

Big Cats

A magazine by IBCA on wildlife conservation

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P24

Petaca, the
Chilean
Beauty

P20

Java King
in Danger

P16

Tracking
Snow
Leopards

Living
with **Lions**

India's Conservation Success

A snow leopard is walking towards the camera on a rocky, brownish mountain ridge. The leopard has a thick, spotted coat with dark rosettes on a lighter background. Its eyes are yellow and focused on the viewer. In the background, there are more mountain peaks, some covered in snow, under a clear blue sky. The lighting suggests it might be late afternoon or early morning.

October 23
**UN Recognises International
Snow Leopard Day**

The UN recognition of International Snow Leopard Day is significant in making the international community adapt strategies for protection of this big cat. This day was established in 2013, when 12 countries adopted the Bishkek Declaration to protect snow leopards.

PHOTO BY SASCHA FONSECA



Furry Beings

Marmots (*Marmota*) are abundant in mountainous regions. They hibernate during the winter and emerge from their burrows in late spring. In some regions where marmots are abundant, snow leopards feed on them in summer, which is also the time when snow leopards give birth to cubs.

PHOTO BY JOANNA VAN GRUISEN

BigCats

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Our Contributors for this Issue



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Sharon is a former banking technology executive who worked during the very exciting rise of the Internet. But today, she is most well-known for her avocation, the card game bridge. Since she still owns her first Kodak Brownie camera, a relic of bygone days, wildlife photography became a natural extension of her new pursuit. She also serves on three non-profit boards, including the Felidae Conservation Fund.

Editor's Note



Learning to Coexist

We are fascinated by big cats. Some we revere, others we use as symbols of power and majesty. But across the world, big cat population is dwindling. Barely 10% of lion population survives today. Jaguars, snow leopards and pumas continue to be threatened, while some tiger sub-species are already extinct.

Several countries today have the image of a lion in their emblems (see p.14-15). Sadly, the International Union for Conservation of Nature (IUCN) reports that since 1990 lions have disappeared from at least 12 countries.

Is it possible for humans to coexist with big cats? This issue attempts to answer this question. Our cover story on Asiatic lions of Gir Forest describes how local community members – the Maldharis – live close to the lions. There are 674 lions today in Gir. This is a remarkable story of conservation, given that three decades ago, the species was considered critically endangered. Local communities have become sensitive to the needs of the lions. The lions are today an integral part of their lives.

Another story in this issue looks at how organisations in Indonesia are trying to prevent extinction of the Javan leopard. The challenge in Indonesia is how to mitigate human-leopard conflict, i.e., how to keep a check on human habitations and expand the fragmented leopard habitats.

Our issue also includes rare pictures of the snow leopard being tracked by a group of enthusiastic researchers, and offers a close look at the now famous pumas of Chile. The mother puma is both gentle and firm, offering valuable lessons to her family for survival and existence. Humans have a lot to learn from the big cats. 🐾

A handwritten signature in black ink.

MALVIKA KAUL

Tourists watch a lioness
resting at the Gir
National Park, Gujarat



Living With Lions

The success of India's lion conservation programme is a testament that lions and local communities can coexist and thrive together

TEXT BY DHEERAJ MITTAL & PRAMOD K YADAV
PHOTOS BY MOHAN RAM\WILDLIFE DIV., SASAN



The Gir Forest of Gujarat, India, is home to the Asiatic Lion, a species that until 2008 was considered critically endangered. Gir is also home to the Maldharis, the pastoral community who for centuries has lived close to the lions. To the nearby villagers, the Maldharis provide milk and butter. Maldharis also have a soft spot for one big cat – they consider the lions an integral part of their environment. They ignore the lions’ attacks on their cattle. Strongly connected to the rhythms of nature, they appreciate the interdependence of nature – their cattle are food for the lion, and one life feeds another.

The Gir Forest was declared a sanctuary in 1965, and in 1975, a core area of 259 km² was designated as a national park. Since the late 1960s, the lion population has grown from under 200 to 674. Ever since, communities like the Maldharis have been an integral part of the Gir ecosystem. Today, the Asiatic lion is present in Gir National Park and Sanctuary and its surrounds, i.e., Girnar Sanctuary, Mitiyala Sanctuary, Pania Sanctuary, some coastal areas, Savarkundla, Liliya, and adjoining areas of Amreli and Bhavnagar districts. The International Union for Conservation of Nature (IUCN) downlisted the species from “Critically Endangered” in the 1990s to “Endangered” in 2008.

According to the IUCN 2023 assessment, about 23,000 lions remain in the wild, and their overall population across the world is decreasing. Due to habitat degradation, poaching and human-wildlife conflicts, lions and their prey are threatened across their range countries. The IUCN also reports that since 1990, the lion has disappeared from 12 sub-Saharan African countries. Despite conservation challenges, there is hope—Asiatic and some African lion populations are rising through collective action in Botswana, Kenya, India, Namibia, South Africa, and Zimbabwe.

Lions near Farms

Living inside the Gir National Park, the Maldharis have access to grazing, the sale of manure with topsoil, and compensation for predated livestock. Locals in this region prefer to have lions near their farms as they help controlling the populations of nilgais and wild boars. The herbivores often damage

Photo: Gujarat Forest Department



Prime Minister Narendra Modi in 2007 (then chief minister of Gujarat) met the Maldharis to understand conservation plans for lions

crops and the local communities see the lion as a natural check on them. Over the years, the government has taken several measures to address both human-wildlife conflict and concerns about the safety of lions and the community. Parapets have been constructed around 50,000 open wells to ensure the big cats don't fall into them. Machans or elevated platforms have been constructed to safeguard the community members while they guard their crops at night.

Coexistence has resulted in better conservation. Some Maldharis, along with other village folk, are employed as

Vanya Prani Mitra (friends of the wildlife), acting as a bridge between the forest department and the local communities. They assist in wildlife conservation and management, as well as rescue operations. Additionally, the state government of Gujarat uses eco-tourism to raise awareness about the conservation of Asiatic lions and other wildlife. This has also helped in generating livelihoods for local communities.

Mass Awareness for Lion Conservation

In 2019, the Gir Samvad Setu (Gir dialogues) programme was

Panoramic view of the Gir Forest, the largest continuous patch of dry deciduous forest in the semi-arid western region of India. It is fed by perennial and seasonal rivers and streams. It includes large water bodies fed by Kamleshwar Dam



launched in Gujarat to promote interactions with villagers and utilise their support in conservation efforts. Ever since, Nature Education Camps have been conducted annually to sensitise and educate the younger generation about wildlife conservation, the environment, and nature. Since 2016, World Lion Day has been celebrated on August 10 in an effort to mobilise and support the ethos of coexistence.

Across the Saurashtra region (Gujarat's grassland region that supports an ungulate population), citizens 'welcome' the presence of lions. Villagers chose not to chase two lions in Surendranagar

and Rajkot when the big cats recently camped in these districts for five months. Similarly, villagers did not feel threatened with the presence of lions in Barda Wildlife Sanctuary (the proposed alternate home for lions) and adjoining Porbandar and Jamnagar district areas. Empathy towards this big cat was visible recently when the death of a lion in a road traffic accident led shopkeepers in Sasan village to shut their shops for mourning.



