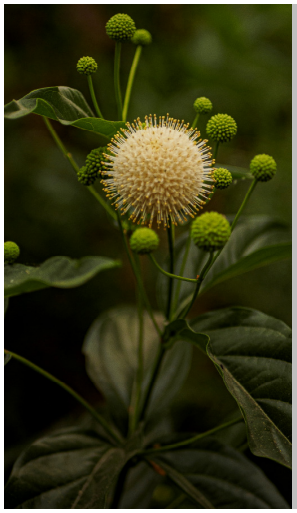

# A GLOBAL TRAGEDY IN SEARCH OF ANSWERS: EDITORS' INTRODUCTION

Brent A. Mitchell[1,2] and Adrian Phillips[2]

bmitchell@qlf.org; adrian.phillips@gmx.com

[1]QLF Atlantic Center for the Environment
[2]IUCN World Commission on Protected Areas

## ABSTRACT

This introduction provides an overview and commentary on the papers in a special issue of PARKS, which is devoted to the impact and implications of COVID-19 on the world's protected and conserved areas. It describes how 11 peer-reviewed papers and 14 essays have brought together the knowledge and findings of numerous experts from all parts of the world, supported by several wide-ranging surveys. The resulting global synthesis of experience answers some key questions: why did the pandemic occur? what has it meant for protected and conserved areas, and the people that depend on them? what were the underlying reasons for the disaster we now face? and how can we avoid this happening again? We applaud the international effort to combat the disease but suggest that humanity urgently needs to devote as much effort to addressing the root causes of the pandemic – our fractured relationship to nature. Unless we repair it, humanity will face consequences even worse than this pandemic.

**Key words:** Pandemic, COVID-19, protected and conserved areas, expert knowledge, global synthesis

## INTRODUCTION TO THE SPECIAL ISSUE

After every personal tragedy – a sudden death, a car accident or a disastrous fire – we ask these questions: "What happened?", "Why did it happen?" and "How can we avoid it happening again"? We ask them too of larger scale disasters: a plane crash, a flood or the collapse of a community building. And, of course, they are the questions we have all been asking about COVID-19. People clamour to know more about the causes, consequences and implications of this devastating global pandemic.

Volumes have already been written in answer to these questions. We have learnt a remarkable amount about COVID-19 in a very short time. People working in every branch of science and all corners of the world have gathered and analysed information with astonishing speed. It is now abundantly clear that this worldwide tragedy has come about because of our neglect and abuse of nature. If we are to avoid repeated experiences of this kind, we will need to reconnect to the natural world. Hence the justification for focusing on how the COVID-19 pandemic, and the measures taken to combat it, have affected protected and conserved areas (PCAs). Such places are a practical expression of humanity's need for nature, and they should be at the heart of recovery plans for the future. This special issue of PARKS looks at the pandemic from the point of view of those who work in this field, drawing on their experience to explain how the pandemic came about, what has been its impact and how we can make sure that something like it does not happen again.

### This special issue of PARKS

The idea of a special issue of PARKS on COVID-19 emerged during the writing of an essay on this topic in the May number (Hockings et al., 2020). The essay provided a snap-shot of the impact of the pandemic on PCAs at that time, and concluded with a Call for Action. However, it could not do justice to the vast range of material that was rapidly emerging on the topic from dozens of perspectives. The Chair of IUCN's World Commission on Protected Areas (WCPA) suggested that an issue of PARKS should be dedicated to this topic alone – and we were honoured to be invited to edit it.

Working with leaders in WCPA, we set out to develop a structure and quickly decided that the issue should be built around three themes. Each theme is supported by several papers:

- The background to the pandemic. The first paper explains how the abuse of nature can give rise to zoonotic epidemics and pandemics like COVID-19. A

second takes an historical perspective and reminds us that the current pandemic is not the first that raises questions about our relationship with the natural world;

- The impact of COVID-19 on PCAs, and on the people and livelihoods dependent on them. A global overview draws together several regional studies. Then five papers explore the impact of COVID-19 on the urban and marine environments, on protected area tourism as the most affected economic sector, and on Indigenous peoples and rangers – the communities that have found themselves in the frontline; and
- How we recover from the damage done to nature and avoid another catastrophe of this kind. Three papers address the policy, financial and scientific lessons we should learn, and the actions that are needed to create a more resilient future after the worst of the COVID-19 pandemic is put behind us.

