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editor's note

Cover art **Kabini Amin**

Whether you're reading in print or online, welcome to this milestone edition of *Current Conservation:* the first issue of our twentieth volume.

From humble beginnings as a collection of readable research summaries to the introduction of longform articles and illustrations for a more engaging look, the magazine is now a global platform where 'art meets science'. But our mission remains the same: to tell conservation stories from around the world, and keep them freely accessible.

In many ways, however, this issue is no different from previous ones. It carries a range of perspectives on myriad issues, such as the need for conserving parasites, how to scale conservation initiatives (while acknowledging that not all can or should be scaled), Indigenous land rights, gender and access, dog-wildlife interactions, and more.

We thank everyone who has been with us on this journey—readers, contributors, and supporters alike.

– Devathi Parashuram

FIVE TIPS FOR SCALING CONSERVATION INITIATIVES

Authors **Cecylia Watrobska and Morena Mills**
Illustrator **Ayan**

Despite global nature conservation and restoration targets, and the implementation of numerous conservation actions around the world, the decline in biodiversity continues. Conservation and restoration initiatives offer promising solutions, but we need them to be more effective, implemented on a greater scale, across biomes, populations, and to last well into the future.

So how can we get pockets of good practice to catch on and spread (i.e., scale), in order for conservation initiatives to have the necessary positive, lasting impact around the world? Over the past ten years, we (the Catalysing Conservation team) have been working to uncover what makes different conservation initiatives scale. Here we present five of our top tips for scaling, based on case studies from around the world.

ONE: INITIATIVES SHOULD BE COMPATIBLE WITH THE LIVES OF LOCAL PEOPLE, REFLECTING THEIR NEEDS AND ASPIRATIONS

Imagine being told that the vegetable patch in your garden needs to be replaced with wildflowers. Wildflowers are pretty, but the vegetable patch provides food for your family and lowers your grocery bill. You are reluctant to adopt the new practice because it is not compatible with your current needs. One of our key findings was that compatibility of initiatives with local practices motivates people to adopt conservation programmes. This includes, for example, the degree to which the initiative is consistent with peoples' values, past experiences, and needs.

The Cairngorms National Park stretches across mountains, moorlands, and forest in northeastern Scotland, and supports rare and diverse species such as the golden eagle and red squirrel. The area is also home to landholders, including local farmers and gamekeepers. These landholders can participate in woodland creation schemes and choose to create mixed native woodland on their land in a bid to restore forests.

When we investigated what motivated them to create mixed native woodland on their land, we found they were more likely to do

so if they thought woodland was compatible with what they used their land for. Arable farmers, for example, were generally against planting trees on fields with good soils to grow crops, as this could lead to a loss of income. However, changes in farming practices with the use of larger farm machinery had, in many cases, created "dead corners"—areas of the field where tractors and harvesters turn. Many farmers saw these uncropped areas as ideal for woodland creation.

We find similar results across different initiatives and geographical locations. In a study that explored peoples' motivations to adopt a community-based conservation programme across five separate initiatives, compatibility of the programme to fit with local customs was often highlighted as critical for adoption. "Each and every location has their own customs," said one participant. "An approach that works in one village doesn't necessarily work in the other."

TWO: THE COSTS AND BENEFITS OF AN INITIATIVE MUST BALANCE TO HAVE OVERALL BENEFITS FOR PARTICIPANTS

Before investing time or money into a new project or habit, you will likely have weighed up the pros and cons and decided that your investment is worthwhile. Participating in a conservation initiative is similar, and initiatives have a wide range of potential benefits and costs. It is not one specific benefit that drives engagement, but the overall benefits that influence adoption.

Locally Managed Marine Areas (LMMAs) are areas under Indigenous protection, where communities set fishing rules to help protect and restore the marine ecosystem. In Madagascar, for example, non-governmental organisations (NGOs) which support LMMA implementation give livestock (chickens and goats) to participants, to compensate for any loss of earnings from fishing restrictions. Villagers identified these economic benefits as important in their decision to adopt the initiative. However, they also highlighted inequalities in livestock distribution across the community, which led to conflict. Initiative design should therefore reflect local perceptions of fairness. In this case, both fishers and non-fishers believed that livestock should be distributed to everyone in the community, not just to fishers.

Benefits are not fixed and may change over time and across geographical regions, as an initiative spreads. Territorial Use Rights for Fisheries (TURFs), like LMMAs, are marine areas where a group has exclusive fishing rights, but with fishing organisations leading their management. In Chile, fishing organisations were initially motivated to adopt TURF programmes for economic reasons. However, over time other benefits like marine tenure and status became more important.

THREE: DESIGNING INITIATIVES THAT RESPOND TO PEOPLE'S MOTIVATIONS FOR ENGAGING IN THEM WILL SUPPORT ADOPTION

We are all motivated by different things. It follows then, that different people will engage in conservation initiatives for a variety of reasons.

The Atlantic Forest in Brazil is a biodiversity hotspot, which is crucial for safeguarding for future generations. One aim of restoration initiatives here is to incentivise landholders to plant trees on their land. However, we have found differences between what motivates large and small landholders to participate in this region. For example, large landholders with an average of 500 hectares of land (equivalent to more than 700 football fields) participated in restoration initiatives to comply with environmental legislation. And uncertainty over changes to legislation by future governments hindered the participation of some large landholders. Moreover, certain carbon offsetting programmes offered incentives that resulted in higher earnings than if the land was not used for restoration.

In contrast, smallholders were motivated by the compatibility of the initiative with their existing land use. Many smallholders rely on cattle ranching for income, and they perceived restoration as interfering with the use of land for cattle grazing. "People […] depend on the space on the property for income (from grazing)," said one smallholder who had not participated in the restoration initiative, "so they are afraid that they would lose this space (to restoration)." It was not only the immediate benefit that mattered, but also how secure that benefit would be in the future.

FOUR: LONG-TERM AND QUALITY EXTERNAL SUPPORT IS KEY

External support, such as covering start-up costs, hosting workshops, facilitating engagement with other actors, and other forms of extended support are often provided by NGOs and external agencies when restoration and conservation initiatives begin. We found that such support is key to helping people adopt an initiative. In Brazil's Atlantic Forest, NGOs provide financial support for both small and large landholders who participate in a restoration programme. This support was key for landholders to engage—none of the landholders we interviewed could afford to fully fund the programme on their land and only 3 percent of landholders had invested some of their own money to get started. Aside from financial support, the NGOs provided training on forest plot management for smallholders, and linked large landholders with companies that could carry out the restoration work for them.

Extended support was also key to the spread of five community-based conservation initiatives across Namibia, Nepal, Fiji, Madagascar, and Chile. "I think the presence of an outside supporting organisation is very, very important […]," said one interviewee. Yet, the support must be targeted to community needs. People reported that they felt communities were not always provided with the support they needed, or that opportunities for training were missed: "[…] our fishermen know nothing about monitoring samples […]. It is so sad for me because I saw a lot of money go by, and I think we could have done a lot better," said another interviewee. Similarly, we must ensure it is the community, and not the overarching organisations, who benefit from the support. "One of the many problems is that the external funding is going to NGOs, rather than to communities, because the communities […] don't have a bank account," reported a different interviewee.

Therefore, organisations must provide quality support, be trusted, and be there for the long term as initiatives scale.

FIVE: LEARNING FROM PEERS CAN DRIVE AN INITIATIVE TO SCALE

Peer-to-peer learning and seeing others around you succeed are important factors motivating people to participate in conservation and restoration initiatives.

Smallholders in Gujarat, India, commonly cultivate cotton and pulses on their land. Restoration schemes in the area support the planting of native trees on their farmland. We asked farmers who engage in the scheme what motivated them to participate, and asked those who didn't engage what prevented them from doing so. Farmers reported that seeing outcomes of fellow farmers helped them decide whether to participate. This peer-to-peer learning happened for both positive outcomes (helping the initiative to spread), and also when the outcome was negative. "I don't think it is viable based on the experiences of other farmers near me […]," one farmer said, suggesting that he wouldn't participate because of poor outcomes experienced by his neighbours.

