

Genealogy of Ecophilosophies

Źródła ekofilozofii

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Abstract

Environmentalism is not a recent movement, but one which dates from at least since the nineteenth century, and which has been subject to periods of contraction as well as growth. Moreover, the philosophical impulses underlying this movement have deep historical roots (and numerous antecedents) in the Western tradition. Broadly speaking, there have been two different traditions – *schools* – of environmental thought. The better known of these schools is one which the article identifies as the *Arcadian*, and which essentially represents a more up-to-date expression of the discontent with civilization and the desire for a return to the state of nature which have been characteristic of various Western philosophical traditions since antiquity. The other school, identified in this article as *Utilitarian*, which emphasizes the beneficial and less wasteful uses of nature with the help of science and technology, is now enjoying resurgence, but it also has deeper and broader historical and cultural roots than often suspected, as recent research has begun to show. Understanding the genealogy of these different types of ecophilosophies, in turn, helps us better discern, with the benefit of hindsight, their potential pitfalls as well as their likely contributions, and thus could lead to better informed philosophical discussions on environmental issues.

Keywords: anthropocentric, conservation, ecocentric, ecophilosophy, environmentalism, sustainable development

Streszczenie

Enwironmentalizm nie jest współczesnym ruchem, jego źródła sięgają głębiej, do XIX w. Od tego czasu zaznaczał się on w naukowym dyskursie, choć ze zmienną mocą. W szerokim ujęciu można wskazać na wiele *szkół* myśli ekologicznej. Jedną z bardziej znanych określono w tym artykule jako *Arkadyistów*. W jej ramach wyraża się rozczarowanie współczesną cywilizacją i chęć powrotu do natury, co było charakterystyczne dla wielu tradycji filozoficznych Zachodu już od czasów antycznych. Inna szkoła, *Utylitarystów*, podkreśla korzyści płynące z mniej niszczącego niż dotąd korzystania z natury, w czym pomaga coraz doskonalsza nauka i technika. Podejście to obecnie staje się coraz bardziej popularne, ale w swej istocie posiada o wiele głębsze i szersze niż to mogłoby się wydawać historyczne i kulturowe korzenie. Zrozumienie źródeł obu tych typów ekofilozofii pozwala rozpoznać ich specyfikę, a poprzez to prowadzi do lepiej przygotowanej dyskusji ekofilozoficznej odnoszącej się do zagadnień środowiskowych.

Słowa kluczowe: antropocentryczny, ochrona, ekocentryczny, ekofilozofia, enwironmentalizm, rozwój zrównoważony

Introduction

In 1972 the historian of science Donald Fleming published an article on what he described as *the New Conservation movement now in progress* (Fleming, 1972, p. 7). What Fleming had the presci-

ence to identify early on, we now know, was the beginning of a powerful global environmental movement which has lasted to the present day. Reading (or re-reading) the article today can be a useful exercise, which helps to restore a much

needed historical perspective on the current phase of the environmental movement.

In the article Fleming began by recalling that a major environmental movement such as he was describing was not new in modern history, that a similar movement had existed and flourished before – namely, in the late nineteenth and the early twentieth century. Environmentalism, it turns out, has a longer history and has shown a more complicated pattern of development than many assume today. The movement did not start in the second half of the twentieth century, as those who know only from living memory often believe, but in the nineteenth if not before, in countries that experienced the industrial revolution early on. Moreover, it is not a movement which has enjoyed a steady growth, with ever widening constituency and ever broadening commitments, but one which has been subject to periods of contraction as well as growth (born in the 1920s, and having grown up in the era of the Great Depression and the two world wars, Fleming and others of his generation witnessed first-hand the period of significant contraction which had followed the first phase of modern environmentalism). Though what appears to be a cyclical growth pattern of environmentalism has been especially pronounced in the United States, it has been by no means limited to one country. As Ramachandra Guha has observed, *the history of environmentalism in most [developed] countries has followed a broadly similar pattern* of thus far having advanced in a succession of two waves since the nineteenth century (Guha, 2000, p. 3-4).

What, then, of the second and current wave of environmentalism? The first wave lasted roughly fifty years (from the 1860s to the 1910s), and was followed by a period of contraction, which also lasted about fifty years. If the pattern holds, isn't the current wave, which started in the 1960s, due for subsidence?

In the 2011 special issue of *Environmental Science and Technology (ES & T)* celebrating the 40th anniversary of Earth Day and the founding of the U.S. EPA, and appropriately devoted to reflecting on the past, present, and future of environment policy, I had the privilege of contributing an article which became the lead feature for the issue (Pak, 2011). Though I didn't state it explicitly, the article was meant in part as homage to Fleming's article of 1972, exploring what changes the environmental movement has undergone since its publication and what we have learned as a result. On one level, I pointed out, there were disturbing signs that the current wave of environmentalism might indeed be subsiding. In the United States, for example, the kind of bipartisan Congressional support which had resulted in the landmark environmental legislations of the 1960s and 1970s was nowhere to be seen today. On the international level as well, the dialogue seemed to be stalling on such critical issues

as climate change among others. And as though repeating the history of environmentalism in the era of the Great Depression, the financial crisis which has afflicted developed countries since the late 2000s has further dampened hopes for new environmental initiatives. Yet, as I further pointed out in the article, there were also signs that possible *game changers* were emerging which could result in environmental initiatives that are less susceptible to vagaries of war, politics, and economic cycles. In particular, I broadly identified two main schools of environmental thought and their potential impact on humanity's relationship to nature.