For each of these eleven peer-reviewed papers, we identified lead authors, experts who are well known in their field, and invited them in turn to bring in a wide range of co-authors to reflect a diversity of perspectives from around the world. Some of the lead authors also drew together collections of case studies. Others were able to draw on regional surveys of PCA managers, and global surveys of rangers and of Indigenous peoples. In all, nearly 150 lead authors and co-authors have contributed to this special issue; and each paper has benefited from two peer reviews.

The SARS-CoV-2 virus came from nature, and only by restoring our relationship with nature can we reduce risk of such pandemics in future. Button Bush (*Cephalanthus occidentalis*) © Ken Hassman

We also invited a number of leading individuals from across the world, with very different backgrounds and perspectives, to reflect on the pandemic and its significance for life on Earth, challenging them to consider the deeper meaning of the COVID-19 disaster. Their 12 essays make fascinating reading. And finally, mindful of the role of international bodies and the importance of several international conferences to be held in 2021, we invited the new Chairperson and CEO of the Global Environment Facility and the incoming Director General of IUCN to introduce and round off respectively the whole issue with their own reflections.

As editors, we are deeply grateful to all those who have contributed so much time and effort to ensure the success of this project. This issue is the product of a team effort for a common purpose. It represents a global synthesis of current knowledge about a topic that reveals humanity's need to rebuild its relationship to nature. And it enables us to answer the key questions that follow.

**Why did COVID-19 happen?**

*Like many pandemics, COVID-19 was caused by humanity's abuse of nature*: Mariana Napolitano Ferreira brought together a group of experts to identify the drivers behind the pandemic. Their article describes how unregulated land use change, intensified agriculture, livestock production, the unregulated wildlife trade and wild meat consumption make it possible for zoonotic diseases (zoonoses) to emerge – jumping from wildlife or domesticated livestock into human populations. The stresses brought about by climate change create the circumstances in which such 'spillover' events become more likely. The article also shows how PCAs have helped to avoid dangerous land use change and so reduce the probability that new zoonoses will emerge. However, controls on many aspects of the extraction, consumption and trade in wildlife are also essential.

*There are many precedents for COVID-19*: the current pandemic is often called 'unprecedented', but it is far from being the first such event in history. Outbreaks of smallpox, bubonic plague, influenza and other diseases have wrought havoc at a regional or global scale on many occasions in the past. Olivier Hymas and colleagues argue that past pandemics — of domesticated animals as well as diseases affecting humans — have shaped land use patterns in some countries to this day,

especially in tropical countries. They point out that Europeans, often themselves carriers of diseases, failed to appreciate that many areas which they 'discovered' and believed to be pristine — and therefore suitable for dedicating to conservation — were in fact landscapes that still bore the mark of a disastrous disease that had previously driven out or destroyed the Indigenous human populations.

**What have been the impacts of COVID-19 on PCAs and the peoples and economies associated with them?**

*The impacts of COVID-19 have been felt in PCAs all round the world*: the paper by John Waithaka and Nigel Dudley, prepared with the help of co-authors worldwide, draws together the results of surveys of COVID-19's impact on many hundreds of PCAs in all regions. It is the most complete digest of its kind. It is complemented by another, coordinated by Carol Phua, which draws on 15 case studies to review the impact of COVID-19 on marine protected areas. Although each terrestrial and marine region has had a distinctive experience, and the news is not universally bad, there are common themes: sudden and massive reductions in visitor numbers (except near cities); associated losses of income for PCAs and for the economies linked to them, as income from tourism collapsed and government support was cut; reports of more incursions and illegal extraction of natural resources; the diversion of protected areas managers from their usual duties; and destabilising relationships between PCAs and Indigenous and local communities.

The impacts occurring in PCAs near cities have been of a different kind: a set of nine case studies of PCAs, drawn together by Greg Moore and Jo Hopkins from their network of urban experts, tells a distinctive story for PCAs in or near major cities. Many such places experienced a surge in demand from urban dwellers who found there a refuge from the fear of the virus and the lockdown measures that came with it. Some visitors discovered nature for the first time; and some found it hard to adapt their behaviour to the needs of the parks. But most park managers were responsive and nimble, engaged with public health officials, experienced new levels of visitation, welcomed new visitors and implemented innovative management practices.

*Tourism has borne the brunt of the economic impact of the pandemic*: The way the pandemic has affected tourism in PCAs, and what this means for PCAs, is explored in greater detail in the article by Anna Spenceley and her team. This paper documents experience from eight country case studies, telling of the dramatic and often devastating effect of the pandemic on protected area tourism economies, especially those in developing countries where international tourism revenue had previously supported many jobs and conservation operations in remote places of great wildlife importance and scenic beauty.