In Fiji, learning from others also seems to have been key to the spread of a local initiative. The Fiji Locally Managed Marine Areas (FLMMA) Network supports villages with the design and implementation of fishing plans that account for the needs of the community, as well as the environment. We found that nearly 75 percent of participants had a nearest neighbour who had also participated in the network. This suggested adoption is driven, in part, by peer-to-peer learning. Learning can be organic, or encouraged through facilitated exchange processes, or by designing moments of learning within the adoption process. Peer learning can be a powerful way in which ideas spread.

Critically, not all conservation initiatives can or should be scaled. In fact, scaling certain programmes may be harmful. Pressures to scale can incentivise poor practice and exclusion of local communities. This can lead to abandonment of the initiative in the long term, harm to local livelihoods, economic instability, and rise of conflict between communities. Thus, before planning for scale, we must carefully consider whether an initiative should be implemented at scale, and the impact scaling may have on others. By choosing the right initiatives to scale, we can support both ecosystems and the communities that rely on them.

Understanding what motivates people to adopt conservation initiatives is vital to help conservation succeed around the world. Our research provides insights that can guide practitioners when designing initiatives that can scale, while delivering benefits to people and nature. For example, proactively addressing factors such as compatibility of an initiative or its benefits, and facilitating peer-to-peer learning, will ultimately help the initiative to succeed in the future.

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See the online version of the article for a complete list of references.

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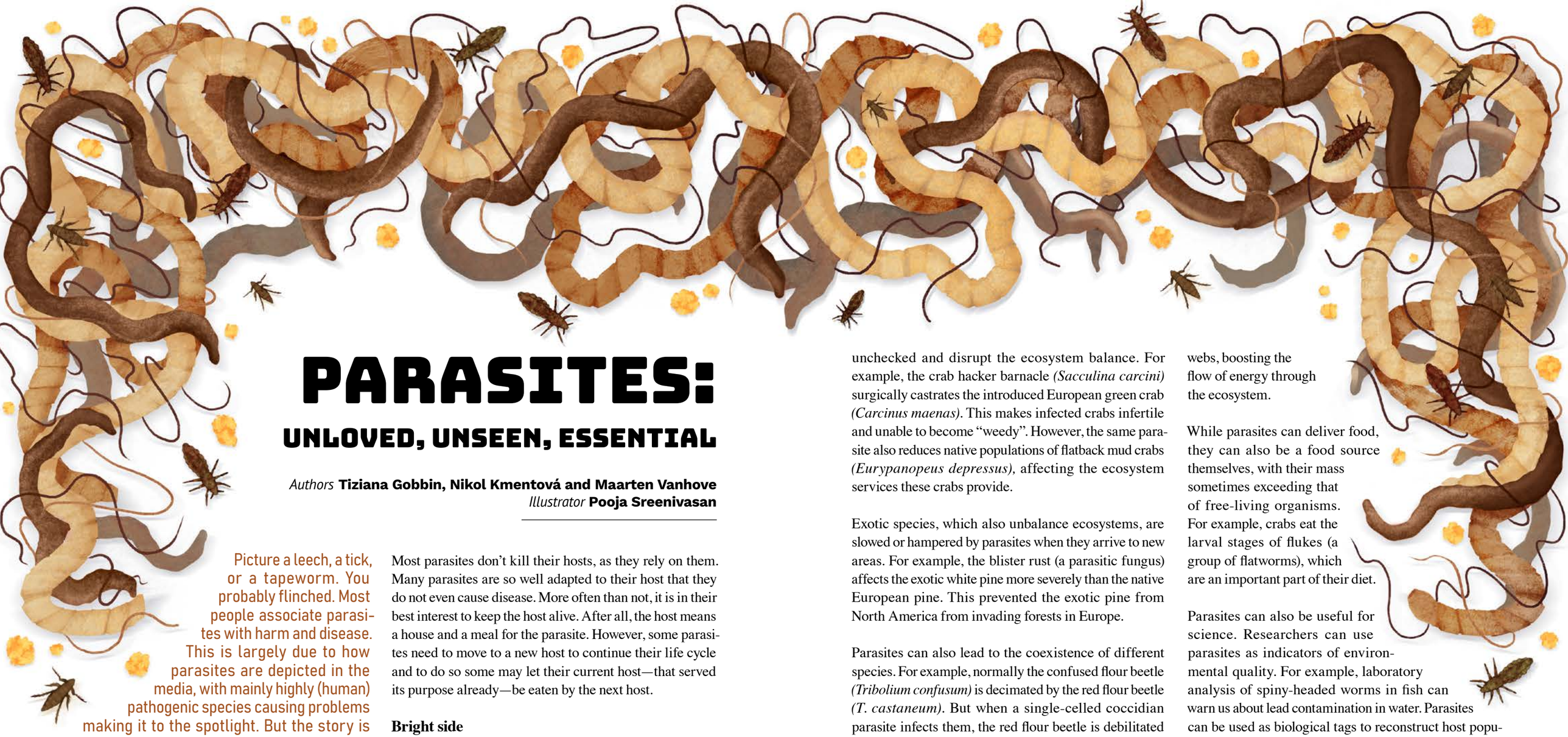

PARASITES:

UNLOVED, UNSEEN, ESSENTIAL

Authors **Tiziana Gobbin, Nikol Kmentová and Maarten Vanhove**
Illustrator **Pooja Sreenivasan**

Picture a leech, a tick, or a tapeworm. You probably flinched. Most people associate parasites with harm and disease. This is largely due to how parasites are depicted in the media, with mainly highly (human) pathogenic species causing problems making it to the spotlight. But the story is more complex than that.

A parasite is an animal, plant, fungus, single-celled organism, virus, or bacterium that causes some harm to another species in or on which it lives—the host—and which needs it to complete its life cycle. The host-parasite relationship can ecologically be classified as "antagonistic", though in comparison to true predators (for example, a tiger) they typically only have a single victim in each life stage. About 99.9 percent of animal parasite species are found in/on wildlife, leaving humans and domesticated animals untouched. You can breathe a sigh of relief.

Most parasites don't kill their hosts, as they rely on them. Many parasites are so well adapted to their host that they do not even cause disease. More often than not, it is in their best interest to keep the host alive. After all, the host means a house and a meal for the parasite. However, some parasites need to move to a new host to continue their life cycle and to do so some may let their current host—that served its purpose already—be eaten by the next host.

Bright side

In fact, parasites can be beneficial to host individuals, populations, and ecosystems. But since the ecological roles of parasites are complex, the benefits for one species can mean harm to another. Host individuals benefit from the exposure to parasites because this enhances the development of the immune system, and may reduce the risk of autoimmune diseases and mitigate the infection by other parasites. Also, some parasites such as spiny-headed worms remove heavy metals and other toxic pollutants from the host.

Parasites can regulate the growth of animal or plant populations. Without them, some populations might grow unchecked and disrupt the ecosystem balance. For example, the crab hacker barnacle *(Sacculina carcini)* surgically castrates the introduced European green crab *(Carcinus maenas)*. This makes infected crabs infertile and unable to become "weedy". However, the same parasite also reduces native populations of flatback mud crabs *(Eurypanopeus depressus)*, affecting the ecosystem services these crabs provide.

Exotic species, which also unbalance ecosystems, are slowed or hampered by parasites when they arrive to new areas. For example, the blister rust (a parasitic fungus) affects the exotic white pine more severely than the native European pine. This prevented the exotic pine from North America from invading forests in Europe.

Parasites can also lead to the coexistence of different species. For example, normally the confused flour beetle *(Tribolium confusum)* is decimated by the red flour beetle *(T. castaneum)*. But when a single-celled coccidian parasite infects them, the red flour beetle is debilitated and preys on fewer confused flour beetles. With the parasite in play, both beetles are able to share the same environment.

Certain parasites have the ability to manipulate host appearance and behaviour, favouring predation of infected hosts with consequences at ecosystem level. For example, infected crickets are induced by horsehair worms in their intestine to seek water and throw themselves in ponds and rivers. This allows the worm to swim away and complete its life cycle. Meanwhile, fish can enjoy a free "home delivered" cricket lunch. This forges a connection between terrestrial and freshwater food-webs, boosting the flow of energy through the ecosystem.

While parasites can deliver food, they can also be a food source themselves, with their mass sometimes exceeding that of free-living organisms. For example, crabs eat the larval stages of flukes (a group of flatworms), which are an important part of their diet.

