





**Visions for a Post-  
Covid World:  
Defining a Radically New  
Normal**

**Edited by Joe Gray**

Dixi Books

Copyright © 2021 Dixi Books

All rights reserved. No part of this book may be used or reproduced or transmitted to any form or by any means, electronic or mechanical, including photocopying, recording, or by any information and retrieval system, without written permission from the Publisher.

Visions for a Post-Covid World: Defining a Radically New Normal

Edited by Joe Gray

Proofreading: Andrea Bailey

Designer: Pablo Ulyanov

I. Edition: March 2021

Library of Congress Cataloging-in Publication Data

1<sup>st</sup> ed.

ISBN-13: 978-1-913680-11-4

1. Rewilding 2. Sustainability 3. Economics 4. Education  
5. Environmental Conservation 6. Energy 7. Food Systems  
8. Climate 9. Animal Rights 10. Communication

© Dixi Books Publishing

293 Green Lanes, Palmers Green, London, England, N13 4XS

info@dixibooks.com

www.dixibooks.com

**Visions for a Post-  
Covid World:  
Defining a Radically New  
Normal**

**Edited by Joe Gray**



*The Voice of the New Age*





# Contents

<b>Introduction</b>	9
Joe Gray	
<b>Chapter 2: Earth's Animal Nations: It's Time for Human Compassion</b>	15
Anja Heister	
<b>Chapter 3: Rewilding on a Global Scale: A Crucial Element in Addressing the Biodiversity Crisis</b>	29
George Wuerthner	
<b>Chapter 4: Case Study 1 - A Peace Park Founded by the Indigenous People of Kawthoolei</b>	39
Karen Environmental and Social Action Network	
<b>Chapter 5: Fostering a Love of the Living World – or, The Need for a Grand Revival of Natural History</b>	45
Joe Gray and Reed Noss	
<b>Chapter 6: Case Study 2 - Indigenous Teachings in an Early-Childhood Programme on the Banks of the GabeKanang Ziibi</b>	61
Joe Gray and Reed Noss	
<b>Chapter 7: Back to the Future: Ecovillages and Eco-Communities – A Solution to Work, Technology and Climate Change Challenges</b>	65
Andrew Olivier	

<b>Chapter 8: Defending Small-Scale Agriculture as a Vital Part of an Ecological Civilization</b>	81
Colin Tudge	
<b>Chapter 9: Covid-19 Disruption of Schooling and Radical Reform in Education</b>	97
Peter Gray	
<b>Chapter 10: Energy Transformation</b>	115
Marie Claire Brisbois	
<b>Chapter 11: Moving Beyond Climate Change Denial and the Anthropocene’s Ecocidal Logic</b>	131
Martin Hultman	
<b>Chapter 12: Better Environmental Communication in a Post-Covid World</b>	135
Dr Sibylle Frey, with contributions from Max Winpenny and Brittany Ganguly	
<b>Chapter 13: Afterword - On Rational and Sacred Ground: Envisioning a Better Future for All Life</b>	149
Eileen Crist	
<b>Contributing Authors</b>	155



# Chapter 5:

## Fostering a Love of the Living World – or, The Need for a Grand Revival of Natural History

Joe Gray and Reed Noss

*[T]his age of biological decline is, not coincidentally, also an age of human indifference to the more-than-human world. Wild nature has been replaced by human-dominated landscapes, circumscribed by patterns and processes never before seen, the consequences of which have been to insulate humanity from other species and wilder landscapes. We now live in a world where it matters more whether it is Friday or Saturday than if it is autumn or winter [...] The loss of biological diversity can only be recognized by someone as a crisis if she has a relationship with nature that is personal and immediate.*

— Stephen Trombulak and Tom Fleischner (2007)

---

“**F**ake animal news abounds on social media as coronavirus upends life.” This was the headline of a piece written for the *National Geographic* website by Natasha Daly in March 2020. In the article, Daly collated examples of news stories that reported on other-than-human animals thriving and revelling in a world temporarily abandoned by humans – items that went viral before subsequently being debunked (Daly, 2020). Swans and dolphins, for instance, had supposedly returned to Venice’s deserted canals, while a group of elephants had reportedly ambled into a village in China, drank corn wine to the point of inebriation, and then fallen asleep in a nearby tea field. There were problems, Daly observed, with each of these stories.