*Ranger services have been thrown into the frontline*: Rohit Singh and colleagues from the International Ranger Federation describe the impact on the ranger service, based on a global survey and two national surveys, that tell a similar story but from the standpoint of a group who have been in the frontline fighting the pandemic. Some rangers lost their lives to the pandemic, some lost their jobs, and many found their health and their livelihoods had been put at risk. Many have had to take on new roles as public health advocates or field staff in their dealings with visitors and local people. Rangers, too, report increased pressures on many PCAs and the difficulty they have had in maintaining their normal duties and good relations with local communities living in or near park areas.

*The pandemic has hit those who most depend on nature and natural resources the hardest*: nearly all the papers report that local people living in and around PCAs have been worst affected: in health terms, many have been put at great personal risk as they often live far from life-saving health services; employment and income opportunities have gone; and sometimes incomers have arrived or returned from cities to compete for the forest, wildlife and fishery resources upon which the resident communities depend. Gretchen Walters and her colleagues describe the experience of Indigenous people and local communities under the stress of the pandemic, as collected through a novel form of survey using the quantitative analysis of stories told by interviewees in eight case studies. They found that the most resilient societies in the face of the adverse impacts of the pandemic were those that depended least on external markets for their livelihoods, that were most empowered in terms of their rights and where strong social structures endured.

*Necessity has been the mother of invention*: the unexpected and often immense challenge that the pandemic has posed for PCAs, their staffs, and the economies and the people that depend on them, has meant that PCA employees, local communities and businesses have often had to adapt to survive. Many rangers have had to explore alternative ways of working, delivering interpretative messages remotely for example, and to take on a new role as advocates of public health measures. Many PCAs have delivered

innovative ways of engaging visitors, opening up to new audiences and putting safety measures in place. Some governments and agencies have tapped into or created new sources of funding. Some tourist operators have been able to develop new products, even when numbers of visitors crashed. Some local communities have found new sources of work or income. While much of this is of a stop-gap nature designed to keep operations going through the crisis, many lessons have been learnt which can be applied when the pandemic recedes.

*The pandemic has thrown into sharp relief many problems that were already well known*: several articles point out that PCAs have long suffered from a lack of resources and weak political support. To that extent, the crisis has accentuated a pre-existing problem in many places. That is why a 'return to normal' is not in most cases the answer and recovery to the status quo ante is not enough. If any good is to come out of this disastrous experience, it would be a resolve to place PCAs on a more resilient footing.

*But it has also revealed the need that people have for nature:* the experience of COVID-19 has brought home to people that we all depend on nature. That may be self-evident in the case of Indigenous peoples and local communities living alongside remote PCAs who depend on natural resources to survive. But it is also true that millions who live in cities have become more aware of the natural world around them as lockdowns have stilled the hubbub of urban life. As Dame Fiona Reynolds put it: "If we ever questioned the dependence of the human spirit on nature, fresh air and beauty the coronavirus crisis has surely laid an end to it. This global experience has shown that humanity needs nature, a foundation upon which we can hope to build a renewed respect for it."

The COVID-19 pandemic gives us the opportunity—nay, requires us—to reflect on our relationship to nature, and how it must be improved dramatically at global and local scales if we are to avoid future crises. Basin Pond, White Mountains National Forest, USA. © Brent A. Mitchell

**How did it happen?**

*A crisis of interconnected crises*: The contents of this issue point to a simple fact: People and nature are at a crisis point. The word pandemic comes from the Greek *pan*, or "all", plus *dēmos*, "the people". While the impact of COVID-19 has been devastating, it takes place as other kinds of pan-demics are also sweeping the world: climate change, biodiversity loss and ecosystem change on a massive scale. While many papers and essays here speak to the biodiversity and ecosystem crises (particularly Reaser, Tabor, and colleagues), this issue of PARKS does not provide a lot of information on climate change. This is not to understate its importance but rather reflects the great many other topics we needed to cover in this volume. Our essayists point out again and again that all of these global crises are interconnected and the root cause is that our use and abuse of nature has reached the Earth's limits.

*An economic system that is out of control*: That overuse is a symptom of an economic system that largely ignores our place in the natural world. As Ashok Khosla puts it, the pandemic "results from the lopsided value systems and institutional arrangements that underlie our current economic policies and practices". The globalised, exploitative economic model based on relentless material growth and territorial expansion made the COVID-19 pandemic inevitable. It is almost as if our extraordinarily interconnected world was designed for SARS-CoV-2: once it had spilled over to humans, the global rapid transit system quickly expanded the epidemic to pandemic proportions.