Parasites can also be useful for science. Researchers can use parasites as indicators of environmental quality. For example, laboratory analysis of spiny-headed worms in fish can warn us about lead contamination in water. Parasites can be used as biological tags to reconstruct host population histories. For instance, the DNA of flukes revealed the migratory origins of populations of steelhead trout *(Oncorhynchus mykiss irideus)*. And parasites can also be a potential source of medical compounds. For example, the anticoagulant hirudin was isolated from leeches.

Knock-on effects

If parasites disappear, we will also lose their important effects on host individuals, populations, and ecosystems, as well as their future use for research and medicine. Habitat loss, pollution, introduced or invasive species, and climate change are all threats to both free-living and

parasitic organisms. In addition, parasites also face threats from the decline or extinction of their hosts. Many endangered species are those with a close relationship with another species, such as parasites and mutualists (including pollinators).

When available host individuals are scarce, transmission of parasites may not be sufficient to keep a viable parasite population. Two outcomes are then possible: switch to another host and thrive, or follow the host's decline and eventually go extinct. Generalists and parasites needing a single host species for their entire lifecycle might be able to leave the sinking boat, but specialists and parasites needing multiple host species for different life stages are more likely to be doomed.

Parasite extinction may sound like good news for host individuals. But it is certainly bad news for populations and ecosystems. Think of the horsehair worm again: if it disappears, crickets would safely avoid water. A field experiment in Japan showed the cascading effects of this. With crickets out of the menu, fish started predating aquatic invertebrates. Because of the increased predation, aquatic invertebrates declined by two-thirds. Fewer invertebrates ate less algae. As a result, algae were able to proliferate. And so, the entire aquatic community was reorganised as a consequence of the missing horsehair worm!

About 3–5 percent of parasitic worms are estimated to become extinct in the next 50 years. These estimates might be optimistic, since they only consider known parasitic species. However, because of their tiny size and hidden lifestyle, many parasite species are yet to be discovered. It is extremely sad that some parasites may be forever lost before being found, described and named by parasitologists. Another sad truth is that even known parasite species are still not well understood. Most parasitic worm species that are scientifically described are never observed again or studied further. Information on their population size, geographical distribution, temporal trends, and host range is often missing. Therefore, the extinction risk of parasites is largely unknown and hard to quantify.

The conservation status of only two parasitic animals has been formally assessed for the IUCN Red List: the pygmy hog-sucking louse *(Haematopinus oliveri)* and the Manx Shearwater flea *(Ceratophyllus fionnus),* both of which are now classified as Critically Endangered. But about 40–70 percent of the 3–10 million estimated species on Earth are parasites, so we have a long road ahead of us!

New hope

Here is the good news: parasite conservation can start now and in great style! We can profit from the experience we gained so far from vertebrate conservation and avoid many mistakes. Also, we can couple parasite conservation with conservation of their hosts, saving resources and making conservation more effective and inclusive.

There's an example of such co-conservation from Belgium. While breeding the endangered European weatherfish *(Misgurnus fossilis)* to release them back into the wild, three parasitic flatworms were found on their skin or gills. These flatworms were previously suggested to be endangered in Eastern Europe. When fish populations were kept under captive conditions imitating natural ones, the infection remained low and did not negatively affect the fish population. And since infection did not hamper fish conservation, the three potentially endangered flatworms were allowed to persist alongside their host. This was done simply by avoiding worm-killing treatments and providing fish with living conditions that avoid high numbers of parasites. But while co-conservation is a reasonable win-win solution for endangered albeit harmless parasites, it will be more challenging to decide whether to conserve a pathogenic parasite of an endangered host. These cases need to be individually considered as there is no one-size-fits-all solution.

We need to take three necessary steps to advance parasite conservation. First, we need baseline data on the existence and occurrence of as many parasite species as possible. To assess extinction risk, we need to know whether a parasite is declining over time or across regions, and why. A Red List of threatened parasites will help determine and prioritise species for conservation. Second, collaboration with conservation experts should be encouraged. The above example illustrates an ongoing collaboration between parasitologists and fish conservation practitioners.

Third, we need to gain the support of the general public, which has been shown to positively influence conservation outcomes. Knowing how people perceive parasites would help us better communicate the importance of parasite conservation. The World Archives of Species Perception-Parasites (WASP-P) is an ongoing project that aims to understand what traits make a parasite species appealing, potentially choosing flagship species for initial public engagement, and to test whether public perception is linked to knowledge on parasites. The ultimate goal is to advise on how to switch from negative to positive perception by better communicating the critical role of parasites in the ecosystem.

And after reading this article, you will hopefully see beauty and value in these hidden creatures, knowing they are overlooked heroes.

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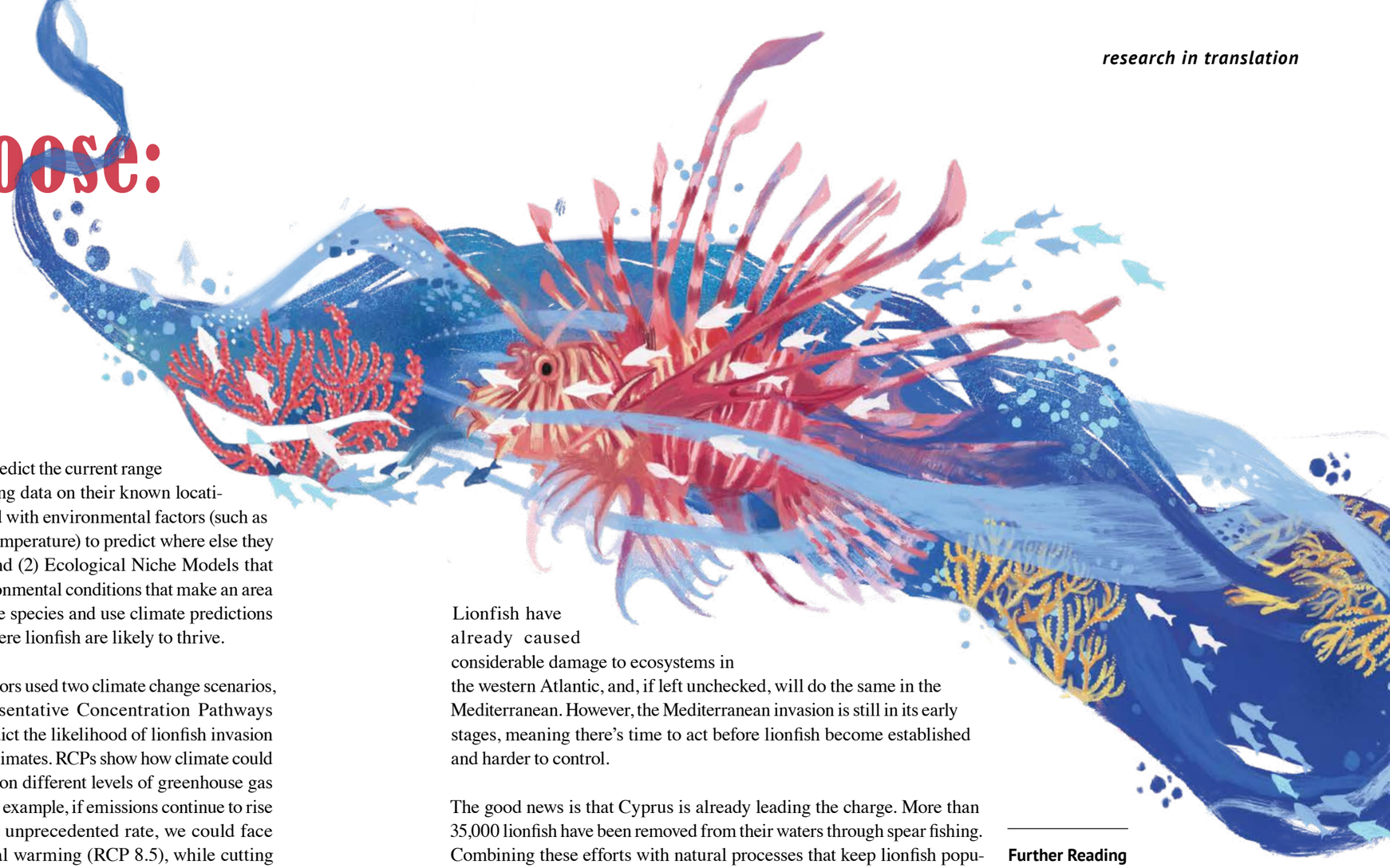
Lionfish on the loose:
The Mediterranean's new unwelcome guests

Author **Navya Mittal** | *Illustrator* **Bhavya Magdziarz**



Although beautiful, with colourful stripes and fan-like fins, lionfish (from the genus *Pterois*) are among the world's most successful invasive species. Originally from the warm waters of the Indo-Pacific, two of the 12 species of *Pterois*—the red lionfish *(P. volitans)* and the common lionfish *(P. miles)*—have rapidly colonised much of the western Atlantic, including the Caribbean. Here they are known for outcompeting native species and disrupting local ecosystems, with the lack of natural predators in their new environments allowing their populations to grow uncontrollably.