An Asiatic lion pride in the Gir landscape

An Asiatic lion pride in the Gir landscape

In free-ranging Asiatic lions, prides consist solely of females and their dependent cubs. When female lion cubs grow up, they tend to stay with their family instead of leaving. Young male lions however leave. Male lions often exhibit independent behaviour, particularly regarding securing food. They may hunt individually,

scavenge from livestock carcasses, or engage in kleptoparasitism by stealing kills made by leopards and lionesses. This adaptive strategy helps them meet their nutritional needs in the wild. Asiatic lions often form same-sex groups, which exhibit behaviours akin to solitary carnivores. These groups function as independent entities, demonstrating a unique social dynamic distinct from typical pride structures.

Protective Measures for the Lion

Due to excessive hunting at the beginning of the 19th century, the population of Gir lions decreased to about 50 individuals. With the timely protective measures implemented by the princely state of Junagadh, the lion population survived and grew to approximately 287 by 1936. However, across India, their range reduction started in the 1800s; the timeline was Delhi in 1834, Bihar in 1840, Eastern Vindhya and Bundelkhand in 1865, Central India and Rajasthan in 1870, and Western Aravallis in 1880. By the 1890s, hunting and deforestation caused by agricultural expansion and livestock grazing confined the lions to a single population in the Gir forests, an area of approximately 2,000 km² consisting of dry deciduous and thorn forests.

In 1955, the Indian government banned hunting lions and later designated the Gir Forest as a wildlife sanctuary to conserve the species. Now, Asiatic lions exist in Gir National Park and Sanctuary, Girnar Sanctuary, Mitiyala Sanctuary, Pania Sanctuary, coastal areas, Savarkundla, Liliya, and adjoining areas of Amreli and Bhavnagar districts are satellite populations in Gujarat.

Lion conservation also involved reducing pressure from



Photo: Gujarat Forest Department

On World Lion Day (August 10, 2022), about 1.35 million people, including school students, participated in events creating awareness for the conservation of the Asiatic lion



Maldharis rear water buffaloes in the Gir landscape

domestic animals while enabling vegetation to rejuvenate and significantly increasing the population of wild herbivores such as blackbuck, spotted deer, sambhar, and nilgai. Due to this substantial transformation, the big cat, originally dependent on cattle for food, adapted its diet to encompass a variety of wild prey, including blackbucks, Nilgai and spotted deer.

Habitat improvement measures as part of the management plan have positively impacted the wildlife in the Gir Forest. Activities such as grassland restoration, peripheral forest development, habitat augmentation in ecotone areas, securing shelter belts and refuge patches, and corridor management have all contributed to improving the wildlife habitat. These efforts have had a significant positive impact on the ecosystem and have helped to promote the growth and sustainability of the Gir forest's prey species. Wild ungulate populations reportedly increased tenfold between 1970 and 2010 and have since reached stable densities.

In 2019, the Hi-Tech Monitoring Unit was established in Sasan-Gir to monitor movement in the landscape. This unit operates 24x7 and uses various advanced technologies,

Leader's Vision for the Big Cat

India's Prime Minister, Mr Narendra Modi, announced Project Lion in his 74th Independence Day speech in August 2020. Earlier in June 2020, he announced that the Asiatic lion population in Gujarat had grown by almost 29% since 2016. He stated in a tweet message the critical role community participation played while emphasising how technology, wildlife healthcare, proper habitat management and steps to minimise human-lion conflict have helped the conservation programme. A keen conservationist, Mr Modi, during his tenure as Chief Minister of the state of Gujarat introduced initiatives such as (i) Declaration of Protected Areas (PAs), (ii) the Strengthening of Protection Measures, (iii) the Creation of a

Task Force Division, (iv) Establishing a Wildlife Crime Cell, (v) Involving Women for Forest and Wildlife Management, (vi) Gujarat State Lion Conservation Society, and (vii) Use of Modern Technology, have been continuously providing impetus to the cause of lion conservation. In 2007, as chief minister, he also visited the Maldhari communities in Gir to understand ongoing conservation efforts for human-lion coexistence.

Inspired by his leadership, India recently prepared the Amrit Kaal Vision 2047, which focuses on managing the growing lion population and scaling up livelihood generation for the local communities in and around the PAs. Conservation success has directly and indirectly contributed to the 17 Sustainable Development Goals (SDGs).



Asiatic lion population growth trend from 1990 to 2020
(Source: Gujarat Forest Department 2020)



Photo: Gujarat Forest Department

Schoolchildren hold Certificate of Mass Awareness Campaign for Asiatic Lion awarded by World Book of Records, UK

including carnivore and avian telemetry, the e-Guj Forest system, the wireless communication system, the check-post surveillance system, the vehicle surveillance system, and the GIS system. Fully equipped state-of-the-art 'lion ambulances' have been in operation since 2019. In addition, each rescued big cat is fitted with a unique microchip, enabling the generation of a comprehensive database of each individual. This database is used to monitor and develop individual case histories, aiding in the long-term management and conservation of wildlife.

The government has also put significant effort into habitat restoration and management for the lions. For instance, in the 1990s, the Gujarat government decided to work with 39 villages around the Girnar Wildlife Sanctuary to get support for creating more space for the lion population to thrive. Rejuvenating and maintaining water bodies and soil moisture within the Gir landscape also ensured a reliable water supply for prey species and lions, especially during the dry season.

The forest department has become skilled at providing veterinary care for animals. Wildlife authorities manage water availability in the landscape through provisioning, regular maintenance, and filling artificial water holes. Weed and invasive species are removed, and fire lines are well managed across the Protected Areas (PAs).

A symbol of power and justice

Lions have been an enduring symbol throughout history. An apex predator, the species was once widely distributed in Asia, covering Mesopotamia, Persia, and the north-western part of the Indian subcontinent, where it was fairly abundant up to the end of the 19th century.

In Hindu mythology, Narsimha, a half-man and half-lion deity, represents Vishnu, a primary deity in the Hindu pantheon. In the ancient story of Prahlāda, a devotee of Vishnu, this half-lion deity represents justice and the triumph of good over evil. Goddess Durga, a fierce embodiment of Shakti (divine feminine power), is often depicted riding a lion. In Buddhist

tradition, the lion represents the power of Buddha's teachings. It signifies the fearless proclamation of truth and the spread of wisdom. Lions are frequently found in Jain iconography, symbolising the spiritual power and majesty of the Tirthankaras (spiritual teachers).

After India was free from colonial rule in 1947, the image of a lion became part of India's national emblem. The national emblem is inspired from the Ashoka Pillar, featuring four lions standing together. This Pillar showcases ancient emperor Ashoka's vision of a universal moral code called dhamma. The Indian government has recently adopted a 'Make in India' logo featuring an Asiatic lion composed of mechanised parts to encourage local entrepreneurship.



Playful lion cubs demonstrate the safe environs of Gir Forest

With the increase in the extent and magnitude of lion tourism, the hospitality industry has flourished along the periphery of the Gir PA. Within the PA's tourism circuit, resorts, hotels, and guesthouses cater to tourists' needs and contribute to the local economy. Lion conservation has made water available for thousands of people to use for irrigation. For instance, the surrounding farmlands of Gir predominantly grew wheat in the 1960s and 1970s until irrigation made sugarcane cultivation possible in the 1980s. These have now given way to extensive orchards of mangoes for the export market.