## Fostering a Love of the Living World

The swans were regularly seen, before the Covid-19 pandemic, on the canals that cut through the Venetian island of Burano, where the photographs of them that went viral were taken. The images of the dolphins, meanwhile, had been snapped not in Venice but at a port in Sardinia. The elephant item, similarly, was discredited.

That these specific news items were fake is not, in a sense, that important. For one thing, it would be a logical fallacy to jump from disproving their veracity to concluding that other-than-human animals were not indeed thriving in a world from which humans had taken a major backward step. One only needs to spend a few minutes outdoors, even in an urban setting, to confirm that many animals are wary of humans, and so it stands to reason that an absence of humans would be exploited in some way – that the humanless vacuum, in other words, would be filled. For another thing, the fact that these news items went viral showed that people, in troubling times, were receptive to stories not just of hope in general but of hope for our non-human kin. This was just one demonstration of what, in the authors' experience, was a much larger phenomenon: the lockdowns of 2020 piqued a societal interest in the more-than-human world.

During the early stages of the Covid-19 pandemic, acquaintances (among our respective groups of friends and colleagues) who had not previously shown more than a passing interest in the wild nature around them were sharing observations of non-humans in a way that they never previously had. And those who already had a moderate interest were showing signs of developing a deep enthusiasm. We can speculate on some of the manifold proximate causes of such occurrences. First, with a greatly restricted set of activities from which they could choose to engage in, many people found their lives to be suddenly simplified, and in the absence of competing 'life distractions' had time to notice nature. Secondly, with the skies mostly clear of planes and the roads carrying far lighter traffic than they normally would be, people could hear the sounds of their wild neighbours with an unprecedented clarity. Indeed, one of the most frequent comments on urban wildlife that we encountered during this time concerned the wonder of being able to experience birdsong in its full majesty; our avian kin were, for once, not being drowned

out by the incessant noise of machines. Thirdly, many people were exploring their local areas on foot or bicycle like they never had before, and – being grateful simply to be outside and breathing fresh air – were especially receptive to goings-on around them, including those that were other-than-human. Fourthly, with social-distancing in place and unprecedented levels of digital-only contact between humans, people, we conjecture, were craving real, in-the-skin encounters with other beings, and they sought these, in the absence of human company, from wild non-human animals and plants.

Most importantly, in regard our discussion here, all of the signs described above suggest, to us at least, that there is a real possibility of a society-wide revival of natural history as an interest and passion. In some ways, this is hardly surprising, as the practice of natural history is in our blood. (To bowdlerise Harry, the London gangster played by Ralph Fiennes in the film *In Bruges*: “How can fricking swans not fricking be somebody’s fricking thing?”) It has served humans well throughout the history of our species, guiding us in our foraging and hunting, our danger avoidance, our medicine, our shelter-making, and our ceremonies. And it is only in the most recent generations, when a proportion of the population has been able to lead successful lives in ignorance of plant-gathering and agriculture, that it has been possible to *get by* without an interest in natural history.

But *get by* they have done. Over the past generation or two, there has been a strong tendency for the lives and daily pursuits of humans to become decoupled from goings-on in the rest of nature. This has occurred in children’s outdoor recreation, as the norms of society in regard to play have shifted (not helping here is the loss, in the past few decades, of natural history education from most school curricula, and the replacement of nature-oriented summer activity programmes with sports camps, computer camps, and the like). The decoupling has also happened in the technologically cosseted lives of many Western adults. Here, as was observed in 2011 by Tom Fleischner, founding President of the Natural History Network, in growing older “we have to learn to *not* pay attention to our world” (Fleischner, 2011: 21). Advertising and the consumerist culture, as Fleischner has commented, are major forces in shrinking the scope of our attention.