Rising ocean temperatures in the Mediterranean are mirroring conditions of the Indo-Pacific, allowing lionfish to thrive in places they couldn't before. It's believed that they got here via the Suez Canal, an artificial waterway connecting the Mediterranean with the Red Sea. It's one of the busiest and most important marine trade routes, but also serves as the primary pathway for marine bio-invasions into the Mediterranean.

Lionfish were first documented in the eastern Mediterranean around 2012. Within three years, they spread to Tunisia and Greece, and by 2021 they had reached Croatia, over 1,000 km away. Another factor aiding their spread is 'prey naïveté'—native species, unfamiliar with lionfish as predators, fail to recognise the danger, making them easy targets.

A recent study by Emma Mitchell and Victoria Dominguez Almela, from the University of Southampton, assessed the distribution of the common lionfish *(P. miles)* in the Mediterranean and how far they might spread in the future. To do this, they used two key methods: (1) Spatial Distribution Models that predict the current range of lionfish using data on their known locations, combined with environmental factors (such as salinity and temperature) to predict where else they might be found (2) Ecological Niche Models that identify environmental conditions that make an area suitable for the species and use climate predictions to forecast where lionfish are likely to thrive.

The study authors used two climate change scenarios, called Representative Concentration Pathways (RCP), to predict the likelihood of lionfish invasion under future climates. RCPs show how climate could change based on different levels of greenhouse gas emissions. For example, if emissions continue to rise at the current unprecedented rate, we could face extreme global warming (RCP 8.5), while cutting emissions could lead to more moderate warming (RCP 4.5). They used machine learning techniques to map out potential areas at risk of lionfish invasion under each scenario.

An emerging threat

The models predicted that lionfish are likely to spread widely across most Mediterranean coasts, except Libya and northern Egypt. By 2040–50, their distribution could expand into the southeastern Mediterranean, with some spread into western areas. In the worst-case climate scenario (RCP 8.5), nearly the entire Mediterranean could become suitable for lionfish by the end of the century. High-risk areas include southern Greece, Turkey, and the Strait of Sicily. Predictions show a shift north and east by 2090–2100, especially in the RCP 8.5 scenario.

Lionfish have already caused considerable damage to ecosystems in the western Atlantic, and, if left unchecked, will do the same in the Mediterranean. However, the Mediterranean invasion is still in its early stages, meaning there's time to act before lionfish become established and harder to control.

The good news is that Cyprus is already leading the charge. More than 35,000 lionfish have been removed from their waters through spear fishing. Combining these efforts with natural processes that keep lionfish populations in check, including predators and pathogens, could make an even bigger impact. This might involve protecting natural predators of lionfish that help control their populations. And creating markets for lionfish in the seafood and jewelry industries could ultimately make removal efforts more sustainable.

Entirely preventing this invasion in the Mediterranean may be challenging. However, accurate species distribution and prediction models can help manage their spread and are the first steps to slowing it down. Cyprus' actions show that these conservation management efforts will pay off.

If you notice a lionfish or another unusual species, it might be invasive—report it to local wildlife authorities or upload a photo to iNaturalist. Citizen scientists play an important role in collecting biodiversity information and could even help detect new invasions in time to take action.

Further Reading

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CONTESTED TERRITORY: DOG AND WILDLIFE INTERACTIONS IN INDIA

Author **Sanjana V. K.** | *Illustrator* **Kabini Amin**

I've been adopted by a dog.

He's a nice tan with white front stockings, a white bib, and a happy white-tipped tail. When he sees me, his ears flatten excitedly, his tail wags itself into a blur as he jumps up at my face, and his dark, liquid eyes brim with friendliness. He religiously accompanies me to and from the field station in Mudumalai Tiger Reserve at meal times, waiting patiently outside or next to me on the veranda while I eat. In between, he settles down outside my door to bark at passing cows, goats, langurs, and other dogs, and alerts me to the field station staff who've worked here for years entering their own room next to mine.

As a nod to the cheap price of this devotion, I've temporarily named him Biscuit. As a companion, he is undoubtedly affectionate and easy to like; as a study animal, he's quite unsuitable, because he'd happily let anyone remove any GPS collar I place on him without protest. But why would a wildlife ecology student be collaring dogs?

On a personal level, I'm fond of animals and dogs in particular. As a kid, I used to pet any and all street dogs I came across. When we later adopted our own dog, I was the one who trained her, trimmed her fur, and walked her on the beach. I even borrowed books from the school library about dog training, behaviour, and sensory abilities—not quite common reading fare for a 13-year-old. I toyed with the idea of becoming a veterinarian, but ultimately decided against it—I wasn't too confident about the surgery bit. Since my fondness for animals encompassed wild ones as well, it was natural to turn to studying wildlife ecology.

And somewhere along the way, I learned that domestic dogs are, in fact, relevant to wildlife conservation. While I was delighted to discover this bridge between the personal and professional, dogs—specifically free-ranging dogs, or unconstrained and unmonitored dogs—can actually be a serious problem for wildlife.

Man's best friend, wildlife's enemy?

The first and most common complaint is predation. Dogs have been companions and protectors for thousands of years, following where humans go; therefore, when humans settle near natural ecosystems, dogs are usually right there with them. The most abundant carnivore on Earth, they have contributed—as invasive predators—to the extinction of 11 vertebrate species. Some dogs have been reported to kill hundreds of individuals of a species, like a German shepherd who killed an estimated 500 kiwis in New Zealand in 1988.

Of course, not all dogs kill in this indiscriminate way. But since dog populations are subsidised by the food and shelter provided by humans, they can reach considerable sizes. Even occasional hunting can add up to serious damage to an endangered species, if the dog population is large enough. Additionally, the presence of so many human-supported predators means that wild predators must suddenly face strong and well-fed competition, affecting their ecology, behaviour, and perhaps even population size. Even if dogs scavenge rather than hunt, enough of them doing so can result in other animals dependent on the same resources, such as jackals, vultures or foxes, going hungry more often than they otherwise would.