Indeed, India has set a high bar for effectively implementing the conservation agenda by making tangible progress in increasing the number of Asian lions and expanding their habitats. 🐾

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Dr Pramod K. Yadav is Programme Associate at Sankala Foundation.

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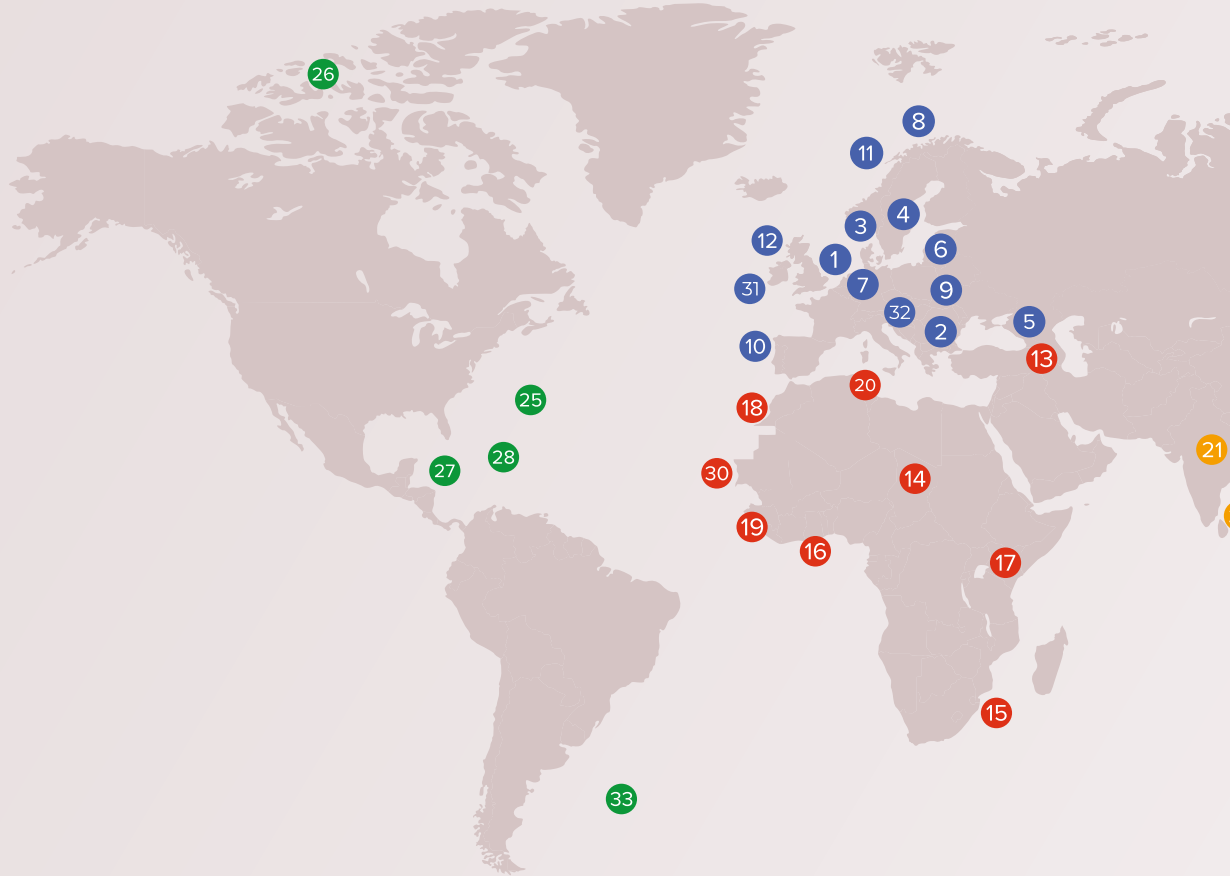
Global Recognition via a Photo Exhibition

BIG CAT INFLUENCES



Lions in

Research: Dr K Banerjee & Dr Tamali Mondal
Infographic: Narender



1
Belgium



2
Bulgaria



3
Denmark



4
Finland



5
Georgia



6
Latvia



7



Netherlands

19



Sierra Leone

20



Tunisia

21



India

22



Sri Lanka

8



Norway

9



Romania

10



Spain

11



Sweden

12



United Kingdom

13



Armenia

Emblems



Europe Africa Asia
Americas Oceania

Lions hold a prominent place in heraldry, appearing in the national emblems and coats of arms of 33 countries worldwide. Representing strength, courage, nobility, royalty, and valour, these majestic creatures are celebrated as enduring symbols of power and pride. Across the world, the image of the lion has been adopted by nations to embody their cultural heritage and historical significance.



South Georgia and the South Sandwich Islands



Montenegro



Guernsey



Gambia



Fiji



Puerto Rico



Cayman Islands



Singapore



Philippines



Bermuda



Canada



Chad



Eswatini



Ghana



Kenya



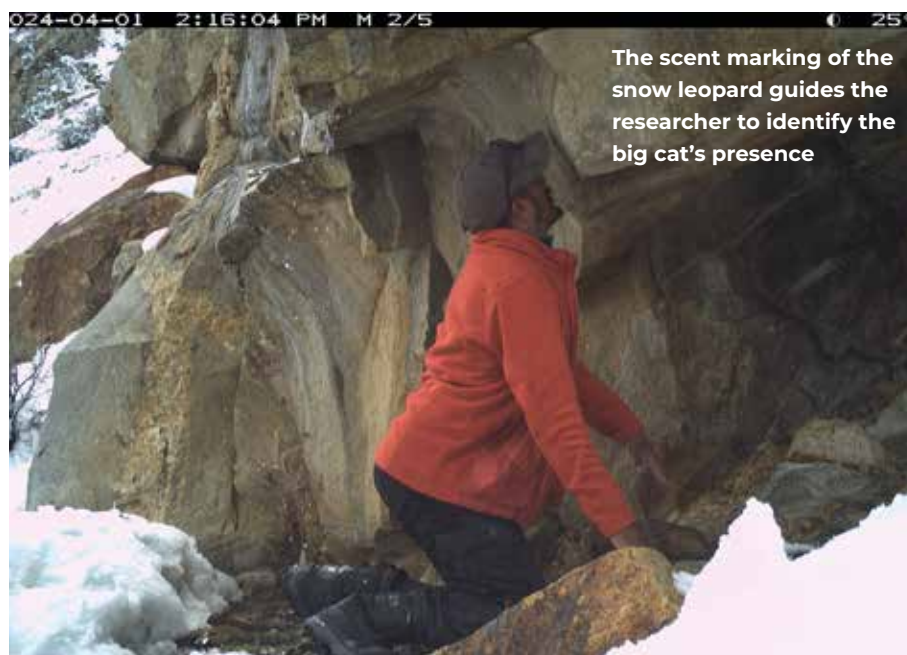
Morocco



Tracking Snow Leopards in High Himalayas

A demanding field trip in Kinnaur, northern India bordering Tibet, fetches rare images of the snow leopard. A researcher shares the fascinating journey

BY CHARU SHARMA
PHOTO COURTESY
WILDLIFE WING, HPFD
AND NCF



Kinnaur's picturesque landscape features steep valleys, high-standing mountains, and the mighty Sutlej, Pare-chu and Baspa rivers. Our quest for capturing the elusive snow leopard began by placing cameras in rugged terrain of Kinnaur that has breathtaking views. The team navigated their way through cliffs, on

ridgelines and steep gorges.