## Fostering a Love of the Living World

The decoupling is even apparent in the teaching and practice of biology, from compulsory education through to institutes of higher education. “Despite the importance of detailed natural history information to many sectors of society,” as Tewksbury and colleagues (2014: 304) have remarked, “exposure and training in traditional forms of natural history have not kept pace with growth in the natural sciences over the past 50 years.”

The journalist Richard Louv is someone who has dedicated much of his life to researching and writing on this issue of decoupling. In *Last Child in the Woods* (Louv, 2008), he shined a spotlight on the divide that has grown in modern times between children and the outdoors and drew links from the resulting ‘nature-deficit’ to increases in such phenomena as obesity, depression, and attention disorders. Then, in *The Nature Principle* (Louv, 2012), he shifted his focus to nature-deficit in adult lives and argued how the restorative powers of the natural world can enhance health, promote creativity and mental acuity, foster better businesses and communities, and strengthen the bonds between humans. The deficit of which Louv has written is, of course, not a material one – humans are just as dependent as they ever have been on the workings of nature around them, for breathable air, freshwater, food, and so forth – but, rather, a deficit of spirit and attention. The importance of each of the relationships that he has described between contact with non-human nature and human wellbeing cannot be overstated. Yet, from an ecocentric (Earth-centred) perspective, there is something that makes the disconnect more troubling still, as we explore below.

### **Natural history as a wellspring of care for non-humans**

Before getting any deeper into this chapter, we should come to defining ‘natural history’. The term has been used in various ways through the centuries, and we will pick out two examples here, both contemporary. The first is that of Joshua Tewksbury and colleagues (2014: 300), who have described ‘natural history’ as “the observation and description of the natural world, with the study of organisms and their linkages to the environment being central.” This is both

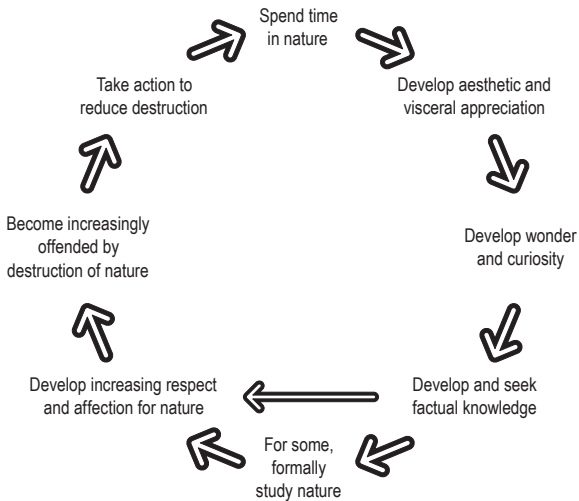
crisp and sound as a definition. But the second representation that we select – drawing on the work of Tom Fleischner once more – is the one that we prefer, for its greater emotive potential. In a 2002 article in *Wild Earth*, Fleischner defined natural history as the “practice of intentional, focused attentiveness and receptivity to the more-than-human world, guided by honesty and accuracy” (Fleischner, 2002: 11).

Building on this, Fleischner has commented elsewhere that “natural history facilitates people falling in love with the world” (see <https://is.gd/nathist>). And “a known and loved world,” he reflected in that *Wild Earth* piece, “has more effective advocates than one that’s ignored” (Fleischner, 2002: 12). The mechanism for this is simple: people spend a part of their lives observing and learning about their fellow creatures; they develop affection for, and feelings of kinship with, these beings; and they, in turn, want to see that the creatures and their habitats are protected from harm. This begins with striving to behave, as individuals, in ways that do not compromise the flourishing of the wild species that one has grown to cherish. It also requires continued immersion in nature to renew relationships with those wild beings and to renew one’s energy for the long fight ahead (see Figure 1).