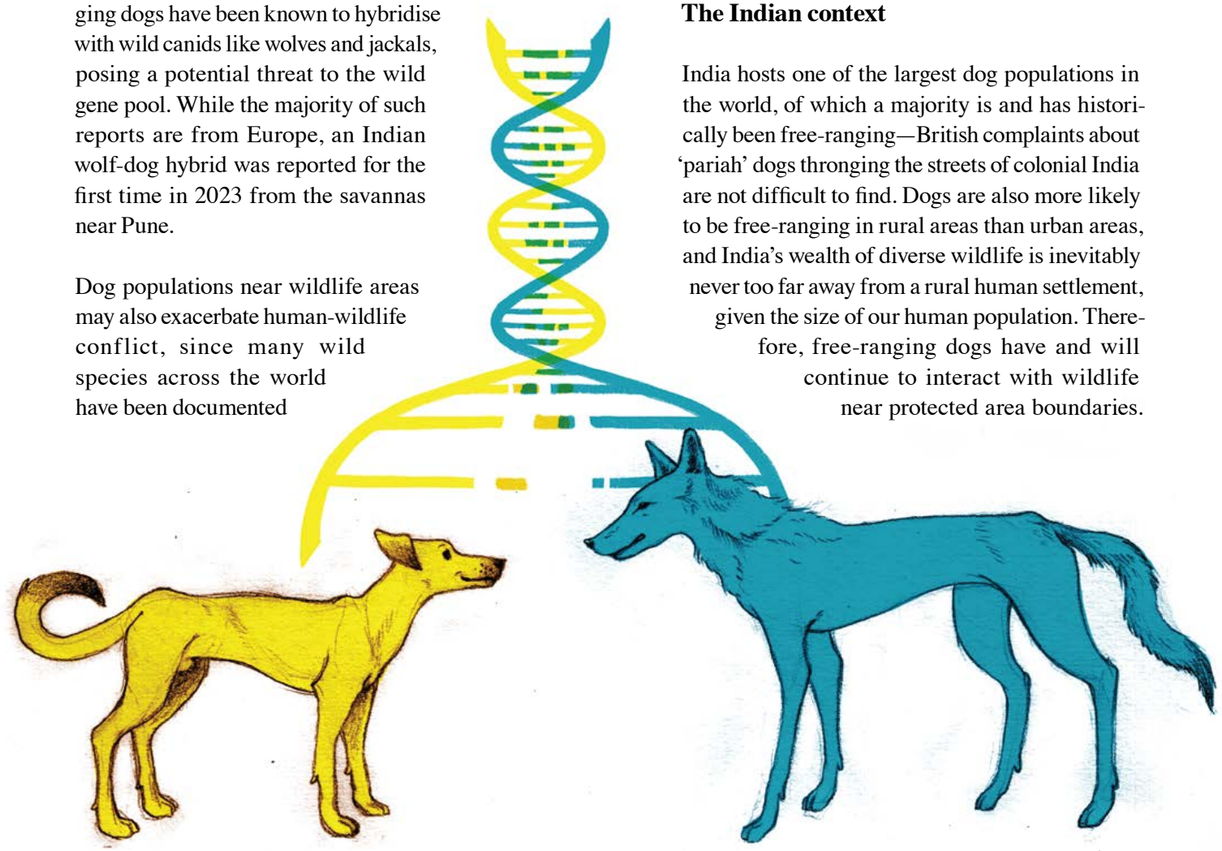
While predation is the most widely reported negative impact, there are several other facets to dog interactions with wildlife. Free-ranging dogs have been known to hybridise with wild canids like wolves and jackals, posing a potential threat to the wild gene pool. While the majority of such reports are from Europe, an Indian wolf-dog hybrid was reported for the first time in 2023 from the savannas near Pune.

Dog populations near wildlife areas may also exacerbate human-wildlife conflict, since many wild species across the world have been documented to prey on dogs, including grey wolves (Europe, Asia, and North America), coyotes (North America), pumas (North and South America), Amur tigers and leopards (Asia), and lions and spotted hyenas (Africa). As a result, large dog populations may attract these predators close to human settlements. Leopards, in particular, have been documented to prey on dogs since the colonial period in India, even entering houses to do so. This could lead to wild predator populations rising sharply, sustained by the abundance of dogs as prey, increasing the risk to humans and livestock; or, conversely, the strong emotional bond between dog and owner could lead to retaliatory killing of wild predators that hunt dogs.

Lastly, dogs may act as reservoir hosts of dangerous, highly contagious diseases, most notably rabies, canine parvovirus, and canine distemper, increasing the chances of transmission to wildlife. For example, in a particularly high profile case, the lion population in the Serengeti dropped by around 30 percent between 1993–94 after an outbreak of canine distemper that was attributed to transmission from domestic dogs.

The Indian context

India hosts one of the largest dog populations in the world, of which a majority is and has historically been free-ranging—British complaints about 'pariah' dogs thronging the streets of colonial India are not difficult to find. Dogs are also more likely to be free-ranging in rural areas than urban areas, and India's wealth of diverse wildlife is inevitably never too far away from a rural human settlement, given the size of our human population. Therefore, free-ranging dogs have and will continue to interact with wildlife near protected area boundaries.



Art by Kabini Amin
Current Conservation Issue 20.1
currentconservation.org

Are dogs a problem for Indian wildlife, then?

The answer, it turns out, depends on the socio-ecological context. Despite the many ways in which dogs can potentially affect wildlife, studies abroad have found that dogs might pose anything from a dire threat to no threat, depending on the ecology of the wild species in question, density of the dog population in the area, and level of care and food the dogs receive. In the Americas, for example, dogs were found to pose no threat to the common, widespread white-tailed deer, but a potentially severe one to the vulnerable, restricted southern pudu (a small South American deer), as they were encouraged by their owners to kill wildlife. The case studies that are so detrimental to dogs' ecological reputation are from relatively limited literature when compared to similar research that exists for, say, feral cats. There is sizable scope for studies that go beyond merely identifying impacts to investigating their severity and persistence, with explicit reference to local ecological context.

In India, published research that quantifies the impact of dogs on wildlife is mainly from two landscapes: the Trans-Himalayan mountains (specifically Spiti and Ladakh) and the grasslands of Maharashtra. In the Trans-Himalayas, food availability fluctuates seasonally—restaurants and hotels open in summer to cater to tourists and close in the harsh winters, leaving free-ranging dogs with no alternative food sources. In their search for food, dogs have been documented to form large feral packs, attacking and killing endangered wildlife, valuable livestock, and even humans. They remain a persistent threat in this landscape.

In Maharashtra, studies near the Great Indian Bustard Sanctuary found that dogs influence which parts of the landscape Indian foxes use, as well as how vigilant the foxes are while foraging, potentially increasing the energy cost of foraging. One disease-focused study also found that canine distemper virus, parvovirus, and adenovirus are all enzootic (self-sustained) in dog populations in the area. Indian foxes, on the other hand, were somewhat susceptible to parvovirus and adenovirus, and highly susceptible to canine distemper virus, with high rates of mortality. Dogs could therefore play a role in transmitting these diseases to foxes in the area.

Additionally, a large-scale survey-based study on domestic dog attacks on wildlife in India found that dogs have attacked 80 wild species across the country, with most of these incidents occurring near protected areas.

However, we still have very few multidimensional studies that focus on other landscapes in India. While dogs are certainly likely to negatively impact wildlife, a much larger foundation of scientific evidence about how exactly they affect specific ecosystems or species is sorely needed to evaluate the overall risk that they pose to Indian wildlife.

Management woes

Dog management in wildlife adjacent areas is complex, not only because of the range of ecological issues—from predation and disease to hybridisation—that must be addressed, but because of the socio-ecological context of dog keeping as well. Different cultures have vastly different attitudes towards dogs and dog keeping practices.

In most Western cultures, for instance, dogs are either pets or working dogs, and are the property of their owner. As strays exist outside this boundary, they can be euthanised as a matter of course, depending on local laws. In these countries, wildlife-related dog management includes policies such as compulsory leashing near sensitive wildlife areas, specific dog-friendly trails in national parks, or restricting dogs to human-use areas like camping grounds or visitor centres. Where trained dogs are used for hunting, the extent to which they are involved (only chasing versus actually killing) is usually regulated for humane reasons. In such cases, managing dog impacts on wildlife can be done by targeting the dog's owner—for example, implementing educational programmes to facilitate behavioural change of the owner.

On the other hand, free-ranging dogs that belong to no one (feral dogs), everyone (community/village dogs), or even to a single owner, are widespread and particularly abundant in developing countries. Such dogs can sometimes fall under multiple of these categories, and pose a much more nuanced—and therefore difficult—problem to solve. On an individual level, with respect to owned free-ranging dogs, many people like having a loyal, furry friend around; a farmer or jeep driver or shopkeeper from a village near a protected area can certainly love their dogs just as much as someone in a metropolitan city apartment.

Dog keeping can also be a matter of survival, since dogs in rural areas are usually kept to herd and protect livestock, chase crop-raiding wildlife away from farms, or alert their owner to the presence of wildlife near homes. In this role, they may help reduce human-wildlife conflict by averting incidents of livestock lifting, crop loss or even human death. Does this balance out the increased presence of wild predators that come to prey on dogs? We don't know, but the bottom line is that simply telling people living near protected areas not to keep dogs, or even to keep their dogs permanently caged or leashed, is not a viable solution to dog-wildlife issues when free-ranging dogs help protect people's families and livelihoods.

On a broader level, emotions tend to run high when dog management is discussed. Though Indian laws only allow Animal Birth Control (ABC) or surgical sterilisation as a legal form of population control, "We should just kill all the dogs!" is repeated vehemently and often in conservation circles. While there is assuredly good reason to say that dogs should be removed from wildlife-sensitive areas with endangered species, and humane euthanasia should remain an option in the absence of any others, culling is not sustainable in the long term and will increase the rate of population turnover as adult dogs are removed. As the proportion of young increases, and dogs from nearby populations move in, the spread of disease can increase because contagious diseases are often more prevalent in younger animals and immigrating dogs may carry new pathogens. This is not only a risk to dogs and wildlife, but an issue of public health for humans, especially in an India burdened by a high rabies caseload.

