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Review Article

Impact of Lockdown Mediated Anthro-Pause on Man-Animal Conflict

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ABSTRACT

Objective: With the COVID-19 pandemic there was a major lockdown world-wide which halted human activity to a total pause giving rise to a new term never known previously "Anthro-pause". During this anthro-pause there were various reports of rare animal sighting in urban areas. Some of the reports were true and some was far away from reality thus demand for detail study. Methods/findings: Man-animal conflict has resulted in mammoth destruction and aggravated mass extinction. A careful study of the pandemic driven anthro-pause has given a rare chance to study the impact of human intervention on wild life scientifically with realistic observations and data. This study will help to provide insight to address previously intractable questions like is it the urban structures or humans himself that have impacted the wild life. The learning will pave future understandings on how by minor changes to our lifestyles and transport networks can potentially have significant benefits for both ecosystems, human wildlife coexistence.

Keywords: *Man-animal conflict, Ecosystem, Lock-down, Anthro-pause.*

INTRODUCTION

Animals evolved from sea then moved into fresh water and lastly to land in the Ordovician Period as plants was available as food source. A simple history of animal ecology centres on the theme of eating some organisms for food while providing food for others. Humans impacted the environment in major ways, neither of which was original but have greater in consequence than those of any other single species (Little & Little, 1990). They seriously started to pollute their environment in the past two centuries by urbanization. By their sheer increase in numbers, humans crowd out many other species, particularly those that are large in size but also those that live in habitats humans pre-empt, giving rise to Man-animal conflict **(**Raup, 1986). The conflicts have occurred since the dawn of humanity due to interaction between man and animal and resultant negative impact on man and his resources or animal and its habitat.

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To get a perspective of this, note that of the total land area of the world, which is about 510 million square km, 30% is desert and 24% mountainous, leaving humans to occupy about 45-50% of the remaining area when they started to live as communities about 17,000 years ago. Prior to that, humans lived in the wild, along with animals and plants, as hunter gatherers. And over these millennia, particularly during the present one, humans have built cities and urban clusters, thus making what was 'wild' land into 'civilised' land. Thus as per geo-zoologists it is we humans who have transgressed and changed the landscape of Mother Earth. This human intervention resulted in elimination of countless tiny species without realizing their existence. The number of extinctions humans have been directly and indirectly responsible for ranks as one of the major extinction events in Earth's history **(**Raup, 1986).

2. COVID-19- a worldwide pandemic:

In this scenario by the end of 2019, a pneumonia outbreak of then unknown etiology, was reported in Wuhan, China. The causative organism was identified on the 7th of January 2020 as a novel coronavirus and referred to as COVID-19. As evidence suggested that human-to-human transmission of COVID-19 can occur through droplets, contacts, tears, and fomites it led several countries to adopt a series of confinement measures and lockdowns with an aim to reduce the spread of the contagion while forbidding any form of assembly or crowd. Across the globe industries ground to a halt while billions of people stopped moving about the planet and stayed at home resulting in new terminology by scientists **"anthropause"** meaning pause to human activity. Meanwhile, anecdotal evidence of an increase in animal activity has also been abundant showing the impact of the global lockdowns designed to control the coronavirus pandemic has had a profound effect on the natural world (Lawton, 2020).

3. Reports of animal sighting in urban area:

As COVID-19 sweeps across the globe, countries are locking down their towns and cities because of the severity of the outbreak. From early march there were viral posts on social media about animals being more visible in urban centres that created a buzz. Various national and international news papers were gaga on the sighting. There were reports that animals that live in cities or on their outskirts are exploring the empty streets, like the Kashmiri goats in Llandudno, Wales. Others that would normally only venture out at night are becoming bolder and exploring during the daytime, like the wild boar in Barcelona, Spain. There not only seem to be more animal sightings than usual, but many surprising encounters include pumas spotted prowling the streets of downtown Santiago, Chile, troops of monkeys in Singapore, wild boars in cities across Europe and Coyotes wandering streets during daylight hours in the US and dolphins recently swam through the untypically calm waters in the harbour of Trieste, Italy. BBC news reported how with a lull in traffic in the Bosphorus marine route during lockdown in Istanbul, dolphins are increasingly sighted near the shores of the city. In mountains, too; Marco Lambertini of the World Wildlife Fund is concerned that COVID-19 could infect mountain gorillas which are likely to be particularly vulnerable as they share about 98% of their DNA with humans. They, like all great apes, are already endangered due to habitat loss, poaching and diseases – only 900 remain in the mountains of Central Africa.

