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CINHOL BERGENERAL





Dr. Alexandros Karamanlidis*

Editorial

"Welcome to ARCTUROS".

The

For thirty years now these words have greeted our new and old friends and introduced them to the family of ARCTUROS and to our efforts to protect biodiversity in Greece and beyond. And despite ARCTUROS growing into adulthood and becoming a household name we feel the urge to introduce ourselves again...

annual review you hold in your hands is our second one, following the reboot we all did in 2021. In the midst of the pandemic, we realised that moving ahead with a "business as usual" attitude would not lead anywhere and that the only viable solution to this health crisis was, and still remains: "Protect biodiversity, here and now"! We realised also that this solution requires a different approach to solving the problem. It needs new and fresh ideas!

The second annual review of ARCTUROS is based on the successful format of the previous one and provides an overview of the organisation's efforts in 2022 in various fields, including research, environmental education and communication/awareness. Furthermore, the review presents also our efforts for a new ARCTUROS! An ARCTUROS more international, more extrovert, more creative, but at the same time, also an ARCTUROS closer to our friends and supporters.

In 2021 we dreamed, in 2022 we built, in 2023 we will deliver!

Spoiler Alert! In 2022 we launched an international project aiming to improve human – bear co-existence. At the same time we laid the foundations for the operation of our new International Research Centre and have already welcomed our first international students. In 2022 we designed, and in 2023 we are going to launch, our "Biodiversity Trails", which will unlock a new dimension in the experience of ARCTUROS. And finally, we signed a partnership agreement with the National Confederation of Disabled People with the aim of promoting diversity in nature, animals and humans!

For thirty years ARCTUROS has relied on the power of science, environmental education and awareness in its efforts to protect biodiversity. We would like to express our gratitude to all our friends and supporters, as well as to the Hellenic State for standing by us during the difficult times of the pandemic. We hope that the actions that we have designed in 2022 and will carry out in 2023 will give a new momentum to our efforts to successfully protect our natural heritage.

Welcome to ARCTUROS...the new ARCTUROS 2.0!

* Dr. Alexandros Karamanlidis is a biologist and the Managing Director of ARCTUROS



The ARCTUROS International Environmental Centre is located in the Municipality of Amyntaio, Prefecture of Florina, northern Greece. It is a Centre that carries out various actions with the aim of protecting biodiversity at a national and international level. The Centre maintains its own modern facilities and is the base of interdisciplinary research and wildlife management teams.

The Centre consists of **4 areas/facilities that are accessible** to the general public: 1) Bear Protection Centre, 2) Bear Information Centre, 3) Wolf & Lynx Protection Centre, 4) Wolf & Lynx Information Centre and **6 areas/facilities that are not accessible** to the general public: 1) Hellenic Shepherd Dog Centre, 2) Research Centre, 3) Volunteers House, 4) Wildlife Veterinary Clinic, 5) Wildlife Rehabilitation Centre, and 6) Headquarters.

ARCTUROS operates also its own Emergency Response and Wildlife Rehabilitation & Reintroduction Teams that aim to: a) rescue wildlife, and b) mitigate human-wildlife conflicts.



INTERNATIONAL



The animals of **ARCTUROS**

The International Environmental Centre of ARCTUROS hosts currently 66 animals (22 brown bears, 11 grev wolves, 10 ungulates, 2 golden jackals, 3 European lynxes and 18 Hellenic shepherd dogs) originating from Greece and other European countries. These animals are either previously-captive animals, or seriously injured and/or orphaned. The Hellenic shepherd dogs are local and participate in a breeding programme. For the orphan animals in the Centre a strict rehabilitation and reintroduction protocol is followed. When the reintroduction of a particular individual is not possible, the animal remains for the rest of its life at the International Environmental Centre.





Highlights

3. A new enclosure that can host up to 8 animals was created for the ungulates of the Centre that can not be reintroduced back to the wild.

2 Jasper, who came to ARCTUROS from a zoo in Austria, passed away in July. He was the oldest wolf (16 years old) in the Wolf Protection Centre.

ridis/ARCTUROS

RED DEER

INTERNATIONAL



The family and visitors of ARCTUROS

In ARCTUROS we constantly strive to upgrade and modernize our facilities, in order to ensure: 1) excellent working conditions for staff members and volunteers, and 2) excellent conditions for our visitors to have a unique experience whilst visiting our facilities.