Snow leopard (*Panthera uncia*), popularly known as the 'gray ghost', is an elusive cat occurring in the high-altitude regions of several mountain ranges of 12 Asian countries. As a flagship species, the snow leopard symbolises the conservation of its vast ecosystem.

What are the population densities of



Rinchen Tobge from Spiti and Tanba Chherring from Hango (Kinnaur) deploying a camera trap near Shalkhar village

snow leopards in a landscape surrounded by human settlements, agricultural fields and grazing pastures? How has this changed in the last five years? To address these questions, and chronicle changes over time, the Himachal Pradesh Forest Department (HPFD) and Nature Conservation Foundation (NCF) launched the second round of state-wide snow leopard assessment. This initiative aims to deepen our understanding of snow leopard populations and identify priority areas for focused conservation efforts.

55 cameras in 500 km²

Since snow leopards inhabit regions where the tree line starts to disappear, the team stacked stones to set their cameras for them. We had previously deployed cameras here in 2017, and I was surprised to see that the deploy

stations were intact even after seven years!

We set up 55 cameras in a 500 km² area in 4x4 km grids, with at least one camera in each grid for representative sampling. It is

Our research engages local communities, recognising that they are central to conservation and their insights of local ecology are helpful for conservation

recommended that study areas be at least 481 km² apart to arrive at accurate density estimates. We hiked up to the ridgelines of mountains and looked for snow leopard signs – scrapes (scratch marks on the ground), scent marks (a typical sign of territorial marking), scat or pugmarks – and microhabitats like cliff bases and overhanging boulders.

Our team of 10 included locals from Spiti Valley who have decade-long experience in tracking snow leopards. Their experience was valuable as the team completed the task in just 12 days. Their expertise helped in deploying cameras exactly in places where snow leopards come and mark their territory. This team also included members from Champions from Kinnaur, who are part of the Champions Network by NCF. Our research engages local communities, recognizing that they are central to



A snow leopard and common leopard observed at the same location in Ropa valley

conservation and their insights of local ecology are helpful to address conservation challenges.

Once we set off from our base, we climbed for long distances for several hours, until we reached the mountain tops. En route, we often spotted the majestic mountain monarchs – the ibex and the blue sheep, preferred prey of snow leopards. Another perk of fieldwork is meeting new people every day, especially as they are very welcoming – offering hot cups of tea, tingmo (a steamed bread in Tibetan cuisine), momos and lots of warmth.

Sharing Space with Humans

Snow leopards here live close to human settlements, sharing

spaces with communities. Locals claim they spot them right in front of their houses. Some suggest they have also seen snow leopard cubs in their neighbourhood.

We managed to record snow leopards in 29 cameras along with eight other mammals like the Pallas's cat (first record from the state), and common leopards in many locations where previously only snow leopards were observed. It would be interesting to see how common leopards are impacting snow leopards, especially in the face of climate change.

These insightful results from camera trapping are made possible by the dedicated efforts of the field team which included residents from Kibber village in Spiti Valley. Their work underscores the importance

A Siberian Ibex in Kinnaur Valley. Ibex is a preferred prey of the snow leopard





Panoramic view
of Leo village
with apple
orchards



En route to the village of Kunnu
Charang, the last hamlets on
Indo-Tibetan border

of promoting multi-use landscapes as conservation units that support both wildlife and human livelihoods, fostering ethical measures of coexistence.

The Global Snow Leopard & Ecosystem Protection Programme (GSLEP), an alliance of snow leopard range countries and relevant stakeholders towards conservation of snow leopards and the mountain ecosystems, initiated Population Assessment of World's Snow Leopards (PAWS) to arrive at a global estimation of their population.

As a part of PAWS, in 2021, a study surveyed 26,000 km² of potential habitat in Himachal Pradesh, estimating 34-73 individuals. A nationwide assessment from 2019-23 estimated India's snow leopard population at 718 individuals. These studies revealed that most snow leopard populations inhabit shared, multi-use landscapes. 🐾

Charu Sharma is a researcher with Nature Conservation Foundation, Mysuru.

The King In **D**anger

Illegal hunting and human-wildlife conflict have threatened the existence of the Javan leopard. A new alliance is attempting to safeguard the future of this big cat.

BY ERWIN WILIANTO PHOTO COURTESY MOF-SINTAS



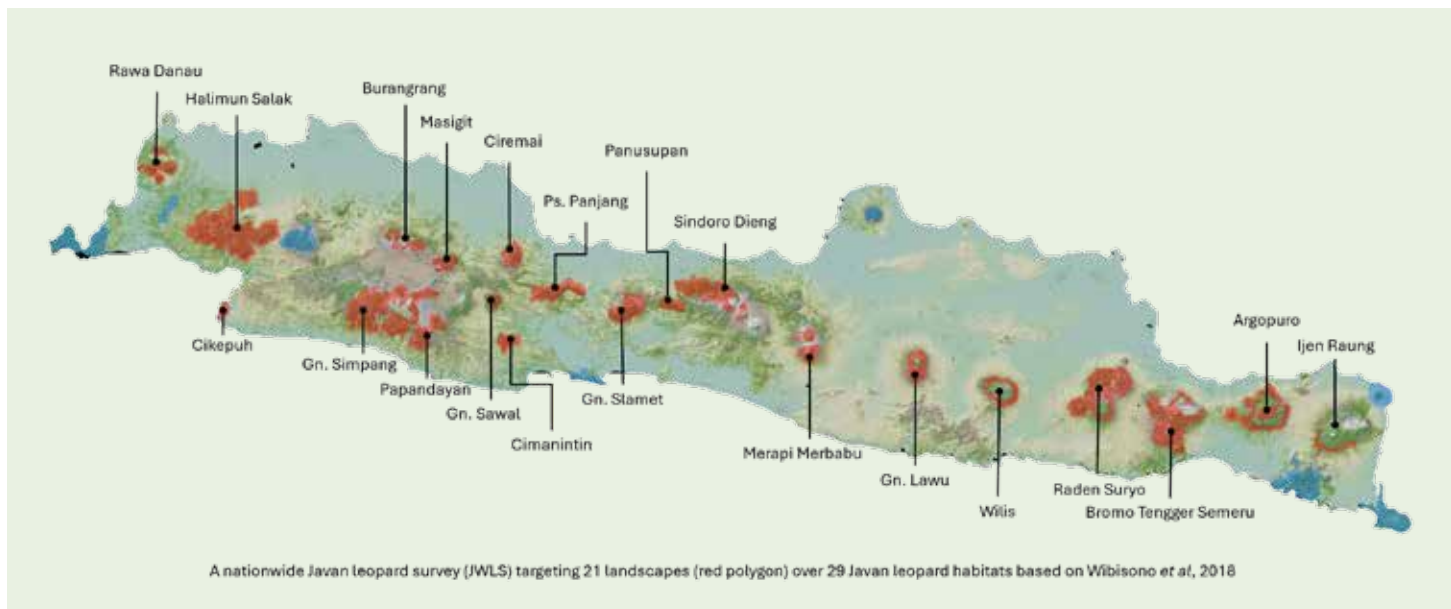
Melanistic
Javan leopard in
Indonesian forest

In the deep tropical rainforests of Java, the Javan leopard – the only large carnivore left – is a frequent target of professional hunters. The hunters appear to have shifted focus from the Sumatran tigers and elephants, whose numbers are dwindling, and they are harder to hunt for fur and traditional medicine. The recent discovery of wire snares in a typical method used by the Abai group, a syndicate of Sumatran tiger poachers, shows that poachers are targeting the Javan leopards often. With a population of prey such as deer, monkeys and wild boar on the decline due to poaching, the survival of this big cat, also called the ‘king of the island’, is increasingly threatened on the island of Java.