What then is a solution? People concerned for animal welfare, whether conservationists or not, usually advocate for ABC and vaccination programmes, but these require effort, personnel, facilities, and long-term funding to be even

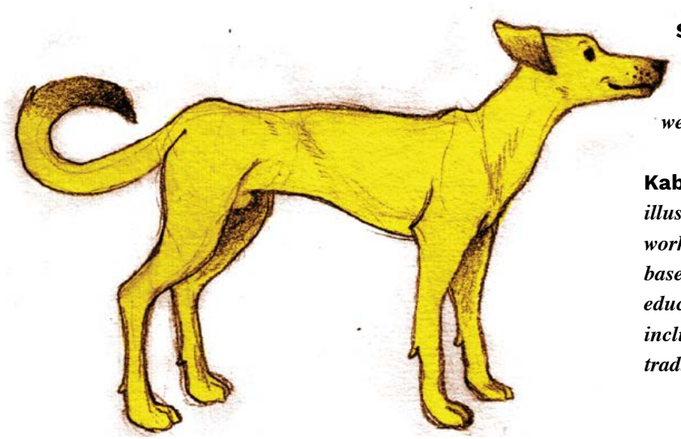
slightly effective. These resources are not easily accessible in rural India. The issue remains a bitterly contested one with no easy answers, and suggestions from scientists can be overshadowed by public perception of which side of the issue they land on.

Sniffing out coexistence

Unaware of the political nature of his existence, Biscuit trots ahead as we step out for breakfast. On the way, he barks at langurs, chasing them up trees, before returning to me with a proudly wagging tail. Last week, a friend at the field station showed me a photo of a dead langur, the corpse covered with flies. "Killed by that pack of black dogs," he said. I know that pack, and I know they're owned. Though they too accept the occasional biscuit and pat on the head, they're overall fiercer and hardier than Biscuit; perhaps understandably, since that household has lost multiple dogs to leopards. The ones that remain do their job, guarding their owner's cattle, just as Biscuit does his job as self-appointed guardian of my doorstep.

If they see other animals, they chase. If they catch them, they might kill. The outcome is the same, whether they go to the wildlife or the wildlife come to them—both can happen, at these porous village-forest boundaries. Indeed, I would later analyse my GPS collar data to find that owned free-ranging dogs spent 96 percent of their time in human settlements or agricultural fields, with about 98 percent of data points being within 500 metres of the owner's home. And yet Mudumalai Tiger Reserve has previously been in the press for reports of dogs chasing wild animals. Do you then blame the dog for chasing the deer it sees near its home, the deer for avoiding natural predators by approaching village boundaries, or the humans for building their settlements in the middle of a forest and bringing their dogs with them?

Regardless of whether we see them as affectionate, indispensable companions, or a nuisance and menace to humans and wildlife, the dogs themselves are ultimately just doing what dogs do. It's up to us to research dog ecology—from movement and disease to behaviour and diet—in the context of natural ecosystems. Learning more about this interface is the only way to eventually be able to implement effective, sustainable management strategies that benefit all the species involved, whether wild or domestic.



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Between birds and people:

FIELD NOTES ON GENDER AND ACCESS

Author and photographer **Sanmadi K. R.**

Last year, a team of three women—a sociologist, a field associate, and myself—set out to engage with the residents of Thirupudaimaruthur village, nestled along the banks of the Thamiraparani river in Tamil Nadu's Tirunelveli district. The village is home to India's first conservation reserve, the Thirupudaimaruthur Birds Conservation Reserve (TBCR). Thanks to the presence of tall, mature trees and availability of food from the river, the village is a popular nesting and roosting spot for wetland birds, such as painted storks, spot-billed pelicans, and egrets. These birds visit the village for several months each year, establishing a seasonal but deeply rooted ecological relationship with the landscape.

Our study, as part of the Ashoka Trust for Research in Ecology and the Environment-Agasthyamalai Community Conservation Centre (ATREE-ACCC), focused on examining the community's relationship with these birds, perceiving their understanding of conservation, and assessing the feasibility of community-based ecotourism as a potential livelihood opportunity. This required not only structured interviews but also unstructured conversations, observations, and ongoing trust-building with the villagers.

Through our community engagement and observations, we found that for the villagers, conservation meant coexisting with birds and other life forms. They tolerated the strong smell of bird guano and had even given up hunting and the use of firecrackers for the well-being of the birds. They considered the birds a source of pride for the village, drawing researchers like us to their community, even though many villagers mistook them as *'velli-nattu paravai'* (foreign migratory birds).

I had assumed that, as women, our identities might make it easier to build trust with the villagers during fieldwork—and in many ways, that assumption turned out to be true. With the support of a few key community members, such as the gatekeeper of the village, the head and secretary of the panchayat (village council), and our field associate—who hailed from the region and had a few local connections—we were able to profile potential participants for interviews and discussions. Such local support proved invaluable and enabled us to ease into conversations.

Painted storks roosting on a Mahua tree inside the Thirupudaimaruthur Birds Conservation Reserve in Tamil Nadu, India

We formally introduced ourselves to the village through a Self-Help Group meeting, a gathering primarily attended by women. This proved to be a pivotal access point. From the very beginning, the women were warm, curious, and generous with their time. Many were eager to share stories about their village, especially when we approached them during informal group settings. Most women rolled *beedis* (handmade cigarettes) for a living and typically worked outdoors in small, chatty groups under the shade of trees, in front yards, or on quiet street corners. These natural social settings became perfect sites for open, fluid conversations that offered us rich qualitative insights.

In contrast to the men in the village, the women were far more vocal about the everyday challenges their community faced. They spoke candidly about issues like water shortages during the rainy season, limited access to sanitation, and the lack of decent income-generating opportunities. Many women also expressed a genuine interest in being trained, and in taking ownership of community-based ecotourism initiatives.

Within a few weeks, we had completed interviews with nearly 50 percent of our target sample—most of them women. However, the next phase of recruiting and retaining male participants proved to be much more difficult.

We initially tried to contact the men in the village using phone numbers collected from the women. We had assumed that scheduling interviews with male family members through the women would be straightforward. However, this proved to be wrong. Most of the men worked in agriculture or traveled to nearby towns for daily-wage jobs. Attempts to reach them at home early in the morning rarely succeeded; many had already left for work, and some were reluctant to participate in an interview at that hour.

Eventually, we began frequenting the village's only tea shop, a bustling morning gathering place for many men. They would stop by to sip tea, read the newspaper, and exchange banter before heading off to work. This became an ad hoc recruitment centre for us. We managed to speak to a few men, but the sampling was not representative as not all social groups equally shared that space.

A resident of Thirupudaimaruthur village rolling *beedis* outside her home along with other women from her family

To increase our outreach, we split into two teams. Since we were an odd-numbered group and I could converse in Tamil, I often worked alone. We began calling male participants ahead of time to schedule interviews more deliberately. That's when we encountered another layer of complexity; many men were only available late in the evenings. And these time slots came with challenges as some men had a routine of drinking alcohol at night. I had to remain alert for signs of intoxication before starting any interviews. I still recall an evening when I had to prematurely end a conversation because the participant was visibly inebriated. Despite being accompanied by a colleague, I didn't feel safe continuing the conversation.

Engaging young men between the ages of 18 and 30 turned out to be the most challenging part. Many from this age group were either disinterested, shy, or felt that they had little to contribute.

The author (first from right) having an informal chat with one of the *beedi*-rolling social groups

A commonly heard refrain was, "My parents know more about the village, the birds, and the temple. You should speak with them instead."

One young man in particular kept postponing his interview, offering a different excuse each time. Eventually, we had to drop him from the study. Curiously though, he ended up helping us recruit a few of his male friends, encouraging them to participate even as he remained firmly on the sidelines. While he declined to be interviewed, he seemed genuinely interested in listening in on his friend's sessions.

Surprisingly, some male participants opened up more freely during joint interviews conducted alongside a female family member—usually their wife. The presence of a familiar person appeared to lower their inhibitions, making them more engaged and less guarded. Such incidents highlighted how social comfort and peer validation played subtle roles in male participation.