In 2022:

- The Headquarters and the Volunteer's House in Aetos. were completely renovated.
- A gift shop was created at the Wolf & Lynx Information Centre in Agrapidies.
- The reception area in the Bear Protection Centre in Nymfaio was renovated.



- ARCTUROS had the honour to quide the President of the Hellenic Republic, Mrs. Katerina Sakellaropoulou, through our International Environmental Centre.
- ARCTUROS welcomed 49,778 visitors, including 16,081 children. 98 schools visited the Centre!

Supported by:

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The ARCTUROS Research Centre

The Research Centre is a new Department within ARCTUROS that was added to the International Environmental Centre. It includes: 1) the Research Team and its activities to study and protect biodiversity, and 2) the International Research Program that hosts students from international universities and research institutes.

Research Team activity report for 2022:

The operation of the network of camera traps installed in 2021 was continued and expanded, with the addition of 20 more cameras. The size of the study area was increased also, from 70 km² to 106 km². In summary:



International Research Program

The partnership of ARCTUROS with foreign universities (e.g., Manchester Metropolitan University, Nottingham Trent University, University of Glasgow) began in September 2022. In this project international and greek students have the opportunity to participate in the field activities of the ARCTUROS Research Team and carry out their undergraduate/postgraduate research projects. Research projects usually focus on species and/or issues related to greek biodiversity that have been the main research focus of ARCTUROS for the past 30 years.

Species	Number of recordings
Brown bear	2,041
Grey wolf	299
Roe deer	4,035
Red deer	1,315
European wildcat	321
Mesopredators	
Red fox	860
European badger	291
Mustelidae	317
Birds	112

The high number of recordings related to females (of all species except wolf) and their young

Publications

In 2022 the Research Team of ARCTUROS participated in a scientific study on the parasite *Thelazia Callipaeda* that affects brown bears in Greece. The study was published in the journal Transboundary and Emerging Diseases. You can find all publications of ARCTUROS here.

The Hellenic Shepherd Dog Centre of ARCTUROS

ARCTUROS raises Hellenic shepherd dogs and gives them away for free to shepherds in order to protect their livestock and mitigate human – large carnivore conflicts. Duties in the Dog Centre are performed by our specialised staff; however, volunteers are also welcomed in the daily care (i.e., feeding, dog walking, training, grooming, cleaning etc.) of our shepherd dogs. All dogs are granted to their new owners with a Contract of Cooperation that outlines their general commitments regarding a dog's well-being and the future cooperation between the two parties in case of further reproduction.



Map of Greece indicating the number of Hellenic Shepherd Dogs given away for free in 2022

- AITOLOAKARNANIA
 CORINTHIA
 HALKIDIKI
 LAKONIA
 KAVALA
 SERRES
 XANTHI
 MAGNESIA
 THESPROTIA
 PIERIA
 FOKIDA
- 2 ATTICA
- 2 IOANNINA





In 2022 the Centre:

 Hosted 18 Hellenic shepherd dogs that participated in the breeding programme.

• Gave away for free **46** pups (6 pups were born in the Centre, whereas 40 were born and granted through the breeding network established by ARCTUROS).



The ARCTUROS Emergency Response Team

The ARCTUROS Emergency Response Team (ERT) operates since 2008 on a 24/7 basis. The team is funded by ARCTUROS and intervenes in wildlife emergencies and accidents. At the same time the team is active in informing and/or educating rural communities and promotes the harmonious coexistence of humans and wildlife.

LeasePlan

Cases of human-wildlife interactions

The ERT intervened in 84 cases: 61 were related to brown bears, 16 to wolves, 7 to other species (3 to jackals, 1 to a weasel, 2 to wild boar, 1 to an ungulate)

Cases involved damage to livestock

Cases involved damage to apiaries that were caused either by brown bears or wild boar

Incidents involved damages to agricultural crops that were caused either by brown bears or wild boar









The Emergency Response Team vehicle is a generous offer of Leaseplan

APKTOY

LeasePlan



Interventions per Prefecture

The ARCTUROS Emergency Response Team

In 2022 the ARCTUROS Emergency Response Team intervened in **67 cases**:

- 10 cases involving brown bears (4 individuals poached, 1 death due to unknown causes, 2 fatal vehicle accidents, 1 release from an illegal snare, 1 orphaned bear)

- 7 cases involving wolves (5 fatal vehicle accidents and 2 deaths from poaching)

- 2 cases involving golden jackals (2 fatal vehicle accidents)

- 37 cases involving ungulates: 36 roe deer and 1 fallow deer (16 fatal vehicle accidents, 8 injuries following dog attacks, 6 orphans, 2 confiscations from illegal possessions, 2 releases following accidental entanglement in illegal snares, 2 individuals poached, 1 injury). Of these, 14 cases had a positive outcome, as the individuals either survived (but will be hosted permanently at ARCTUROS) or were reintroduced back to the wild after their rehabilitation or managed to move away on their own.