*A burgeoning human population*: The sheer mass of humanity is felt in nearly every corner of the Earth, on land, in the oceans and in the atmosphere. Consider that it took over 200,000 years of human history for the world's population to reach 1 billion, and only 200 years more to reach 7 billion. There are currently 7.8 billion people on the Earth, projected to grow to 10.9 billion by the end of the century. Wildlife populations are squeezed into shrinking fragments of habitat, in ever closer proximity to humans, increasing the risk that pathogens will spill over from wild animals to people. As Mark Poznansky and Rich Roberts tell us, life scientists have understood this for decades. Illegal wildlife trade, estimated between US$ 10-20 billion per year, increases the risk.

*A neglected conservation system*: Conserved areas can provide protection, but they have been starved of resources, are not always truly protected and too often are treated as disposable. Rohit Singh and his colleagues document how "The Thin Green Line" of rangers is stretched to breaking point in many places. Even more depressing, Rachel Golden Kroner and co-authors document how the pandemic itself has been used as a cover to rollback many protections. And yet, as Yolanda Kakabadse reminds us, the COVID-19 crisis could be "the perfect opportunity" to re-evaluate the importance of PCAs and invest properly in programmes that guarantee their integrity.

*The paradox of our relationship to nature*: Until relatively recently, our species has lived as part of the natural world. But the global tragedy of COVID-19 has come about because much of humankind – as Mary Robinson tells us – has begun to see itself as "outside of nature". The result is a paradox. The modern world has become emotionally, economically and spiritually separated from nature; yet the pandemic has arisen precisely because of the close and often abusive interactions that many people routinely have with it. We have lost our respect for the natural world and, in doing so, we have exposed ourselves to the dangers it can harbour.

**How can we avoid it happening again?**

*Use the power of the global community*: Before the SARS-CoV-2 epidemic burst onto the scene, 2020 was planned to be a 'Super Year for Nature', in which major new international targets to combat climate change and biodiversity decline would be set. That work has been delayed to 2021. This creates a unique opportunity to address all these pandemics with new resolve and commitment: a 'Year of Green Recovery'. The case for action is presented across this issue. It comes powerfully from former heads of States, Mary Robinson of Ireland and Juan Manuel Santos from Colombia. It specifically figures too in our opening essay by the GEF's Carlos Manuel Rodríguez, in comments by Elizabeth Maruma Mrema of the Convention on Biological Diversity, and in the closing essay by IUCN's Bruno Oberle, with Kathy MacKinnon and Trevor Sandwith.

*Rethink economics*: We have been humbled by COVID-19. The experience requires us to develop new economic systems that value nature properly and really "build back better", as described in papers led by Rachel Golden Kroner (on a green recovery from the pandemic) and Tracey Cumming (on building sustainable finance for resilient protected and conserved areas).

*Listen to the science*: Scientists estimate that there are at least a half million viruses in wildlife populations with the potential to spill over to humans. We do not know how many would be likely to do so, under what circumstances, and which might cause disease. But we now know all too well that just one can be devastating. Jamie Reaser and Gary Tabor with their colleagues describe land-use induced spillover of pathogens from one species to another and warn us that the next pandemic is already in the making. To avoid a repeat of COVID-19, natural areas must be kept intact and made better connected, and degraded systems restored.

*Listen to societies that retain deep cultural connections to nature*: While science can show us one way of getting into a healthier balance with nature, Indigenous peoples also have wisdom and knowledge to lead us to that better path, says Josefa Cariño Tauli, an Ibaloi-Kankanaey Igorot youth. Gretchen Walters et al. document some of the Indigenous experience with COVID-19. As Juan Manuel Santos notes, Indigenous peoples make up only 5 per cent of global population yet manage more than a quarter of all land and protect about 80 per cent of global biodiversity.

*Listen to the next generation*: Much of the work of recovery will fall to future generations. Emily Bohobo N'Dombaxe Dola says that she and other youth leaders are ready to take up the challenge in 2021. The question – she asks – is whether today's world leaders are ready too.

*Listen to the voice inside us*: Every one of us has work to do. Gilles Boeuf frames the problem not as a war against a virus, but against our own failings and irresponsibility towards the planet. Richard Louv boils it all down to a single existential threat with shared solutions, and sees the possibility of a nature-rich future if people galvanise the full powers of science, love and imaginative hope. Freya Mathews recognises that this will be articulated differently in different parts of the world, but all based around the idea that maintaining a living Earth should be part of our human purpose.