The Javan leopard (*Panthera pardus melas*) endemic to Java,

boasts of a dark coat, a genetic adaptation reflected in its subspecies name ‘melas’ (meaning ‘black’ in Greek). This dark colouration provides exceptional camouflage within the dense, low-light of the Javan rainforest. Preliminary results from the Java-Wide Leopard Survey (JWLS) suggest that black/melanistic leopards are more prevalent in Java than lighter-coloured leopards. These Javan leopards are significantly smaller than their mainland Asian and African counterparts, typically reaching only two-thirds of their size.

The Javan leopard is currently the only large predator remaining on the Indonesian island of Java, especially following the extinction of the Javan tiger during the last century.



Location of Javan leopard habitats on Java Island (Map credit: SINTAS)

In the lush landscapes of Java, melanistic leopards are the more common sight, their dark coats shimmering like shadows in the underbrush, while their lighter-coloured counterparts play a more elusive role in this vibrant ecosystem.

A master of camouflage and known for its solitary nature, the Javan leopard is an elusive creature, making it one of the least studied big cats in the world. It is a keystone species in the island's complex ecosystem, maintaining ecological balance while ensuring its health and diversity. The 2021 Red List IUCN assessment reported 391 adult leopard individuals and reclassified it from Critically Endangered to Endangered. However, habitat loss, human encroachment, and conflict with local communities have pushed this iconic species to the brink.

Although deforestation rates in Java are low (less than 1% per year), the island's high human population density (more than 1,317 people per sq km) has fragmented the Javan leopard habitat with limited potential for expansion and connectivity. A 2018 study, 'Identifying Priority Conservation Landscapes and Actions for the Critically Endangered Javan leopard in Indonesia: Conserving the Last Large Carnivore in Java Island', found that more than

60% of leopard habitats are outside protected areas, and only five national parks have enough space for a viable leopard population. This fragmentation, even without direct threats such as poaching, poses a significant challenge to the long-term survival of the Javan leopard.

Illegal hunting and human-wildlife conflict remain prevalent threats. A 2019 study, 'Uncover the Unrevealed Data: The Magnitude of Javan Leopard Removal from the Wild,' claimed that, on average, four leopards were poached or killed in conflict each year between 2007 and 2019. The true extent of poaching is likely to be underestimated due to the lack of dedicated efforts to investigate and prosecute the illegal Javan leopard trade. Data on poaching incidents is often derived from law enforcement operations targeting tigers and Sumatran elephants rather than specific efforts to combat leopard poaching.

Java, which is otherwise considered a centre of knowledge and NGO movement, overlooks the plight of its native Javan leopard. Despite its research prowess and NGO presence, the island's endangered feline receives inadequate attention and conservation efforts. Most NGOs, swayed by donor preferences, prioritise popular species over fewer charismatic ones, perpetuating an imbalance in conservation efforts. Conservation funding and initiatives disproportionately favour iconic species like tigers, orangutans, and elephants, leaving the Javan leopard and other species in the shadows.

In recent years, a few organisations have developed a more robust and comprehensive strategy for protecting leopards. The Javan Leopard Focus Group, a group of young conservationists, independently monitors the leopard population and helps mitigate human-leopard conflicts in West Java, primarily using personal funds. Recognising the conservation gap, Save the Indonesian Nature and Threatened Species (SINTAS) Indonesia Foundation, an organisation initially focused on Sumatran tiger

Most NGOs, swayed by donor preferences, prioritise popular species over fewer charismatic ones, perpetuating an imbalance in conservation efforts

View of a semi-evergreen forest, a critical habitat of Javan leopard. (inset) Picture of a Javan leopard in the forest



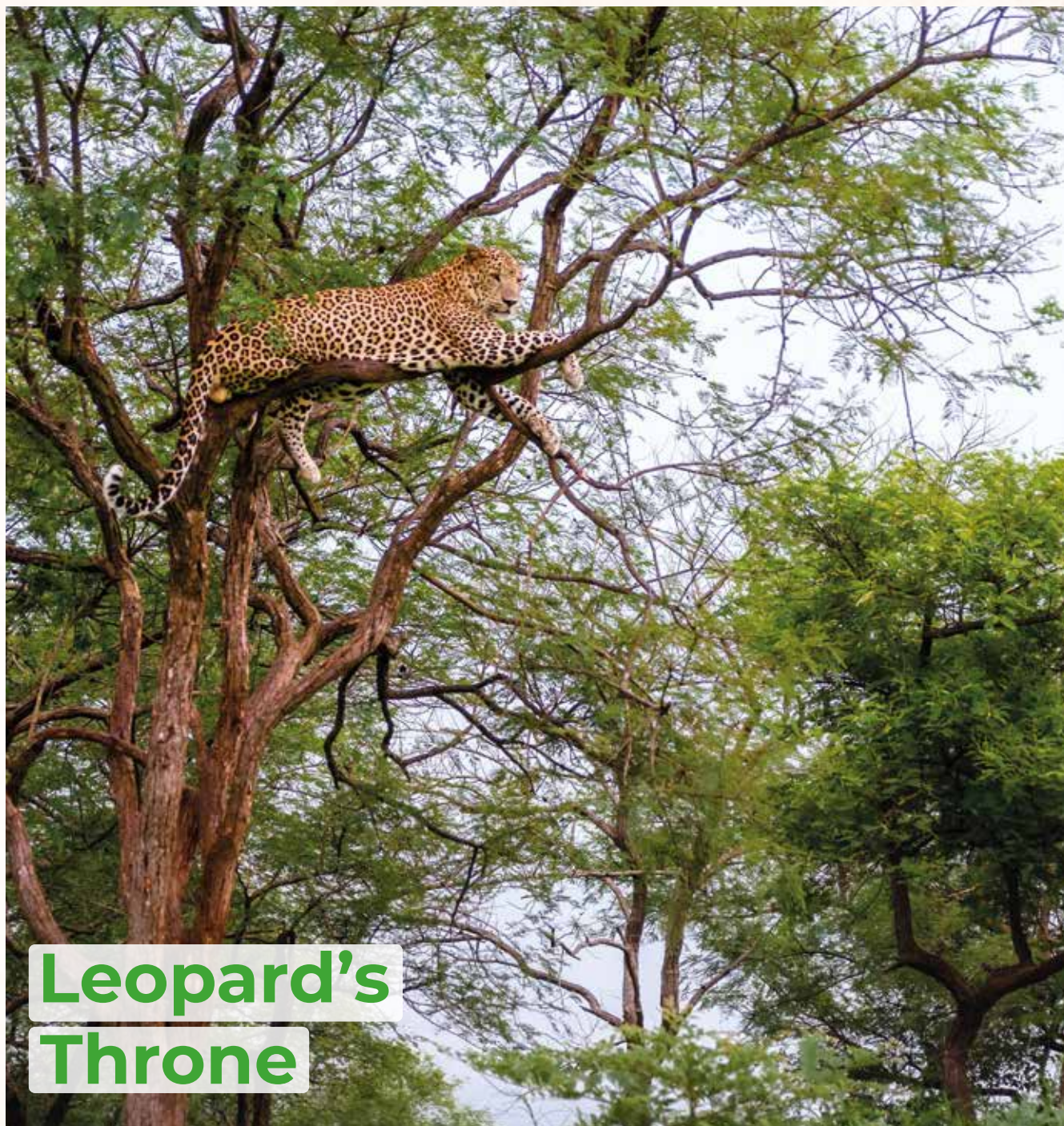
conservation, has expanded its activities to support the Javan leopard monitoring and population management at several sites: Taman Nasional Merubetiri, Cagar Biosfer Blambangan, and Gunung Muria Merubetiri National Park, Blambangan Biosphere Reserve and Gunung Muria Protected Forest. Such organisations have embarked on an ambitious project to survey Javan leopards across the island, namely the Java-Wide Leopard Survey (JWLS). The JWLS marks a significant milestone in conserving the endangered Javan leopard. It represents a critical step towards safeguarding the future of the Javan leopard.