- 12 cases of birds (e.g., raptors, pelicans, white storks etc.) that ARCTUROS rescued in the field and transferred to specialized Wildlife Rehabilitation Centres.

 - 1 case lasting 24 hours, where the ARCTUROS ERT removed 148 dead pelicans from the lakes Zazari and Chimaditida. This intervention was carried out in order to prevent the transmission of avian bird flu to other healthy bird populations.

ERT interventions in 2022

24 FLORINA	3 EVRITANIA	
6 KASTORIA	2 PELLA	1 GREVENA
5 HALKIDIKI	2 KILKIS	1 ARTA
4 IMATHIA	2 KARDITSA	1 TRIKALA
4 KOZANI	2 FTHIOTIDA	1 SERRES
3 XANTHI	2 KAVALA	1 THESSALONIKI
3 IOANNINA		



The ARCTUROS Wildlife Rehabilitation & Reintroduction Team

The ARCTUROS Wildlife Rehabilitation & Reintroduction Team is a specialized team with extensive experience in wildlife rehabilitation. Species that are entered into the rehabilitation and reintroduction programme of ARCTUROS include bears, wolves, jackals and ungulates that have been found as orphans at a very young age. Following their rehabilitation, which usually lasts a year, animals are reintroduced into their natural environment, as long as their behaviour and health allow it.

In 2022:

- **3 orphan bears (**Humba, Vechar and Goran) that were found as orphans in Bulgaria, were successfully reintroduced by the team of ARCTUROS. Post-release success of the reintroduction attempt will be monitored for 1 year using satellite collars.

> The study of the post-release movements (as indicated through the use of satellite collars) of the three orphan bears from Bulgaria, shows that, not only have they succeeded in surviving on their own in the wild, but also that they have not been any threat to humans as they have never approached human settlements!

- The first reintroduction attempt of an orphaned wolf was carried out in Greece in 2022. Scar, was found at the tender age of a few weeks and was rehabilitated by the ARCTUROS Wildlife Rehabilitation & Reintroduction Team following a specific protocol.

> - ARCTUROS participated in a workshop organised by the Wildlife Rescue Centre "Alcyone", at the Island of Paros. The aim of the workshop was to improve the coordination and cooperation between Wildlife Rehabilitation Centres in Greece

Environmental Education

The ARCTUROS Environmental Education Team is interdisciplinary and has been carrying out for the past 30 years environmental education programmes that are approved by the Hellenic Ministry of Education & Religions and the relevant national educational authorities. The Team carries out modern, interactive programs with the aim of informing and raising environmental awareness in children and adults about the protection of wildlife and biodiversity. At the same time the Team organises/ participates in training seminars and national and international environmental education conferences.

In 2022 the Environmental Education Team carried out 195 educational programs that were attended by 9,452 children (an increase of 88%, compared to 2021), 720 teachers and 1,818 adults.





Environmental Education

ARCTUROS ENVIRONMENTAL EDUCATION PROGRAMMES



Environmental Education

ARCTUROS ENVIRONMENTAL EDUCATION PROGRAMMES PER PREFECTURE



2 CYCLADES

2 LESVOS

2 MAGNISIA

2 ARKADIA

2 ACHAIA

2 VIOTIA

2 EVRITANIA

2 KARDITSA

2 HALKIDIKI

2 PELLA

ARCTUROS ENVIRONMENTAL EDUCATION PROGRAMMES PER COUNTRY



Communication & Public Awareness

Communication and public awareness are one of the main pillars of the work of ARCTUROS. Efforts are communicated through press releases, our website and our social media pages.



G) ARCTUROS

click here

340.900 views

Communication & Public Awareness

20% increase compared to 2021 _____followers

966(+)



 ∇

Youtube: **% 3,800** new videos

Instagram:

16,400 91

607,200











click

Communication & Public Awareness

Press room



The case of the 3 poached bears within a month that was highlighted by the ARCTUROS Communication & Public Awareness Team received international attention through Euronews. The issue was presented by the French, Spanish and Italian outlets of this international media chan-

nel.

