

# Ecology and Ethics

## Volume 2

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## **Ecology and Ethics**

This series is devoted to continuing research at the interfaces of ecology and ethics (embedded in the multiple fields of philosophy and ecology) to broaden our conceptual and practical frameworks in this transdisciplinary field. Confronted with global environmental change, the academic community still labors under a tradition of strong disciplinary dissociation that hinders the integration of ecological understanding and ethical values to comprehensively address the complexities of current socio-ecological problems. During the 1990s and 2000s, a transdisciplinary integration of ecology with social disciplines, especially economics, has been institutionalized via interdisciplinary societies, research programs, and mainstream journals. Work at this interface has produced novel techniques and protocols for assessing monetary values of biodiversity and ecosystem services, as illustrated by the Millennium Ecosystem Assessment. At the beginning of the 2010s, however, an equivalent integration between ecology and philosophy still remains elusive. This series undertakes the task to develop crucial theoretical and practical linkages between ecology and ethics through interdisciplinary, international, collaborative teamwork. It aims to establish a new forum and research platform to work on this vital, but until now insufficiently researched intersection between the descriptive and normative domains. The scope of this series is to facilitate the exploration of sustainable and just ways of co-inhabitation among diverse humans, and among humans and other-than-human co-inhabitants with whom we share our heterogeneous planet. It will address topics integrating the multiple fields of philosophy and ecology such as biocultural homogenization, Planetary or Earth Stewardship.

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Editors

# Earth Stewardship

Linking Ecology and Ethics in Theory  
and Practice

 Springer

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# Foreword

Ethics is embedded in a system of beliefs and practices that orient our behaviors with respect to every external factor in our lives, or what we would like those behaviors to be. In order to examine properly where global and local societies are now in the development of ethics, we must first consider the situation of the human species here on Earth.

In the 4.54-billion-year history of Earth, primates appeared about 85 million years ago and members of our genus, *Homo*, 2.3 million years ago, in Africa. *Homo erectus* and *H. ergaster* migrated out of Africa 1.3–1.8 million years ago, but the evolutionary developments that led to the appearance of modern humans continued in Africa. What are recognized as members of our species, *H. sapiens*, lived in Africa from 400,000 to 200,000 years ago, when we estimate that modern *Homo sapiens* appeared for the first time. Migrating out of Africa from 100,000 to 50,000 years ago, they colonized the whole world, replacing earlier members of the genus *Homo* everywhere they went and, ultimately, becoming the only surviving representative of the human line.

Before our ancestors developed the skills of domesticating animals and growing crops, evidently starting with the dog, they lived as small bands of mostly 20–40 individuals, rarely coming into contact with other bands and in general mostly without social interactions between them. At the time agriculture was begun, it is estimated that the entire human population of Earth amounted to only 3–4 million people, scattered widely over the six habitable continents. These people would have found patterns of behavior and ethics appropriate for their circumstances, but it is likely that many of these have survived and that they are much less appropriate in the modern world than they were originally. Following the development of crop agriculture about 12,000 years ago, some of them would have become inappropriate or even destructive as the conditions in which people lived changed rapidly. At present, though, very different styles of living are characteristic of different groups of people in mountainous, coastal, and other regions, as the chapters of this Earth Stewardship book make clear.

Over the approximately 12,000 years since the domestication of plants and animals made the formation of settled villages, towns, and cities possible by providing

a dependable supply of food, the various elements of what we now consider civilization developed gradually. When large numbers of people lived together in a single place, they could specialize in their activities and thus produce benefits for the population as a whole as well as for themselves. Poets, storytellers, religious and civic leaders, farmers, and builders appeared, and began to produce the trappings of cities and nations that characterize the world in which we live now. Ultimately, about 5,000 years ago, written languages were developed more or less at the same time in Mesopotamia and along the Nile, with cuneiform script forming the basis of most modern writing and hieroglyphics remaining a more local language along the Nile.

The invention of written language began defining for people that part of their history that was well known and understood, as the feats of kings and generals, conquest and defeat began to be recorded as they occurred. Whatever happened more than 5,000 years ago was either remembered or imagined, coming down to the people of later generations in stories and myths. Through these tales and myths, they tried to understand the meaning of life and to develop plausible stories about what had happened on Earth before the means existed to record them in a permanent form. These events pretty clearly define the erroneous belief that the world was created about 5,000 years ago that is so strangely held by fairly large numbers of well-intentioned people.

In the Bible, some of which seems to have been written at the time of David and Solomon about 4,000 years ago, two different versions of human's role on Earth are presented in the first two chapters of Genesis. Presumably the views of two different authors dating from different periods, one (the first) celebrates human's domination of Earth, to be subdued for their purposes, and the other (the second) counsels us to save and care for the Earth. This second interpretation aligns with Earth stewardship.

It is likely that after some 8,000 years of building ever-larger fields and running herds of animals over the semi-arid hills of the Near East ecological damage was obvious. In the face of these developments, it is not strange that people would have begun to recognize the need for sustainable practices locally as their numbers grew. When people existed only as widely-scattered bands foraging in natural communities, individuals and groups would have gained benefit by gathering and hoarding whatever supplies of food or other valuable commodities that they could find. Similar behaviors in the very different modern world have become highly destructive and are widely recognized as inappropriate. However, no one seems to have developed a suitable theory of what might be done about it – in some ways essentially the subject of this Ecology and Ethics book series.