The JWLS is the first national-level survey dedicated to Javan leopards, encompassing an extensive network of 29 survey blocks, 1,160 camera stations, and an impressive 104,400 days of camera trapping effort. This initiative started in April 2024 with the Ministry of Environment and Forestry (KLHK) as the lead agency. The SINTAS Indonesia is forging a collaborative alliance with local practitioners and NGOs working on the ground. This initiative aims to bridge the gap between grassroots conservation efforts and financial support, empowering local expertise to impact Javan leopard conservation significantly. The JWLS has made significant strides in mobilising support for Javan leopard conservation. Financially supported by ten national companies, the JWLS has expanded its presence across the island. Ten of 21 landscapes are now being surveyed, involving over 20 local groups and universities.

The Javan leopard is more than a beautiful animal; it symbolises

hope for preserving Java's rich biodiversity. Such efforts to protect the top predator will hopefully result in safeguarding the entire ecosystem it inhabits. 🐾

Erwin Wilianto is the founder of SINTAS Indonesia and a member of the IUCN Species Survival Commission—Cat Specialist Group.



Leopard's Throne

Indian leopard (*Panthera pardus fusca*) rests atop a *Neltuma juliflora* tree in Gir National Park in western India. Apart from good perching spots for the elusive leopards, the tree has other benefits - erosion control and nitrogen fixation, use as fuelwood and fodder by local communities, and rapid afforestation in arid areas. However, considered an invasive species, it causes soil salination.

PHOTO BY SHIKHAR MOHAN

Petaca, a Chilean Beauty

TEXT & PHOTOS BY **SHARON OSBERG**

PATAGONIA, IN SOUTH CHILE, IS A magical place famous for its jagged peaks, vast grasslands, and howling winds. It is also home to one of our most adaptable land predators: the puma (also known as the mountain lion, cougar, panther, or catamount). Adult pumas are highly territorial and generally solitary, except during the breeding season or when a female cares for cubs.

During my recent visit to the Torres del Paine UNESCO Biosphere Reserve in Patagonia, which is home to around 100 Pumas, an unusual circumstance occurred after my subject Petaca's seven-day dry spell of hunting. Petaca, watched over her cubs feeding at the carcass she'd just stolen. Afterwards, she allowed the young puma (who made the kill) to feed. During this episode, Petaca never stopped growling but stayed put. Eventually, Petaca left the carcass, signalled for her cubs to join, and moved off. We followed them far across a valley and into the hills. 🐾



A female puma is shown in profile, standing on a dark, rocky ridge. She is looking back over her shoulder towards the camera. Her fur is a light tan color. The background features a range of mountains with patches of snow under a cloudy sky.

A female puma
of the Torres del
Paine Biosphere
Reserve in
southern Chile





(Above) We had been watching a puma sleep for hours. She finally sniffed a nearby guanaco, at which point she got up, stretched, then took off down the mountain. This photo is a three-shot composite of her springing into action.

(Left) The Torres del Paine National Park in Chilean Patagonia is known for its famous granite towers, part of the Paine mountain range. It is one of the many breathtaking views into the national park. These towers are joined by the Cuernos del Paine, which are known as the 'Horns of Paine' and can be seen from a distance.



This lone guanaco is probably a young male recently driven from the herd. He'll need to find another herd soon. The guanaco warning system is so effective that pumas fail most of their hunts. The success rate is estimated 20%.



With the sun setting, Petaca's family settled down to rest



Petaca spotted this rock about the same time I did. All five photographers in my group wished hard for the same thing – a shot of Petaca atop the rock. It worked; what an incredible experience!

Wild World

News

BY RAVINA YADAV



Arabian Leopard Triplets
born at RCU



Photo: RCU

Five Arabian Leopard Births Recorded in 2024

The Royal Commission for AlUla's (RCU) Arabian Leopard Conservation Breeding Centre continues to make strides in its mission to protect the Arabian leopard. In 2024, five cubs were born at the facility, including a rare set of triplets on June 19. This marks the first time in Saudi Arabia that three cubs—one female and two males—have been born in captivity.

The Arabian leopard, the smallest leopard subspecies in the world, has been classified as Critically Endangered by the International Union for Conservation of Nature (IUCN) since 1996. Native to the harsh deserts of the Arabian Peninsula, it requires large territories to find sufficient prey, making it highly vulnerable to habitat loss from urban and agricultural expansion. Infrastructure developments, such as roads and dams, have further disrupted their mountain habitats, increased human-leopard

conflicts and led to their persecution. As a result, fewer than 120 leopards are estimated to remain in the wild.

The RCU, a Saudi commission dedicated to protecting and revitalising AlUla in northwestern Saudi Arabia, has made its breeding programme a

cornerstone of its conservation strategy. This programme only aims to increase population numbers but also prioritizes the preservation of genetic diversity. The triplets' father, Baher, has been temporarily loaned from the Wild Animal Breeding Centre in Oman, playing a key role in this effort. His contribution is vital for the long-term success of the Arabian Leopard programme and the eventual reintroduction of leopards into the wild in AlUla. Between 2023 and 2024, the facility has seen significant success, with 12 cubs born, expanding its leopard population from 14 to 32.

Beyond captive breeding, the RCU's comprehensive approach includes habitat restoration and community engagement to promote coexistence between wildlife and local populations. These initiatives aim to create a sustainable ecosystem where Arabian leopards can thrive.

Read more: <https://panthera.org/newsroom/royal-commission-alulas-arabian-leopard-conservation-program-welcomes-birth-rare-triplets>

Rangers Better at Spotting Lions

A study in Uganda's Murchison Falls National Park, published in Communications Biology, has revealed that wildlife rangers outperform technology when it comes to counting lions. Lions, iconic symbols of Africa's wilderness, face mounting threats as their populations dwindle, particularly in west and east Africa. Conservation efforts have poured resources into safeguarding these majestic predators, but an often-overlooked aspect is the accuracy of monitoring their populations.

The study, conducted in the Nile Delta region of the park, compared two methods: ranger-led surveys and infrared camera traps. Over 76 sampling days, two wildlife rangers, Lilian Namukose and Silva Musobozi, traversed nearly 3,000 km, photographing lions and documenting their unique whisker spot patterns, much like human fingerprints. At the same time, camera traps were deployed across 32 locations in the same study area. The results were striking—rangers detected 30 lions on 102 occasions, generating a reliable population estimate of 13.91 lions per 100km². Meanwhile, the camera traps produced only two usable detections due to poor image quality.