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Grèce : trois ours retrouvés morts dans des espaces protégés au cours du mois dernier



Follow us:







views

USERS PER COUNTRY

1. Greece	101,727
2. France	3,372
3. United Kingdom	1,756
4. U.S.A.	1,733
5. Cyprus	1,715
6. Germany	1,617
7. Holland	824
8. Belgium	442
9. Undefined	438
10. Italy	407

Volunteering

The volunteering programme of ARCTUROS is carried out primarily at the International Environmental Centre. Volunteers and students participate in a variety of ARCTUROS-related activities, such as informing and raising visitor awareness, assisting in rehabilitation and rehabilitation, as well as participating in environmental education activities.

ln 2022:

Actions	Volunteers
International Environmental Centre*	102
Events throughout Greece	37
Forest cleaning events	98

*Volunteers and students who participated in activities based at the International Environmental Centre of ARCTUROS were affiliated to the following bodies:

- Centro Pa Desaroyo, Cede (Aruba)
- Organic Sciences Westfälische Wilhelms Universität (Germany)
- Kreisjugendwerk der Awo Karlsruhe-Stadt (Germany)
- Agricultural University of Athens (Greece)
- Biological Applications and Technologies University of Ioannina (Greece)
- Mountaineering Club of Ptolemais (Greece)
- Associazione di Promozione Sociale Joint (Italy)
- Everything is Possible (UK)

The ARCTUROS Volunteer Programme "Conservation of Large Carnivores and Reduction of Human Wildlife Conflict: The Case of the Greek Shepherd Dog Breeding and Redistribution Centre" that was completed in 2022 received the "Good practice - ESC" (Reference: 2020-1-EL02-ESC11-005892) distinction of the national Youth and Lifelong Learning Foundation.





Programmes

The conservation activities of ARCTUROS are supported by various programmes and other financial tools that are available in Greece and within the European Union.

In 2022 ARCTUROS launched one new brown bear conservation programme and completed one volunteering program:

LIFE Bear Smart Corridors

Project objective: the aim of the project is to design and implement a variety of conservation actions that seek to improve human - brown bear coexistence. This improved coexistence should ultimately result in an improvement of the connectivity between neighbouring bear sub-populations in the country.

Duration: 2022-2026

Project partners: Local Communities and Stakeholders of the Municipality of Amyntaio, Prefecture of Florina, Greece.

Actions implemented in 2022: Mapping of illegal landfills, mapping of fruit orchards (with the aim of protecting them effectively) and research to identify and evaluate the functionality of the existing brown bear movement corridors.

Website: https://rewilding-apennines.com/el/ life-bear-smart-corridors

LIFE CORRIDORS

During the field work for the evaluation of the existing movement corridors, 64 brown bear scats and 190 hair samples were collected by the ARCTUROS Research Team. These biological samples will be used for genetic analysis.

Wildlife rehabilitation and public awareness of Human-Wildlife coexistence

Project objective: Wildlife conservation and public awareness **Duration:** 11/2021-10/2023

Reference: 2020-1-EL02-ESC11-005892

In 2022: With the participation and assistance of 6 volunteers the following actions were successfully carried out: 1) Hellenic shepherd dog day care and breeding, 2) public awareness activities regarding human - wildlife coexistence and 3) familiarization with the Greek language through the programme "Contact with the Greek Language & Culture" by TIMENOS, the Research Centre of the University of Western Macedonia.

EUROPEAN

Partnerships

Wildlife Insights

The Research Team of ARCTUROS collaborates with the institutes "Snapshot Europe" & "Snapshot USA", the Max Planck Institute of Animal Behaviour, Euromammals and the North Carolina Museum of Natural Science in the cloud-based platform "Wildlife Insights".

Wildlife Insights provides significant data that derive from the use of camera traps that are deployed worldwide to monitor wildlife. All participating institutes cooperate to share and analyse the data to inform authorities and proceed to better decision-making regarding wildlife protection and conservation.

Wildlife Insights

International Bear & Otter partnerships

The Managing Director of ARCTUROS, Dr. Alexandros Karamanlidis is an active member of: i) the IUCN Specialist Group on Bear-Human Interactions, ii) the IUCN Brown Bear Specialist Group in Europe, and iii) the IUCN Otter Specialist Group in Europe. Furthermore, as an external researcher he has a partnership with the Norwegian University of Life Sciences in Ås, Norway.