…

One day we will no longer need to wear a mask to prevent the spread of SARS-CoV-2. As liberating as that will feel, we must not replace the mask with blinkers and repeat mistakes that will trigger future crises. A defining characteristic of our species is our extraordinary ability to learn and adapt – and all the papers here document many lessons to be learned. But *Homo sapiens* is also the only species capable of heedlessly causing its own extinction. The pandemic is nature's warning that we have reached the limit of our planet's capacity to absorb

abuse. We must act on what we have learned. We must adapt how we use the Earth, at scale, in fundamental ways.

People the world over made huge sacrifices to help contain the virus. Our science responded to COVID-19 by producing vaccines with record speed, a feat born of great resolve. The pandemic showed us heroes – in hospitals, emergency response, food supply lines and other essential services – that have been pushed to the limit of endurance. Once this immediate threat has passed, can we apply the same courage, discipline and commitment – socially, politically and economically – to restore our balance with nature? Do we fully comprehend the larger threat connecting all these pandemics of human and planetary health? This is our ultimate test; our last chance perhaps; a worldwide reckoning. The question we must all ask ourselves is this: *Will we act?* Either we will re-discover our place within nature, or humanity will face consequences even worse than this pandemic.

## ABOUT THE AUTHORS

**Brent A. Mitchell** is Senior Vice President of the Quebec-Labrador Foundation's Atlantic Center for the Environment. He chairs the IUCN WCPA Specialist Group on Privately Protected Areas and Nature Stewardship, is a founding member of the US National Park Service Stewardship Institute, and is grateful to have had a skilled and *simpatico* co-editor in Adrian Phillips. ORCID 0000-0001-5305-1029

**Adrian Phillips** was formerly chair of IUCN WCPA, and Vice Chair of WCPA for World Heritage. He was previously employed by UNEP and IUCN, and for 11 years was the CEO of the UK's Countryside Commission. More recently, he was a trustee of several leading UK conservation NGOs. He was pleased to be dragged out of retirement to work with long-time colleague Brent Mitchell on this important publication.

## REFERENCES

Hockings, M., Dudley, N., Elliott, W., Napolitano Ferreira, M., MacKinnon, K. et al. (2020). Editorial essay: COVID-19 and protected and conserved areas. *PARKS* 26 (1): 7-24. doi: 10.2305/IUCN.CH.2020.PARKS-26-1MH.en.

## RESUMEN

Esta introducción ofrece una visión general y comentarios sobre los artículos publicados en un número especial de PARKS dedicado a los efectos y las repercusiones del COVID-19 en las áreas protegidas y conservadas del mundo. Describe cómo 11 artículos revisados por pares y 14 ensayos han reunido los conocimientos y conclusiones de numerosos expertos de todo el mundo, con el respaldo de varias encuestas de amplio alcance. La síntesis global resultante de la experiencia responde algunas preguntas clave: ¿Por qué se produjo la pandemia? ¿Qué ha significado para las áreas protegidas y conservadas y para las personas que dependen de ellas? ¿Cuáles fueron los motivos subyacentes del desastre al que ahora nos enfrentamos y cómo podemos evitar que se repita? Si bien encomiamos el esfuerzo internacional para combatir la enfermedad, sugerimos que la humanidad debe dedicar urgentemente el mayor esfuerzo posible a abordar las causas profundas de la pandemia –la fractura de la armonía entre la naturaleza y la humanidad. Si no la reparamos, la humanidad se enfrentará a consecuencias aún peores que esta pandemia.

## RÉSUMÉ

Cette introduction donne un aperçu et des commentaires sur les articles dans un numéro spécial de PARKS qui est consacré à l'impact et aux implications de la COVID-19 sur les aires protégées et conservées du monde. Nous décrivons comment 11 articles revus par des pairs et 14 essais ont rassemblé les connaissances et les conclusions de nombreux experts de toutes les régions du monde, appuyés par plusieurs enquêtes de grande envergure. La synthèse globale de l'expérience qui en résulte répond à des questions clés: pourquoi la pandémie s'est-elle produite? qu'est-ce que cela signifie pour les aires protégées et conservées, et les personnes qui en dépendent? quelles sont les raisons sous-jacentes de la catastrophe à laquelle nous sommes aujourd'hui confrontés? et comment pouvons-nous éviter que cela ne se reproduise? Nous saluons l'effort international de lutte contre la maladie, mais suggérons que l'humanité doit de toute urgence consacrer autant d'effort à s'attaquer aux causes profondes de la pandémie - notre relation fracturée avec la nature. Si nous ne la réparons pas, l'humanité devra faire face à des conséquences encore pires que cette pandémie.