Moreover, the ranger-led approach proved to be 50% cheaper than using camera traps.

This study underscores the potential of empowering wildlife rangers as active conservation stakeholders.

Read more: <https://doi.org/10.1038/s42003-024-06796-0>

Photo: IUCN



European bison in Shahdag National Park

Bison returns to Azerbaijan Returns 100 years

European bison, the largest land mammals in Europe, have made a triumphant return to the wild in Azerbaijan's Shahdag National Park. After nearly a century of absence, this rewilding effort marks the first time the species roams freely in the South Caucasus. With the population now reaching 66 individuals, including several

calves, this initiative is a major milestone in global conservation.

Once widespread across Europe, the species faced near extinction due to habitat loss and overhunting. The last wild bison in the Caucasus was killed in 1927, leaving the species extinct in its natural habitat.

Decades of conservation efforts began with the preservation of a small population in captivity, paving the way for their eventual reintroduction to the wild.

In Azerbaijan, the rewilding project began in 2017 with the construction of a reintroduction centre. In 2019, 12 bison were brought from European zoos, and by 2020, 20 were released into Shahdag's wild landscapes. The GPS collars now track their movements, providing vital insights to support population management and ensure their

adaptation.

Beyond species recovery, this initiative rejuvenates Shahdag's ecosystems, enhances biodiversity, and brings new opportunities for eco-tourism. Local communities benefit from increased tourism and educational programmes like bison-focused summer camps, fostering a deeper connection to conservation.

The project is driven by IDEA (International Dialogue for Environmental Action), with support from WWF Azerbaijan, the Ministry of Ecology and Natural Resources, and other international partners. Shahdag National Park now stands as a beacon of hope, demonstrating the potential of collaborative efforts to restore species once thought lost.

The return of the European bison to the South Caucasus symbolises resilience and the power of conservation.

Read more: <https://iucn.org/story/202411/return-bison-azerbaijan>

Amur Tiger Walks 120 miles to reunite with mate

In the Siberian wilderness, a remarkable story of survival unfolds with Boris and Svetlaya, two Amur tigers orphaned as cubs in 2014 in Russia's Sikhote-Alin mountains. They were rescued and raised in a specialised conservation programme designed to prepare them for life in the wild. At 18 months old, they were released more than 100 miles apart to expand the species' range in the Pri-Amur region on Russia's far eastern Pacific coast. In an unexpected turn, Boris trekked 120 miles through dense forests and rugged terrain to reunite with Svetlaya. The journey took over a year. Six months later, they had their first litter of cubs.

This success is part of a larger conservation effort led by the Wildlife Conservation Society (WCS) and Russian scientists to restore the dwindling Amur tiger population. Poaching, habitat destruction, and human-tiger conflicts have

drastically reduced their numbers, with only an estimated 485 to 750 tigers remaining in the wild. Yet, these tigers' journey is part of a pioneering rehabilitation programme designed to minimise human interaction and ensure the cubs could thrive independently in the wild.

The programme focuses on teaching young tigers' essential survival skills, including hunting live prey. Over time, the cubs are conditioned to hunt wild animals, gradually transitioning from domestic prey to wild boar and sika deer. Remarkably, these tigers have not only adapted to the wild but have also reproduced, producing multiple litters of cubs.

As scientists track the success of these rewilded tigers, including Boris and Svetlaya, the results are promising.

Read more: <https://www.smithsonianmag.com/smart-news/two-orphaned-siberian-tigers-reunite-as-mates-after-one-treked-120-miles-through-russian-wilderness-180985660/>

Photo: ANO WCS



QUICK FACT

Blackbucks can run at a speed of **80 km/hour**. Their horns can grow over **30 inches** in length





Grace in Motion

Blackbucks are native to the Indian subcontinent and representative of an arid and semi-arid grassland ecosystems. Approximately 95% of the population inhabits Rajasthan, Gujarat, Madhya Pradesh, Tamil Nadu, and other regions of peninsular India. A small population is also found in Nepal, specifically in the Terai plains and Lal Suhanra National Park of Pakistan. The swift and agile blackbuck is a picture of grace.

In India, the Bishnoi community regards the blackbuck as sacred, believing it to be the reincarnation of their spiritual leader Guru Jambheshwar. Blackbucks (female on the right) are protected by the community. Bishnoi women nurture abandoned blackbuck fawns.

PHOTO BY MOHAN RAM

Launch of IBCA website, BigCats magazine



India's Minister of MoEF&CC and president of IBCA, Mr Bhupender Yadav, launched the IBCA website and the 2nd issue of BigCats

On 13 December, 2024 the official website of IBCA [ibca.world] was launched by India's Minister of Environment, Forest and Climate Change (MoEF&CC), and president of IBCA, Mr Bhupender Yadav. The website is a platform for global efforts aimed at conserving the world's seven iconic big cat species: cheetah, jaguar, leopard, lion, puma, snow leopard and tiger. Visitors can explore detailed profiles of these species, learn about their habitats and the challenges they face, and discover the vital need for immediate conservation actions. The site also highlights IBCA's mission to unite governments, conservation partners, and scientific organisation to foster cooperation in protecting these majestic creatures and their ecosystems.

Mr Yadav, released the second issue of the BigCats magazine in New Delhi. He said conservation has been integral to India's cultural ethos since ancient times. He emphasised India's significant progress in conservation, with protected areas now covering 5% of the country's total geographical area.

IBCA Hosts Meet on How Technology can Help in Conservation

On 6 December 2024, conservationists, scientists, and technology enthusiasts gathered online to explore the transformative potential of technology in conserving big cats and their habitats across the globe. The meeting was hosted by International Big Cat Alliance (IBCA).

The meeting commenced with a warm welcome from Dr Kausik Banerjee, Lead Specialist at IBCA, who emphasised the urgency for technology-aided interventions in big cat conservation. He noted the collective responsibility of the international community to leverage available tools to address emerging conservation challenges in an ever-evolving landscape.

Dr SP Yadav, Interim DG of IBCA, urged for collaboration across diverse fields underscoring the importance of a united front in exploring innovative conservation strategies. "We must harness the power of technology to enhance our approaches to big cat conservation," he stated.

Dr K Ramesh, a distinguished scientist from the Wildlife Institute of India, presented a comprehensive overview of global advancements in technology for big cat conservation.