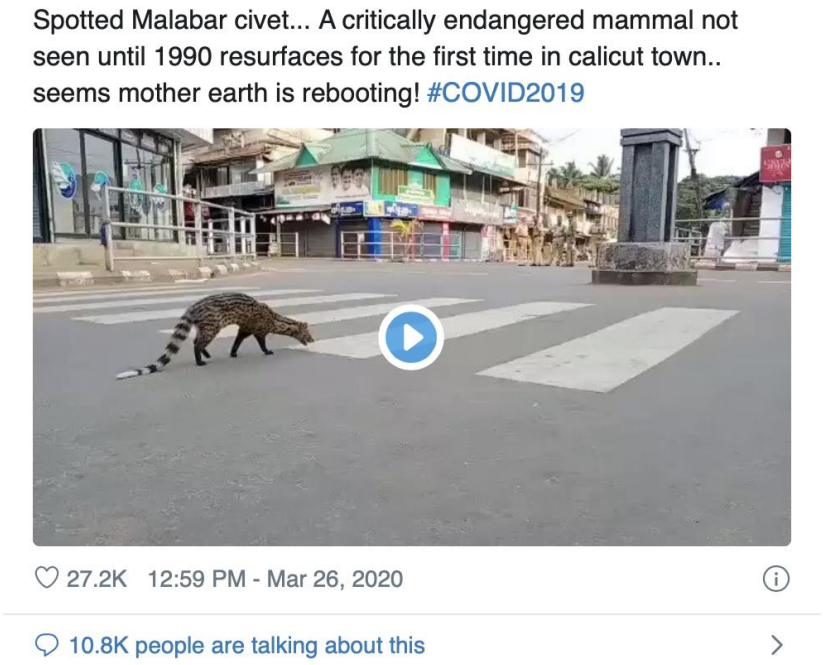
During these days of lockdown across various parts of India, we see reports of 'wild' animals coming over to the cities, towns and urban clusters. In Uttarakhand, an elephant was reported to come down unusually near Hari ki Pauri in Haridwar. A leopard was sighted in Almora. In Karnataka, elephants, spotted deer and sambar deer had transgressed into towns of Thondi and Thiruvadanai, while in Maharashtra, people spotted scores of civet cats, mongooses and porcupines in communities. Likewise, as the Ganga became less polluted in recent days due to decreased industrial and human waste during lockdown, the Ganges dolphins and gharials (fish-eating crocodiles) have been sighted in larger numbers.

There were reports by Ramanathapuram Forest Range Officer that partial migratory birds species like open bill stork, spot-billed pelican, painted stork, grey heron, spoonbill and ibis have extended their stay due to reduced human movement and less disturbance at the Therthangal due to lockdown. In kurseong, Railway Layout, Viajayanagar people said they have been sighting some rare species of birds and more number of birds during lockdown.

A puma in the streets of Santiago, 24 March 2020

4.1 Fake instances vs Reality:

The unprecedented chaos over pandemic with mounting cases and fatalities, the news of wild animals enjoying in absence of human hustle bustle, is a solace amidst this pandemic gloom. Thus people worldwide circulated and shared stories of animals on social media platforms without verifying any authenticity of the source. Of these sightings many turned out to be misleading excluding few which have made their way through WhatsApp forwards to social media and even to some online and mainstream media outlets. One of the most widely circulated videos is a particular video from India with captions such as “mother earth is rebooting” and categorizing the species in the video as the Malabar civet a critically endangered species that is difficult to sight. Later, reports and comments started budding, demystifying the original claim while recognizing the species as the Small Indian Civet, a very common one in the locality of the Indian Subcontinent.



