is on establishing a biological research station in a 650-hectare area managed by the Loro Parque Fundación for the protection of the macaw and its habitat.

Lubos Tomiska is one of those extremely rare people who became passionate about loris from a very young age. Born in 1991 he started breeding these charming but demanding birds in 2007. His collection has more than twenty species and subspecies. After graduating in Prague, in 2016 he moved to Tenerife to become curator of birds under Marcia Weinzettl. Their



The President of the Loro Parque Fundación, Christoph Kiessling, presented the reality of zoos as fundamental centres for the conservation of species. He stressed the importance of international meetings of experts who have access to real information. Photo: M. Pérez / LPF



experience has proved successful as the number of parrots and lorikeets in the park and the breeding centre has increased to more than 500. In 2021, Lubos returned to the Czech Republic.

He made some important observations about the feeding of loris. Seed-eating parrots possess mucus-secreting glands at the end of the oesophagus. This softens the seeds before digestion. Loris lack these glands, so they are not able to digest dry seeds.

Sara Torres Ortiz, from the Max-Planck Comparative Cognition Group (CCRG), works with the largest parrot gene pool in the world at the Loro Parque Fundación and learns about the intelligence of the different species at the institution's headquarters in the Loro Parque Animal Embassy. Visitors to the park can watch their cognitive studies live, through a unique visual barrier that does not disturb the

parrots. The aim is to motivate visitors to reflect on the amazing degree of intelligence of parrots and the importance of conserving them in nature.

Travelling all the way from Australia, **Daniel Gowland** delighted the audience with an excellent visual presentation on the breeding and conservation centre that he manages there. He explained

the importance of aviaries set up in very quiet areas where birds have minimal interaction with their keepers. Details such as the plants and substrate on the aviary floors are essential for the good management of the delicate species he manages.

The second day opened with a talk by Chaona Phiri about the black-cheeked lovebird (Agapornis nigrigenis). Chaona is a Zambian landscape ecologist and ornithologist who is currently completing her PhD studies at Manchester Metropolitan University with the support of the Loro Parque Fundación.



The most geographically localised parrot in Africa, the black-cheeked lovebird is endemic to Zambia and has a highly restricted

distribution. It is confined to the mopane woodlands (Colophospermum *mopane*) in south-western Zambia and occurs sporadically over an area of 15,000 km², with central breeding areas covering some 2,500 km². These parrots were abundant in the past, with a record 16,000 birds caught in four weeks in 1929 for the cage bird trade. Currently, they have a very low population density. This is the focus of her exciting project, which she explained to the attendees with extraordinary warmth

Juan Carlos Noreña Tobón talked about Colombia's most endangered parrot where, of the 60



species found in the country, 17 are in the endangered category.

Juan Carlos described the work he is carrying out with the support of the Loro Parque Fundación and a group of enthusiastic people in Risaralda to create the feeling that the parrot belongs to its inhabitants. In Colombia thanks to the projects, billboards with information and attractive photos have been erected and a striking mural has been painted at the entrance to the town of Santa Rosa de Cabal. In 2019, the parrot became the symbol of the town

It is estimated that the adult global population of the Fuertes's parrot is only 230 to 300 individuals. However, the population has increased

between 10% and 25% during the last ten years, partly due to the provision of nest boxes, and the regeneration of the habitat following outreach activities

among the population. Thanks to the continued work on Colombian species by the Loro Parque Fundación over more than 20 years. this species has changed its extinction category level.

Cultivation by planting important food trees for this species, which feeds mainly on mistletoe berries, has proved very difficult.

Juan Carlos showed Images of the Fuertes's parrots (Hapalopsittaca fuertesi) and yellow-eared parrots (Ognorhynchus icterotis), which decorate the public transport system in the city of Pereira including the gondolas of the cable cars. Both species are threatened by habitat destruction and agricultural, livestock and mining activities, which, thanks to the foundation, have escaped extinction. The yellow-eared parrot conservation programme has been arguably the most successful in the history of parrot conservation.

Rosemary Low

I want to congratulate all the people involved in organising this great event. It has had an enormous impact



Moments of the Convention



Convention attendees were welcomed at the Castillo de San Miguel in the South of the Island by LPF President Christoph Kiessling, (centre), and the organising committee Kerstin Urban and Danie Labrador, Photo: M,Pérez / LPF



Gala dinner at the Hotel Botánico. Photo: M. Pérez / LPF



Dr. Enrique Martínez from the University of La Laguna gave a lecture on research into the adenovirus, which affects parrots in an almost imperceptible way. His research work as part of a project of the Loro Parque Fundación has made great progress. Photo: M. Pérez / LPF



Lubos Tomiska and Marcia Weinzettl during the Congress. Photo: LPF



Dr. Petra Wolf surprised the audience with her analysis of parrot nutrition. Her lecture was received with an extraordinary amount of applause. Photo: M.Pérez/LPF



Biologist Rafael Zamora described the importance of Loro Parque for nature conservation worldwide due to its success story. Photo: M. Pérez / LPF



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The Plaza de Europa in Puerto de la Cruz, in collaboration with the town hall of the city, was another highlight, with a dinner, orchestra and dance that delighted the international participants Photo: M. Pérez / LPF



Anton Vaidl, curator of the Prague Zoo. Photo: M. Pérez / LPF



Martin Schaefer heads the Jocotoco Foundation in Ecuador Photo: M. Pérez / LPF



Venezuelan ecologist Jon Paul Rodríguez explained how the Yellow-shouldered Amazor has been able to change its threat category and be saved from imminent extinction thanks to the continuous actions of Provita and the Loro Parque Fundación. Photo: M. Pérez / LPF



Biologist Fernanda Riera from Brazil showed the great success of the reintroduction of Lear's Macaws in Brazil, Photo: M. Pérez / I PE



The renowned bird breeder Tony Silva from Florida gave interesting insights into parrot breeding. Photo: M. Pérez / LPF



Internationally renowned author Roseman Low with Paul Colo from San Diego during the conference. Photo: R. Low



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КЛЕК At LPF we are waiting for you so we can work together for nature!



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