Research Centre TIMENOS of the University of Western Macedonia

The newly-established partnership between ARCTUROS and the research Centre TIMENOS aims in organizing educational activities that promote the Greek language to foreign volunteers, as well as in disseminating tools and promoting good practices that enhance the learning, distribution and use of the Greek language and the Greek culture. In the 1st phase of the partnership volunteers from Ireland, Germany and Italy will participate.

Π.Ε.Κ. «ΤΗΜΕΝΟΣ»

Veterinary School of the Aristotle University of Thessaloniki

ARCTUROS maintains a permanent cooperation with the Veterinary School of the Aristotle University of Thessaloniki that focuses on the successful rehabilitation of injured wildlife and on the Rehabilitation and Reintroduction Programme of orphaned wildlife.

National Confederation of Persons with Disabilities (NCPD)

ARCTUROS and the NCPD joined forces in order to pursue a common vision: equal access of people with disabilities and chronic diseases and their families to the wonders of the natural environment!

Network of Environmental Organizations

ARCTUROS is a member of the network of Greek environmental, non-governmental organizations that intervene on important issues related to environmental and wildlife protection. In 2022 ARCTUROS participated in 7 interventions (e.g., interventions regarding the uncontrolled development of wind turbines in important wildlife habitats, the seismic surveys in the Ionian Sea, the use of poisoned baits, the illegal use of a raptor for exhibition purposes at the games of the football team AEK).

Race for climate change

Under the slogan "Lets Protect Biodiversity", ARCTUROS participated on the 24th October 2022 in the relay race "Running Out of Time". The race was the longest carried out so far globally; "Running Out of Time" started in Glasgow, Scotland and ended in Sharm El-Sheikh, Egypt. The aim of the race was to raise public awareness about climate change and urge world leaders to immediate action. The leg of the race in Greece was coordinated by the Hellenic Society for the Protection of Nature.





Supporters

Thanks to the moral, material and financial support of private citizens, companies and other bodies, ARCTUROS is able to carry out successful actions for the protection of biodiversity in Greece and beyond. Through donations, adoption of animals and member subscriptions we all create together a better natural environment!

In 2022 the number of the supporters of ARCTUROS reached 977.





Sponsors

The work of ARCTUROS in 2022 was generously supported by numerous companies and educational institutions that responded to our call to protect biodiversity. The support of our sponsors, with whom we share common values and a common vision has enabled the continuation of our efforts, independently and with absolute transparency. The renovation of the ARCTUROS Research Centre and Headquarters was carried out with the support of our MEGA Sponsors: IKEA provided furniture and equipment, ELVIAL provided the window systems, VIOSPIRAL provided hygiene products and KOSMAOGLOU GROUP provided paint materials.



KIR-YLANNI	KIR YIANNI provided financial support.	Peritas	PERITAS BARF FOOD donated food to supplement the dietary needs of our wolves.
🍪 INTERAMERICAN	INTERAMERICAN Insurance Company insured our 4 vehicles.	PREDICTA	PREDICTA supported the work of ARCTUROS.
BETTERFUTURE Pre & G	GOODYEAR donated tires for 3 of our vehicles.	ecostar	ECOSTAR donated consumables (e.g., inks, toner) for our office needs.
weDo/	WeDo/Professional supported the cleaning up of two forested areas (i.e., the Schinias National Park, in the city of Marathon and the riparian area surrounding the village of Agrapidies, in the Prefecture of Florina).		KALIDOSCOPIO PUBLICATIONS offered a percentage from the sale of 6 of their children's books.
Βλαχάκη	AVGA VLACHAKI improved the wellbeing of our bears, by donating dietary products.	same of	LEASE PLAN donated a Volkswagen Amarok for the transportation needs of the Research Team.
Uniferen	ELAIS UNILEVER offered products and financial support.	AQUA	AQUA CARPATICA supported the operation of the ARCTUROS Emergency Response Team.
	ROYAL CANIN supported the Hellenic shepherd dog Breeding programme, by donating products that cover the dietary needs of our breeding shepherd dogs.		SIDENOR Ltd donated materials and equipment for the mainte- nance of the Wolf & Lynx Protection Centre.
Kerners Logot Jpp. gr. Kerners Lowesser	LOGOTYP Company supported the sale of ARCTUROS products by offering paper bags.	REE	DUKAS School, ELAIS UNILEVER HELLAS SA and BORN FREE supported, through adoptions, the hosting of the brown bears in our International Environmental Centre.
		STADIKA 105	

Campion School

To be continued...





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