Even when male participants had confirmed appointments for Sundays, many were not at home when we arrived. Despite repeated follow-ups, the retention rate remained low. What we were able to accomplish with women in a few weeks stretched into months when it came to men. There were a few standout male participants, who spoke deeply about their lives. Some shared vivid childhood memories, such as crossing the river by foot or spending summers outdoors, while a few described working as lifeguards, helping save pilgrims who accidentally fell in the Thamiraparani river. These stories, filled with detail and emotion, added another layer to our understanding of how livelihoods and nature intersect in the village's cultural fabric.

This gendered disparity in engagement revealed more than just logistical hurdles—it provided insights into the rhythms of daily life in Thirupudaimaruthur, and the differing degrees of availability, willingness, and trust among the villagers. It reminded us that participatory research is never just about asking the "right" questions. It's about understanding social cues, finding the right moments, and sometimes, identifying the right person to ask them. By the end of our fieldwork, we had not only gathered data, but also witnessed the subtleties of participation, power, and perception.

Sanmadi K. R. ***is an ethnographic researcher whose work spans public health, conservation, livelihoods, and food culture. She uses participatory methods to uncover local knowledge, lived experiences, and community-driven pathways to resilience.***

The art of disappearing

Salar de Uyuni is located in southwest Bolivia. In a hidden part of the Andes lies the world's largest salt flat. During the rainy season, surrounding lakes overflow and allow a thin layer of water to transform the salt flats into the world's largest mirror.

I never would have been able to tell that this was a place on Earth
if it hadn't been for the polygonal patterns of
Salt

The mirror, an earthy reflection, far too precious for me to believe
that oxygen still filled my lungs as we trudged through the
Flats

My feet began to wander off into the distance, only to be pulled back
as I was reminded of the lack of depth perception, a lost estimation of time

If I had been facing south, I'd be sure that this place was not meant for humans, because
there is no horizon where Earth and Heaven meet, only where the sky is
Reflected

Only where the mountains sit and the flamingos play until the tyres
disturb the water and force our eyes to look at what we have done to the
Earth

I remember wondering if we need an estimation of time
to get to the places we're going

Flags from every corner of the Earth reminded me that it is not just in my head;
we need to see the flats before they disappear, or we'll be looking at an arid desert
Instead

I'd walk these flats for hours, while exhaustion and dehydration overtake me, as
long as I could be among the beauty, the best way to go that I could think
Of

But time won't let me, while we were busy scraping salt and lithium to send off to power
computers, phones, and electric cars, the Earth was dying

I am reminded that this place is not otherworldly, not meant to provide an escape,
because Salar de Uyuni reflects what we have made of the Earth, not a picture of
Heaven.

Alyssa Hughes *is a writer and dancer based out of New York City. She received her BA in English and Film from Fordham University.*

Photo: Salar de Uyuni by Javier Collarte/Unsplash.

Intimidation of social scientists in conservation

Author **Nowella Anyango-van Zwieten et al.** | *Illustrator* **Ayan**

We have been called spies, weak researchers, and arrogant. The reason? We are critical social scientists. We expose power dynamics, social inequalities, and injustices in conservation. This work produces knowledge that is considered "unwanted", "threatening", or "disobedient" by those whose interests are challenged.

Some say sticks and stones may break my bones, but words shall never hurt me. However, words have been used against us for character assassination, legal threats, job exclusions, retracted publications, and censorship. One may not expect this to happen in conservation research, but it does. It is instigated by research granting bodies, policymakers and government officials, donors, ethics bodies, conservation biologists, and international and local conservation NGOs.

In a recent article in *Conservation Biology,* we show how such intimidation happens before, during, and after the publication process. Here we highlight a few examples in which the topic and type of research were the most likely reason for the obstruction. We conclude by directing a way forward for the wellbeing of people and nature.

Ground realities

Before doing research, some of us faced difficulties in obtaining research permits. India and Indonesia raised "national security" issues to censure research that didn't adhere to their developmentalist agendas. Access to the Great Nicobar Development mega project in India was denied to a researcher because she does "political ecology" and had "foreign" funding. In Mozambique, researchers were denied park entry into Parque Nacional do Limpopo. They were unjustly accused of inciting local residents who were protesting against eviction and resettlement.

Receiving permits does not guarantee that intimidation will stop. While conducting research about militarised transboundary conservation in Central Africa, one of us was driven to a secluded, fenced complex by an all-male and armed group of national intelligence officers. Accused of spying, she was pushed to identify pictures of hacked body parts during a three-hour interrogation. Shocked and anxious for the safety of her local hosts, she left the country. Today, it still impacts her mental health and wellbeing.

Several of us faced intimidation during or after publication. For instance, South Africa's national lobby organisation for wildlife ranching sent an email to all its members asking them not to collaborate with two PhD researchers. Rigorous research was dismissed as "anecdotal" and "unscientific". Some of us were bullied across various media platforms. A European donor unhappy with non-academic publications critiquing management of Virunga National Park, told one of us to be "pragmatic" and that for every hundred Congolese people who did not like the park, he could show her a hundred happy ones.

Commitment to truth

Michel Foucault, a French philosopher, said the courage to speak truth is not optional but an obligation. We understand that conservation is highly competitive, because funding is limited. Therefore, conservation NGOs and governments are under pressure to show their successes. However, research findings—even when uncomfortable—enrich our combined understanding to improve conservation.

We suggest: (i) conservation organisations and social scientists engage and collaborate better (ii) (critical) social scientists should better understand the position, interests, and contexts of conservation practitioners (iii) educational curricula should include social sciences in mainstream conservation teaching (iv) funders should rethink "success" in their criteria and make more room for critical reviews.

Intimidation is destructive, not only for critical social scientists but also broadly for conservation, affecting both people and nature.

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Ayan ***is a trans artist, designer, and activist who works in India and Germany. His work explores identity and personal narratives.***

CONSERVATION BY DISPOSSESSION:

How the Mosopisyek tribe lost their forest home

Author and photographer **Patrick Hans Mulindwa**

For centuries, the Mosopisyek people have called the high-altitude forests of Mount Elgon, an extinct volcano marking the Uganda-Kenya border, their home. They managed to forge a life out in this terrain, their survival becoming intricately linked to the land—relying on livestock grazing, hunting, and gathering from the resources of the forest. However, in the name of conservation, first, the British colonial government and then the Ugandan government forcibly evicted them, leaving them landless and marginalised. Today, the Mosopisyek continue their struggle for recognition and the right to return to their ancestral lands.

A legacy of displacement

The Mosopisyek's forced displacement began during the colonial era when British authorities designated parts of the mountain a forest reserve in 1938. This move aimed to protect the forest's biodiversity but overlooked the Indigenous communities residing in it.

Three generations of Mosopisyek, the two oldest of whom were born and lived in the forests of Mount Elgon before eviction

Resettlement areas such as Yatui village in Kween district, on the edge of the Mount Elgon rainforest, are remote and lack access to basic services, including education and healthcare

In the 1950s, the British imposed further restrictions on forest access, criminalising traditional practices such as hunting and gathering. This disrupted the Mosopisyek's way of life, forcing them to adapt to an unfamiliar system of land use regulations. While colonial authorities framed these measures as essential for environmental protection, they largely served British economic interests by prioritising timber extraction and resource control over Indigenous land rights.

Post-independence, in 1983, the Ugandan government allocated 6,000 hectares of land in Kween and Bukwo—neighbouring districts situated on the slopes of Mount Elgon—for the tribe's resettlement, acknowledging their ancestral claims. But in 1993, Mount Elgon was upgraded to a national park, leading to mass evictions by the Uganda Wildlife Authority (UWA). Houses were destroyed, and families who had lived in the forests for generations were rendered homeless. By the early 2000s, an estimated 6,000 Mosopisyek people had been displaced, many without compensation or alternative livelihoods.

The consequences of this 'fortress conservation' approach have been devastating. Stripped of their land and traditional way of life, the Mosopisyek have faced poverty, discrimination, and statelessness. Living on the fringes of their former homeland, they lack access to basic services such as education and healthcare.

A 2024 report by the International Work Group for Indigenous Affairs highlighted that, between October 2022 and November 2023, the Mosopisyek community suffered the destruction of 96 houses, the arrest of 70 community members, and the impoundment of 1,295 animals, leading to severe food insecurity.