Screengrab of a video wrongly labelling the small Indian civet as the spotted Malabar civet. Source: Twitter

Another example cropped up lately of a group of whales at the Bombay High Offshore Oilfield. The video shows people excitedly seeing a group of whales swim from an elevated platform, possibly a ship deck. The video became viral with newly popular captions and hashtags like “Nature reclaiming its space”. Later when authenticity was

questioned it was found that the same video is available on youtube dated September 10, 2019. Oil and Natural Gas Corporation (ONGC), which runs operations at the Bombay High Offshore Oilfield released a statement which states, "It's heartening to see marine life thriving. However, mobiles are not allowed in ONGC offshore installations. Therefore, this video has not been shot at/near any ONGC offshore installation". Therefore it turned out to be an edited video where the original clip from indonesia was used with new superimposed audio making the video seem real and recirculated amid this pandemic.

Screengrab of a manipulated video of a group of whales during the pandemic. Source: India TV

In addition to above many more videos and photos of animal roaming in urban domain during lockdown are actually doctored which are cases of misinformation and have no-relevance to the lockdown. Some examples being the deer on Ooty-Coimbatore road was a photo from Japan, elephant walking through Dehradun was an old video and various pictures of peacocks other birds claimed to be newly spotted in urban locality were found to old pictures.

Screengrab of doctored photos of wild animals in urban area during the pandemic. Source: The Hindu

All these instances lead to some questions to the society such as Why is these videos shared so much? Why people are sharing without first confirming the authenticity? One reason may be the urge to feel happy amidst the gloom of the global pandemic other being as such actions give people a mental boost as they get hits likes or shares on their posts so no concern about authenticity. These reports though ravage the social media platforms like wild fire have little capacity to convey the genuine sense of whatever is playing out in city streets amidst the pandemic. Thus, although well-intended, these stories though appeal to the public in a certain way and shape their perception of their natural world. The long term implications on people's mindset about conservation and restoration efforts based on these reports will be bleak. Thus all the videos and images of wild animals roaming freely on city streets are not untrue but posts that talk about animals taking to the city streets primarily because of the absence of humans is misinformative.

4.2. The real scenario and reasons for increased sighting:

Actually, the way human impact wildlife is complex and thus some sporadic incidences we see in lockdown are hard to interprit. What is a matter of fact is various wild animals live in the fringes of the city or occupy the green spaces available in the middle of the city. They often visit the interior parts of the city and are well adapted to the urban ecosystem. Many of them share space with humans. Some studies showed the presence of several species of wildlife in Sanjay Van, a small urban forest in New Delhi that is a portion of the Delhi Ridge. The animals include common palm civet, golden jackal, nilgai. Indian hare, small Indian civet and Indian crested porcupine. Similarly, major cities around the globe harbour a variety of species apart from the dominant human beings and thus the sighting of these animals from late night to early morning is very common event in many cities. The truth is during lockdown human started observing animals in places where they are uncommon especially in daylight due to reduced movement and traffic. Another prime reason being the search for food. Many of these animals major percentage of diet comes from human-generated food waste. Thus as pandemic's impact is more in urban areas there observed a limited and spatially unequal distribution of food waste generated by humans, as cities are not functioning at their maximum potential. Thus animals adapted to urbanised food are forced to venture out more than before because of limited food resources. An example can be that of the venturing of golden jackals in broad daylight in different parts of cities for food which generally scavenge leftover food at night. The lockdown and supply cut of human generated food forced the animal to venture out more in open for longer hours. As its their breeding season the need for food is greater for nurturing thus the change in behaviour pattern. Moreover low traffic load also enhanced the access of these animals to natural food as they could reach those parts which were in-accessible previously due to traffic.