It is for the reasons presented in the previous paragraph that the disconnect between humans and non-human nature, as we noted above, is particularly troubling from an ecocentric perspective. In Richard Louv’s most recent book, *Our Wild Calling* (Louv, 2019), he reaches beyond the inwardly human focus of his previous books and looks to the importance of repairing the disconnect not just for our own species but for all life. He writes, for instance: “The only way people come to truly care about animals is to know them, to immerse themselves in the flow of nature and the lives of animals” (Louv, 2019: 265). He also suggests the following ‘reciprocity principle’: “For every moment of healing that humans receive from another creature, humans [should] provide an equal moment of healing for that animal and its kin” (Louv, 2019: 272”). There is much wisdom embedded in this proposal. Additionally, the study of natural history contributes directly to conservation because, in order to save species,

## Fostering a Love of the Living World

we must know something about their habitat requirements, their life histories, and their habits, which can only be gained through direct observations in the wild.



**Figure 1:** Spending time in nature and studying natural history lead to ever-increasing appreciation, wonder, knowledge, and respect for nature, and greater dedication to conservation. Continuing the loop, spending time in nature provides emotional breaks from the ‘gloomy business’ of conservation and renews acquaintances with wild beings. From *Forgotten Grasslands of the South*, by Reed F Noss (copyright © 2013 Island Press; reproduced with permission of the publisher).

In short, then, the potential benefits of the *practice of intentional, focused attentiveness and receptivity to the more-than-human world* go beyond helping with health, creativity, and societal functioning in humans to offering, more crucially still, a wellspring of informed care for our non-human kin and the habitats that they depend on. This is exactly the kind of care that is so desperately needed if humanity is to reverse its current course of ‘ecocide everywhere’. It is no exaggeration to say that the study of natural history can help us save the Earth.

## What might drive a revival?

“Never in history,” muse University of Vermont lecturers Matthew Kolan and Walter Poleman (2009: 30), “have we stood where we do now – with the knowledge, technology, and power to fundamentally alter the geological, biological, cultural, and atmospheric processes upon which we rely for survival.” And at “this critical moment in time,” they reflect, “we are in need of a different approach to education and learning – one that reveals connections, strengthens relationships, and recognises the whole.” A core part of such an educational approach, as Kolan and Poleman themselves note, must surely be a strong focus on natural history. This is as true for teaching that is conducted in a formal setting as it is for education within the context of life-long learning. In other words, a society-wide revival of natural history lies at the heart of any deep solution to the Earth’s, and humanity’s, currently dire predicament. For natural history has the potential to be so much more than a mere interest, or a stimulating distraction from goings-on in everyday life. Rather, its focus *is* everyday life. And, if taught right, it is inherently fascinating to people because it stimulates their innate biophilia – their emotional connection to other living beings.

Natural history, when understood as *intentional, focused attentiveness and receptivity to the more-than-human world*, is a practice that transforms the abstract into the visceral. Natural history also turns objects into subjects, subjects that – to quote field naturalist Ian Whyte, in an article that he co-wrote with one of us – are “imbued with meaning and value and that have independent concerns” (Whyte and Gray, 2020: 119). Natural history, furthermore, reveals the interconnectedness of all life and, as such, has a large role to play in repairing humanity’s severed connection with the rest of nature. Natural history, relatedly, shows us our true place in nature: one of countless co-functioning elements, not master of the machine. Finally, in regard to the desolation that humanity is currently leaving in its wake, natural history has the potential to confine ignorance to the cellar of expired excuses. No one who knows but does not act is innocent.