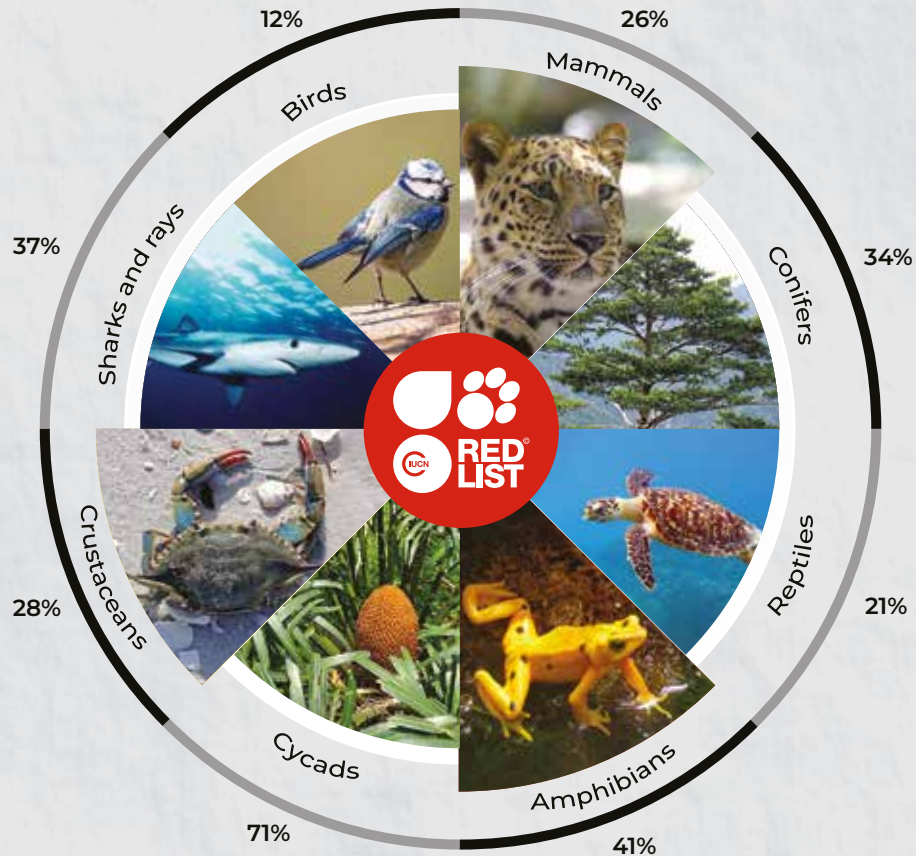
Dr Eric Dinerstein from Biodiversity & Wildlife Solutions stressed the importance of identifying critically endangered species for urgent conservation action. His insights into managing human-wildlife conflict in regions such as Africa and India sparked a conversation about practical solutions and the role of local communities. The African Lion Lead Specialist, Dr Dennis Ikanda shed light on the challenges faced in utilizing technology due to military restrictions in some regions.

Forthcoming Events

- ▶ **78th meeting of the Standing Committee CITES, 3-8 February, 2025, Geneva, Switzerland**
- ▶ **ITEC Executive Course for Wildlife and Conservation Practitioners scheduled for 10 - 16 February 2025, in Kaziranga National Park, India**
- ▶ **32nd International Congress for Conservation Biology (ICCB 2025) in Brisbane/Meianjin, Australia, is accepting early bird registration. The abstract can be submitted by 21 Feb, 2025.**
- ▶ **Indian Regional Association of Landscape Ecology Conference, 26-28 February 2025, on 'Restoration for Landscape Integrity', in Madla (near Panna Tiger Reserve), Madhya Pradesh, India**
- ▶ **21st International Wildlife Law Conference, 8 – 9 April, 2025, Gulfport, FL, United States**

The Barometer of Life

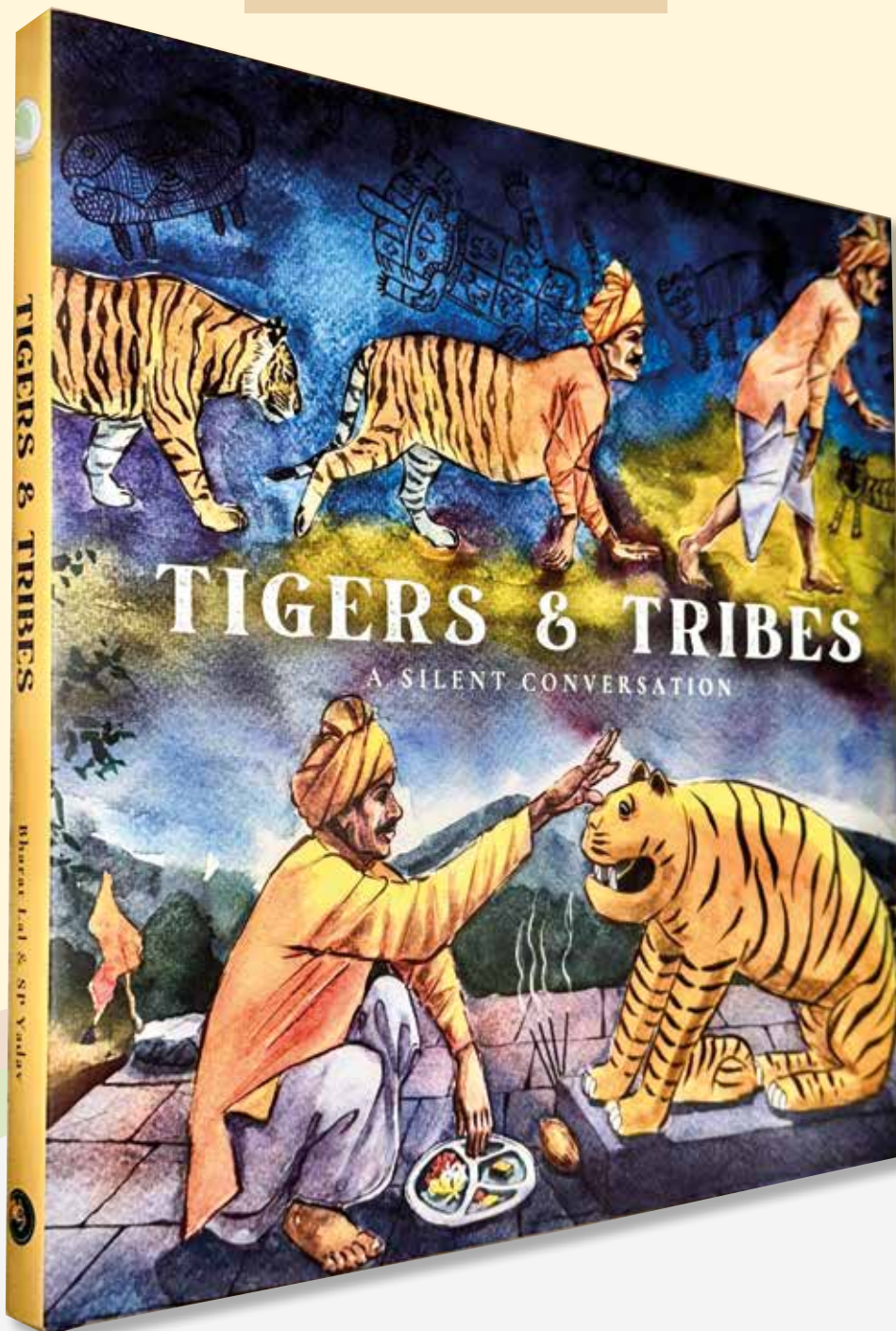
Over 166,000 species assessed, with **28% under threat**



The International Union for Conservation of Nature's Red List of Threatened Species is a critical indicator of the health of the world's biodiversity. This barometer highlights the percentage of threatened species across various taxonomic groups.

In much the same way as a barometer measures atmospheric pressure to help us prepare for adverse weather conditions, The IUCN Red List measures the pressures acting on species, which guides and informs conservation actions to help prevent extinctions. This is why The IUCN Red List is often referred to as a Barometer of Life.

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BigCats

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CHEETAH



JAGUAR



LEOPARD



LION



PUMA



SNOW LEOPARD



TIGER