In this book focusing on Earth stewardship, an effort has been made to represent a range of different land ethics and procedures practiced in different parts of the world and to use them as the basis for considering what we could learn from one another, and what we could do together. What I consider a particularly useful discussion of this aspect, and one that perhaps assists in understanding the conditions for developing general modes of globally-suitable behavior, is that of May. He points out that in Latin America, sectors of the dominant Roman Catholic Church, which traditionally have defended social justice, have in recent years integrated

concern for the natural environment into their social justice agendas. Indeed, as many Evangelical Christians emphasize, neglecting the environment is clearly at odds with the traditional admonition to care for the poor.

The science of ecology, less than a century old in its predictive form, is a necessary ingredient for the evolution of any generally effective land ethic. As Covich brings out so well in his fine review of Frank Golley's lifelong contribution, and as the various chapters on long-term ecological research in this book illustrate, we must continue making important scientific advances in ecology throughout the world. It is the knowledge we gain of these principles that put us in a position to respond to the challenges we face.

Despite this knowledge, it is by no means a simple matter to reconcile the principles of ecology with those of practical politics (as documented by Kingsland). In this context, the strong efforts of Aguirre to integrate environmental knowledge with ethics through hermeneutics and the novel methodology of field environment philosophy seems very useful to me. Although there is clearly much about living systems that we do not know (Li et al.) – for example, I estimate that we have named only about 2 million of the estimated 12 million species of eukaryotic organisms – there is a great deal of available knowledge that we can apply to enhancing the sustainability of these systems. This knowledge can be applied to building a sustainable Earth (Callicott). Such an Earth, however, must also feature social justice and the encouragement of individual talents for children, women, and men everywhere if it is to succeed. We evolved into a complex biological world that not only supports us but determines our features, and we must use practices like those proposed by the Earth Stewardship Initiative of the Ecological Society of America (Chapin and collaborators) to provide a stable basis for civilization in the future. As Rozzi has put it, echoing Leopold, we need to take all of nature into consideration from an ethical perspective, honoring and preserving it for our own sakes. His biocultural ethic emphasizes that we are co-inhabitants in the natural world, no matter how complex our inventions may become. We should not neglect the understanding that that realization brings, in order to avoid being at our very great peril. In the face of these relationships, we are so dominant that we must manage the Earth's living systems actively and sustainably.

How can we work together to modify our collective behavior, driven by competitive and essentially greedy nations and individuals into what many see as an unstable nightmare? Several chapters open avenues for answering these questions by documenting pathways that are being forged by socio-ecological research networks (Hideaki, Maass and Equihua, Redman and Miller, Orenstein and Groner, Barbosa and Villagra, Goralnik et al.), religious alliances (Kerber, Tucker), policy actions (Viola and Basso), environmental citizenship and participation (Hargrove, Taylor), and new forms of conservation (Enkerlin et al., Berchez et al., Valenti and da Rocha), based on both traditional and contemporary ecological knowledge and values (Gao, Mamani, Sarmiento). However, no situation like the one we confront today has ever existed in the past, so that our future, with that of everything we hold as important, is at stake.

In much of the world, family planning is still regarded as wrong or unaffordable in the face of individual strategies for survival. In view of this, how do we reach a stable population, when we are already using more than 1.5 times what the world can produce on an ongoing basis (<http://www.footprintnetwork.org>), unevenly distributed in different countries and regions, and adding a net of 200,000 people per day to our current population of approximately 7.2 billion people? We don't even know that the world can indefinitely support its present human population, much less the even more appalling population numbers, an estimated 9 billion people 36 years from now in 2050. As for limiting consumption, what politician could run successfully on the basis of limiting individual consumption? Perhaps each subconsciously envisions himself in a hunter-gatherer world, so "Follow me over the next hill, and we'll all find plenty of food for everyone." In any case, limiting our consumption, although the time to do so has long since passed for many of us, is absolutely necessary but for the world as a whole seems largely unattainable. As for the development of necessary new technologies, perhaps the current shifting of the world view toward dealing in a meaningful way with global climate change offers hope for the future. In any case, I view the concepts of Ogden et al. as necessary, in understanding properly global differences in degrees and kinds of consumption, but also perhaps visionary, in their implicit assumption that people given the proper array of sound ecological knowledge will behave in increasingly appropriate ways.

In view of these factors, I believe that only a major, ultimately worldwide shift in our ethics and morals will bring about change. At the first Earth Day in the United States, April 1970, some 20 million people turned out for an individual activity somewhere, a tenth of the nation's population at that time, and politicians were quick to take notice and pass strong environmental legislation. The philosopher-biologist E.O. Wilson in his book *Social Conquest of the Earth* (2012) offers the diversity of populations that occur in some major cities as part of the hope for the future. In principle, such situations offer the possibility of overcoming prejudice and working together to achieve necessary common goals, as those proposed by Earth Stewardship. Many people remain unconcerned even with the poor and needy in their own areas, much less worldwide, but despite this we are all tied together in operating what Adlai Stevenson aptly termed "Spaceship Earth," and we must ultimately all succeed if any of us is to do so.

In view of these relationships, what I am calling for is nothing less than a worldwide moral revolution, one to which the impressive contributions of this volume linking ecology and ethics, in theory and practice, have advanced importantly. Given the structure of the society that we have evolved over the years, nothing less is likely to insure success and the continuation into the indefinite future of what we value so deeply and appropriately in our civilization.

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