## Fostering a Love of the Living World

So, what could, and should, natural history's revival look like? Firstly, and perhaps most obviously, it is crucial that people have a chance to connect in deep ways with the nature around them during the formative years of childhood. There are already many superb organisations around the world, from the local level to the international, working to provide children with these chances (including, to cite just one, Richard Louv's own Children and Nature Network). To make access to such opportunities close to universal, though, it is essential that natural history be incorporated within school curricula. And, by incorporated, we mean not as a side activity to offer relief from the main programme – as is typically the case at present, where, occasionally, it is taught – but as a fundamental aspect of the educational agenda, given as much attention as literacy and even more, dare we say it, than numeracy. Natural history as a subject need not be structured around the teaching of examinable knowledge, something that has the ultimate purpose of incentivising educational participation by the ultimate ranking of participants. Instead, the opportunity to leave the desk behind and enter an outdoor classroom is likely, for most children, to be a sufficient incentive, in itself, for meaningful participation. Most children will also delight in the opportunity to put their textbooks to one side and engage their full array of senses – watching birds collect twigs for their nests, smelling crushed conifer needles, touching the smooth bark of a beech tree, experiencing the pleasantly peppery taste of hedge garlic, and listening to the unseen crickets chirr. Finally, in making observations, keeping field diaries, and discussing their thoughts and findings with others, these children will have a chance both to practise and improve literacy and numeracy skills in a novel, non-examined context, and to develop important social skills in an informal setting.

The above discussion is not intended to preclude formal examination-based courses for natural history. And there are already positive moves afoot in this area. In the UK, for instance, the OCR exam board announced in 2020 that it was consulting on the launch of a GCSE in the subject (GCSEs are key exams taken at, or close to, the end of compulsory schooling; OCR, 2020). This course is something that the writer Mary Colwell has been campaigning for since 2011.



There is also much scope for enhancing the place of natural history within the biology that is taught and practised in institutes of higher education, the decline of which was noted above. Nevertheless, we offer a cautionary note that the attainment of grades and qualifications has the potential to run counter to the spirit of natural history. The best practitioners of the subject – and, happily, they form the majority in our experience – are the ones who realise that natural history is not about them, but, instead, the countless other lives that make up our Earthly cosmos. These are the natural historians who return from trips to new locales not boasting of species ticked off a list, as proof of their own ability, but with their spirit recharged, their awareness-of-others expanded, and their humility enhanced. These are the natural historians who are deeply grateful to have been able to enter the habitat of such graceful fellow beings. Furthermore, the need for a society-wide revival calls for natural history to become a fundamental aspect of the educational agenda, and not just a narrow avenue in which certain students get one more qualification, or one more grade, to add to their list. In short, then, we commend ongoing efforts to develop formal qualifications in natural history, and we urge those seeking to restore and expand the place of natural history within university programmes to continue their important work, but we note that these developments *by themselves* will not foster society-wide change.

Now we come to the second part of the grand revival of natural history. This will be, very simply, a suite of programmes for adults, who form a vast swathe of the population that is often overlooked in the targeting of nature activities (other than as accompaniers of children in family-oriented projects). Again, there is of course work that is already being done in this area. For instance, the conservation projects of today, especially those in urban areas and other populous regions, often comprise elements of adult-focused public outreach and volunteer engagement. There is also an increasing number of citizen-science initiatives, which enlist the help of adults in recording sightings of birds, butterflies, and other wildlife. As valuable as such activities are, though, they do have a tendency to attract people with an established interest in natural history. In other words, they

## Fostering a Love of the Living World

mostly reach only the 'low-hanging fruit' or – to add wear to another overworked phrase – preach only to the converted.

One way in which the tendrils of adult-facing programmes can span across a broader cross-section of society is for outreach sessions and materials to be pitched at an introductory level and presented to 'captive audiences' whose existence is not related to natural history. Such groups include those of companies who offer their employees team-building events and other such training activities, those of civic organisations such as the University of the Third Age, and those brought together by churches, mosques, temples, and other places of worship. Another way – one that would potentially be more effective still – is for adult programmes to be scaled up through delivery in partnership with, and drawing funding from, local government. There are many good reasons why the political administration of a city, say, would wish to make natural history a high priority. One such reason is the mental health benefits that can result from increased contact with nature. Improving the mental health of individuals would be a good thing in its own right but could also reduce the burden placed by modern society on already-creaking health systems. Another reason, we believe, is that natural history education could help inculcate green behaviours among a citizenship, which are behaviours that ultimately reduce the stress placed on water supplies, refuse-disposal operations, and other key municipal services.