Thus it can be said that cities and towns are dynamic ecosystems providing space for many species other than human alone thus venturing of animals in search of food is not something new. But due to this pandemic spotting has increased as the are going more frequently in day light and taking stroll encompassing larger areas.

It's also important to note some species may be unaffected by the lockdown while others may be positively or negatively impacted. Endangered sea turtles in Brazil and Floridal, crocodiles of Mexico, of hedgehogs of USA have taken advantage of empty spaces due to low human mobility others species which depend on humans for food faced great challenges with the pandemic. Animals like gulls, rats or monkeys, may struggle to make ends meet without access to human food. In more remote areas, reduced human presence may potentially put endangered species, such as rhinos or raptors, at increased risk of poaching or persecution. Poaching or illegal logging could be monitored by deployment of drones with thermal-

imaging technology via monitor ecosystems. Other technology being radar based day- and night-time cameras. But technology alone will not prevent the plunder of natural ecosystems especially at a time when many people are jobless and hungry.

5. "Anthropause" paving way for new studies:

Many biologists across the world are is currently carrying out research exploring how lockdowns due to the COVID-19 outbreak are impacting the lives of animals. With the hope that common man should also contribute various online survey was done. The research will collect records on any observations of unusual animal behaviour during the lockdown, determine the effects of reduction in human activity in city and town centres on urban wildlife, and the effects increased human activity in gardens and outdoors space is having. The data from the survey will then be combined with other data from media searches to produce a report on the response of urban animals to lockdown across the globe.

A novel enterprise is "COVID-19 Bio-Logging Initiative". This international consortium will investigate animals' movements, behaviour and stress levels, before, during and after Covid-19 lockdown, using data collected with nifty animal-attached electronic devices called "bio-loggers". The principal investigator Christian Rutz, a biologist at the University of St Andrews, UK, and President of the International Bio-Logging Society says "All over the world, field biologists have fitted animals with miniature tracking devices. These bio-loggers provide a goldmine of information on animal movement and behaviour, which we can now tap to improve our understanding of human–wildlife interactions, with benefits for all."

The team will integrate results from a wide variety of animals, including fish, birds and mammals, in an attempt to build a global picture of lockdown effects. There is already 200 databases ready for analysis. These experiment will provide an unique opportunity to identify positive and negative effects of human presence and mobility on a range of natural systems, including wildlife and protected areas and to study processes regulating biodiversity and ecosystems. Including expertise from multiple domains like ecologists, environmental scientists and resource managers to contribute their observations to efforts aiming to build comprehensive global understanding based on multiple data streams, including anecdotal observations, systematic assessments and quantitative monitoring. Confinement experiment as a "stress test" can be a valuable tool to evaluate the strengths and weaknesses in the adequacy of existing networks to detect human impacts on natural systems. These collective approach by combining diverse data will surpass the limited value of the individual data sets and produce unexpected insights. It will also help to rethink on the conservation strategies that are presently in place and create future networks, observatories and policies that are more adept in protecting biological diversity across the world (Rutz et al., 2020).

These studies will help to address previously intractable questions like is it the urban structures or humans himself that have impacted the wild life. These learning will pave future insights on how by minor changes to our lifestyles and transport networks can potentially have significant benefits for both ecosystems, human wildlife coexistence.

6. Comment:

Humans are the creator of urban ecosystem thus stoppage of human activity can never be a solution. It is the humans who can bring back some of the long lost wild life by creating viable options like new forested areas, restoration of degraded patches, and making corridors to connect fragmented patches in the city. The pandemic driven lockdown has given scientist a rare chance to study the impact of human intervention on wild life scientifically with realistic observations and data. We are hopeful that insights from their study will definitely reveal unforeseen opportunities for humans to forge a mutually beneficial co-existence with other species and can rediscover how important a healthy environment is for our own well-being. So it

can be concluded that this "**Andropause**" is a temporary "**Pause**" button which will help us to "**Reorient and Restart**" with vigour of **"Co-existing with the Wild"**

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