Without legal recognition, they have struggled to assert their rights and traditional practices, such as cattle grazing and collection of medicinal plants, with these further being criminalised under conservation laws. Encounters with UWA rangers often result in arrests and violence between both parties, which in the long run has further marginalised the community.

Forest roots

For centuries, the Mosopisyek people's way of life has been intricately tied to the forest and its resources. Their traditions and survival strategies reflect a coexistence and an intimate understanding of their environment—knowledge that has been passed down through generations.

One of the traditions that is central to their way of life is beekeeping. The Mosopisyek make and craft beehives from hollowed-out logs, bark, and vines, then position them high in the trees to protect them from predators. Honey is more than just a food source; it holds medicinal value, is used in rituals, and is a key ingredient in *lakwek,* a fermented honey-based drink consumed during social gatherings and ceremonies. Crafting these hives takes patience, skill, and deep knowledge of local trees—especially since only three species native to the region, including Elgon teak and red cedar, are used. These specific woods are even believed to shape the flavour of the honey itself.

Beekeeping is also important in Mosopisyek traditional marriage practice, where the bride's father climbs up a tall tree to plant a beehive, cuts the branches on his way down, and any suitor who manages to climb up this branchless tree and successfully harvest the honey will be the rightful man for the bride.

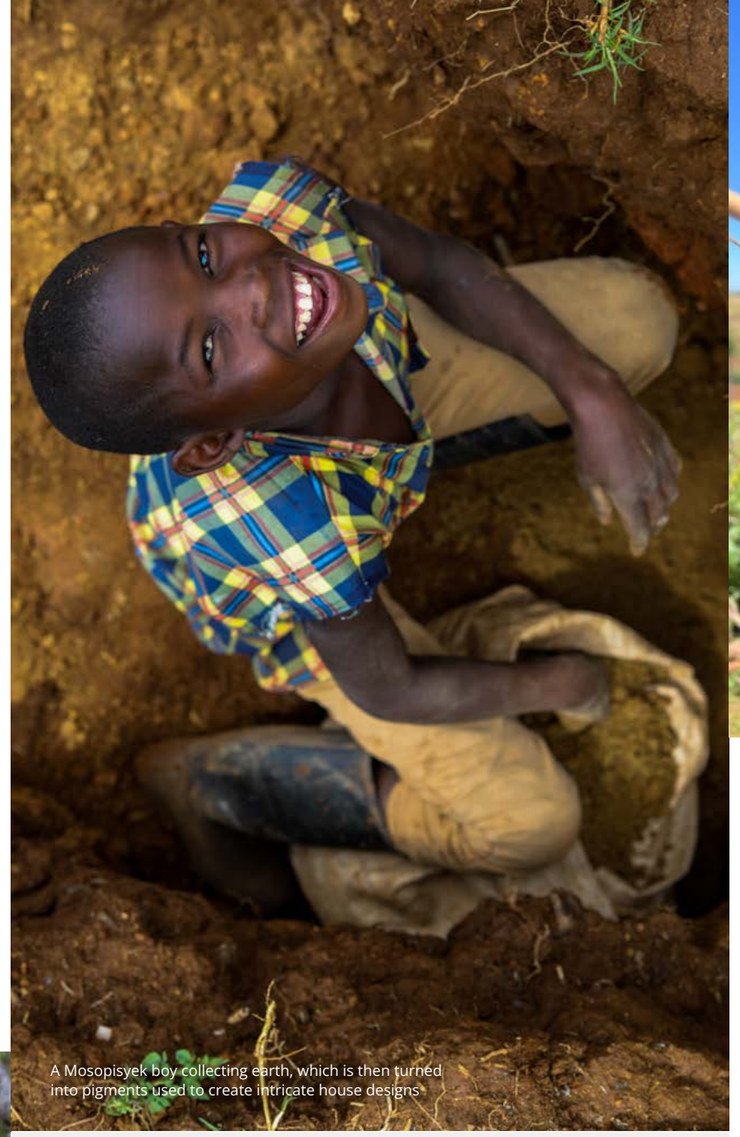
Historically, hunting was an integral part of their subsistence, carried out with deep respect for nature. Using bows, arrows, and carefully placed traps, they selectively hunted antelope, buffalo, and birds, among other animals. However, with hunting now criminalised under conservation laws, the Mosopisyek have lost a key component of their diet and traditional way of life.

Herbal medicine remains central to their culture and the heavy reliance on it is further reinforced by the poor access to modern healthcare, primarily because resettlement areas like Yatui village are so remote. Elders hold vast knowledge of the healing properties of plants, using them to treat ailments ranging from fevers to infections. Since access to the forest has been restricted, the Mosopisyek have begun creating communal herb gardens within their settlement areas. These gardens ensure they can still practise their traditional medicine without the risk of being arrested for trespassing in the national park.

Another striking aspect of their culture is the use of soil in home decoration. Women and children collect different shades of earth to mix natural paints, which are applied to homes in intricate patterns. These designs are not only decorative, but also serve as a cultural identity marker.

The evictions from the forest directly changed the Mosopisyek way of life. But they managed to adapt and become small-scale farmers, allowing them in a limited way to still practise their traditions. But with heavy restrictions on forest access, their culture is slowly dying, according to Francis Barber, a Mosopisyek leader and healer.

Beehives are made of locally available materials; the Mosopisyek have improvised with plastics for weatherproofing because they can't get some materials from deep within the forest



A Mosopisyek boy collecting earth, which is then turned into pigments used to create intricate house designs

A house decorated with different soil pigments

photo essay

Francis Barber, a last-generation forest dweller, elder, and healer, holds a bow and arrows made from specific eagles' feathers, known for their water resistant qualities

The conservation debate

The Mosopisyek's plight raises critical questions about fortress conservation, which seeks to protect biodiversity by excluding human communities. Conservation was the argument used when Moun Elgon was designated as a protected area, citing a fragile ecosystem that needed to be safeguarded from human encroachment. The park is indeed home to diverse flora and fauna, including rare plant species and endangered wildlife, in addition to serving as a vital water catchment area for surrounding regions.

However, Indigenous rights advocates contend that the Mosopisyek have historically lived in harmony with the forest, managing its resources sustainably long before formal conservation policies were introduced. Research indicates that Indigenous stewardship can enhance biodiversity rather than degrade it. A 2021 report by the Rights and Resources Initiative found that forests managed by Indigenous peoples often have equal or higher biodiversity levels compared to protected areas managed by state agencies.

The situation on Mount Elgon is not unique; across Africa and other continents, Indigenous communities have been displaced in the name of conservation. In Cameroon, the Baka people have faced similar evictions from protected areas, leading to loss of livelihood and cultural erosion. In Kenya, the Ogiek community's struggle for land rights in the Mau Forest mirrors the Mosopisyek's challenges.

An uncertain future

In 2005, the Mosopisyek took their case to the Ugandan High Court, which ruled in their favour, recognising them as the rightful owners of their ancestral land and ordering the government to grant them formal land titles. However, nearly two decades later, this ruling remains largely unimplemented. Bureaucratic inertia, competing interests, and conservation policies that favour tourism revenue over Indigenous rights continue to hinder progress.

The Mosopisyek have also sought justice beyond Uganda's borders. They have appealed to international human rights organisations and regional bodies, hoping to pressure the Ugandan government into action. However, these efforts have yet to yield tangible results, leaving the community in a state of limbo.

Cases like the Mosopisyek's are playing out across the world with countless people being affected, and with limited capacity and agency to act against state agencies and brutal conservation practices. A report by Amnesty International suggests integrating Indigenous knowledge and involving local communities in conservation efforts can lead to more sustainable and equitable outcomes.

Co-management approaches, where Indigenous communities participate in decision making processes, have shown promise in various parts of the world. In Australia, the involvement of Aboriginal communities in managing national parks has led to improved conservation outcomes and strengthened cultural ties to the land. Similarly, in Canada, Indigenous Protected and Conserved Areas (IPCAs) have been established, recognising the role of Indigenous peoples in preserving biodiversity.

Implementing such models in Uganda would require significant policy changes and a commitment to upholding Indigenous rights. It would involve granting the Mosopisyek legal recognition, ensuring their participation in conservation planning, and providing support for sustainable livelihoods that align with environmental goals.

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