Finally, the power of advertising – which itself, as noted above, can be a major distraction from the world of beauty around us – could, in this context, be harnessed for good. We are not aware of any campaigns for fostering an interest in natural history that have been run specifically to attract the attention of people with a baseline interest of close to zero. But given how effective advertising can be at selling things that people really do not need, there is no reason to suppose that it would not work for something – contact with nature – from which people would draw genuine and important benefits. To give an example of how this might work, a conservation charity could run a non-targeted campaign of adverts across print and online newspapers that was linked to simple supporting materials for suggested introductory activities, such as putting names to local butterflies.

## A note on recreational pressure

We cannot speak of a grand revival of natural history without asking what the negative impacts of increased visitor numbers might be on wild places. Many wild beauty spots are already placed under tremendous pressure by the presence of human visitors. Erosion, trampling, excessive noise, littering and other types of pollution all contribute to making such wild places less habitable by the creatures who need them. “Are we loving our national parks to death?” was the question fittingly posed by Dayton Duncan in the title of a 2016 piece in *The New York Times* (Duncan, 2016).

There are three comments that we wish to make about this issue. The first is that it is reasonable to assume that those practising natural history – as *intentional, focused attentiveness and receptivity to the more-than-human world* – will most likely want to avoid doing harm to the places they visit. The same cannot necessarily be said of people visiting famed scenic outlooks with the over-riding purpose of getting a photo of the place (or themselves with the places as a backdrop) simply to publish, often boastfully, on social media. The rise in this latter phenomenon and the associated problems from the increased recreational pressure that it brings to bear have been examined by Charlotte Simmonds and colleagues (2018). With a nod to the title of Duncan’s above-mentioned piece, they headlined their own analysis: “Crisis in our national parks: how tourists are loving nature to death.”

The second comment is that, as postdoctoral researcher Desiree Narango (2020: 13) has noted, the “easiest and most accessible place for people to connect with nature is where they live.” And since “the majority of people now live in urban and suburban areas,” she writes, such places, and not wild beauty spots, are where most “primary interactions with nature and wildlife are occurring” (Narango, 2020: 13). (Narango has herself described an example of a project combining natural history, urban ecology, and citizen science, using stories that, in her words, “can encourage people to care enough to do something about conserving biodiversity at home” [Narango, 2020: 16].)

A third comment regards the need for increased land conservation. In order to facilitate human interactions with nature

## Fostering a Love of the Living World

without overwhelming the wild, it is necessary for land conservation programmes to be greatly expanded. This ranges from protection of undeveloped areas within city limits, outward to the wildest remaining landscapes (for more on this, see Chapter 3, by George Wuerthner). With more protected natural and semi-natural area, the impacts of human visitation will be diluted.

### **The role of technology: From cause to solution?**

The technological advances of the past century are the principal cause of the mass decoupling of humans from the more-than-human world. Yet it would be folly *not* to explore what role technology might have in helping to at least partially fix the predicament of detachment that it is has driven. Several major positives for the practice of natural history have arisen, for instance, from the creation of the internet. One is the wide availability of free-to-access resources for helping to identify species encountered and to learn something of their ecology, removing the potential barrier of cost that comes with books (printed materials are still very valuable in this area, but at least there is now an alternative of sorts). Another major positive is the ease with which individuals can now submit records of the species that they have encountered for verification and inclusion in databases that help inform conservation in practice. This activity not only supports the learning process but also gives a greater purpose to making notes of what one sees. In parallel, the progress towards ubiquity of the smartphone, and the improvements in the quality of their integral cameras, means that many people now have on their person, by default, a means of capturing images of plants, insects, and other easy-to-photograph organisms. These images can be useful both in aiding one's self-education and in supporting records, some of considerable scientific value, that are submitted to databases. (In the UK, for instance, records can be submitted through the iRecord initiative at <https://www.brc.ac.uk/irecord/>)

Modern technology also offers the potential for virtual 'contact' with nature. This can be as simple as watching nature documentaries on television. While these programmes do have the potential to

be misleading as to the current state of the planet, offering a false reassurance that all is well, they also have great potential for education in a medium that appeals to many people. And it is hard to argue against the idea that it is better, all told, to have a small film crew visit Antarctica, say, than to have millions of people choosing to see penguins in person.

More immersive experiences are available in the form of nature-based computer games – including *Shelter* (a 2013 creation by Might and Delight), in which the player experiences the wild as a female badger protecting her cubs from a suite of hazards – and in digital experiences such as the Ocean Odyssey. The latter is a National Geographic Encounter digital aquarium in which visitors are able to interact, virtually, with creatures of the sea. Such interactive media have a genuine potential, in the words of Alf Seegert (2014), a professor of English at the University of Utah, to “evoke empathic identification” with non-human others. And such empathy is at the heart of what one might call platinum-level natural history.

We would be the first people to note that virtual ‘contact’ is, in an important sense, not comparable to experiencing real nature, and that it can only ever be a supplement rather than a true substitute. At the same time, we are not going to prescribe a single format by which everyone has to develop an interest in natural history, and, at a moment in time in which mass extinction fills the horizon, we do not wish to take anything with potential for good off the table.

### **Concluding remark**

What we are calling for in this chapter represents nothing less than a seismic shift in modern society. As such, we are open to accusations of being dreamers who lack a grounding in reality. Our goal here, though, has been to present a vision, and the best visions are untempered and undiluted. We make no apologies for having offered such a vista, and we are quite certain that it represents true reality.

## Fostering a Love of the Living World

### References

Daly, N. (2020). Fake animal news abounds on social media as coronavirus upends life. *National Geographic* (22 March). Available at <https://www.nationalgeographic.co.uk/animals/2020/03/fake-animal-news-abounds-social-media-coronavirus-upends-life> (Accessed September 2020).

Duncan, D. (2016). Are we loving our national parks to death? *The New York Times* (6 August). Available at <https://www.nytimes.com/2016/08/07/opinion/sunday/are-we-loving-our-national-parks-to-death.html> (Accessed September 2020).

Fleischner, T. L. (2002). Natural history and the spiral of offering. *Wild Earth* 11, p. 10-13.

Fleischner, T. L. (2011). Why natural history matters. *Journal of Natural History Education* 5, p. 21-24.

Kolan, M. & Poleman, W. (2009). Revitalizing natural history education by design. *Journal of Natural History Education* 3, p. 30-40.

Louv, R. (2008). *Last Child in the Woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.

Louv, R. (2012). *The Nature Principle: Reconnecting with life in a virtual age*. Chapel Hill, NC: Algonquin Books.

Louv, R. (2019). *Our Wild Calling: How connecting with animals can transform our lives—and save theirs*. Chapel Hill, NC: Algonquin Books.

Narango, D. L. (2020). Natural history in the city: Connecting people to the ecology of their plant and animal neighbors. *Journal of Natural History Education* 14, p. 13-17.

OCR (2020). *Re-connecting young people and nature*. OCR News (5 June). Available at <https://www.ocr.org.uk/news/re-connecting-young-people-and-nature/> (Accessed September 2020).

Seegert, A. (2014). Pixels and pathos: Video games and empathy. Presented at: *Interdisciplinary Symposium on Empathy, Contemplative Practice and Pedagogy, the Humanities, and the Sciences*, University of Utah, UT.

Simmonds, C., McGivney, A., Reilly, P., et al. (2018). Crisis in our national parks: how tourists are loving nature to death. *The Guardian* (20 November). Available at <https://www.theguardian.com/>

## Joe Gray and Reed Noss

environment/2018/nov/20/national-parks-america-overcrowding-crisis-tourism-visitation-solutions (Accessed September 2020).

Tewksbury, J. J., Anderson, J. G., Bakker, J. D., et al. (2014). Natural history's place in science and society. *BioScience* 64, p. 300-310.

Trombulak, S. C. & Fleischner, T. L. (2007). Natural history renaissance. *Journal of Natural History Education* 1, p. 1-4.

Whyte, I. & Gray, J. (2020). Field guides as a gateway to appreciating more-than-human concerns. *The Ecological Citizen* 3, p. 119.