The purpose of the present article is to explore these two schools of ecophilosophy and their implications in greater depth. There are many different approaches to looking at environmental issues, and the one followed here is mainly that of the historian of ideas who, because of his professional affiliation as well as personal involvement, has also had to think through their implications for practical policy. The historical approach has no inherent superiority over other approaches; it simply has its own set of merits. One such merit may be that, by making necessary distinctions and recalling pertinent precedents, it could contribute to better grounded and more richly informed philosophical discussions.

Going beyond the Ecocentrism-Anthropocentrism Debate

Why are philosophical discussions necessary? Because, according to some, it is the philosophy whereby many in contemporary society (especially those in developed countries) live which has been the ultimate cause of our environmental problems. One of the defining moments in current environmental debates has been the 1967 publication of the historian of science Lynn White Jr.'s celebrated article, *The Historical Roots of Our Ecologic Crisis*. The article argued, that *especially in its Western form, Christianity is the most anthropocentric religion the world has seen. (...) We shall continue to have a worsening ecologic crisis, it projected, until we reject the Christian axiom that nature has no reason for existence save to serve man* (White, 1967, 1973, p. 25, 29). At the time of its publication, the article seemed to provide a definitive validation of what some had already begun to argue: that to solve our environmental problems, we need a living philosophy based on less anthropocentric and more ecocentric traditions.

The ecocentrism-anthropocentrism dichotomy has been useful for generating valuable insights – but its limitations have also become evident over time. It is not merely that, as some have pointed out, cultures with putatively less anthropocentric traditions like, say, Japan has been just as exploitative of nature from the strictly ecocentric point of view. (Thomas, 1983, p. 23). A more fundamental prob-

lem has been that a purely and consistently ecocentric perspective has been difficult to come by. To use a chemical analogy, ecocentrism has proven to be an element that rarely exists by itself, and is usually found in compounds containing other ideas and agendas that are not necessarily inspired by the love of nature *per se*. Case in point, claims to ecocentrism have been a mainstay of the school of environmentalism which has dominated environmental debates until recently, and for which a more appropriate name, as I have argued in the *ES&T* special issue article, seems to be *Arcadian*.

As the name suggests, and as numerous scholars have pointed out, this school represents, in essence, the modern manifestation of a recurrent motif in *Western thought that regrets the passing of a mythic 'golden age of plenty, innocence, and happiness'* (Pak, 2011, p. 6). The notion of a lost paradise is, of course, not absent in non-Western traditions, but it occupies a central place in both the Greco-Roman and the Judeo-Christian traditions, which form the two main pillars of Western civilization. As environmental historian Carolyn Merchant has documented in her appropriately titled book *Reinventing Eden, a narrative of decline from a prior pristine state of nature* has coexisted side by side since antiquity in the Western tradition with a narrative of recovery and mastery over nature (Merchant, 2004, p. xi).

As philosopher Arthur O. Lovejoy already noted in his classic study of 1935, the longing for the lost arcadia has been, since antiquity, essentially an expression of dissatisfaction with human civilization. It is, he wrote, *the discontent of the civilized with civilization, or with some conspicuous and characteristic feature of it. It is the belief of men living in a relatively highly evolved and complex cultural condition that a life far simpler and less sophisticated in some or in all respects is a more desirable life*. It is also characteristic of this school of thought, he further noted, to value the state of nature over civilization – to regard *nature as norm* and ultimately to make *the identification of the good with that which is 'natural' or 'according to nature'* (Lovejoy and Boas, 1935, p. 7, 11, 12)

Much of what *Arcadian* environmentalists of our time have been saying about the destructive nature of modern civilization, it thus turns out, was already anticipated by some schools of Greco-Roman philosophy. The basic message of the pseudo-Senecan *Octavia* of the first century A.D. for example, is summarized by Lovejoy as follows: *Contrasted with the pacifism, communism, and technological ignorance of primitive man are modern man's belligerency, his subjection of the animal and vegetable kingdoms, his technological skill, his private ownership of property, his luxury, and his general immorality and impiety* (p. 53).

As an example of the more up-to-date version of the same message, one may turn to Rachel Carson's

Silent Spring of 1962, the book which is usually credited for having helped to launch the second and current wave of environmentalism: *Along with the possibility of the extinction of mankind by nuclear war, the central problem of our age has therefore become the contamination of man's total environment with such substances of incredible potential for harm – substances that accumulate in the tissues of plants and animals. (...) Future historians may well be amazed by our distorted sense of proportion. (...) We are told that the enormous and expanding use of pesticides is necessary to maintain farm production. Yet is our real problem not one of overproduction?* (Carson, 1962, p. 8-9).

As anthropologist Claude Lévi-Strauss (1962) observed, human beings, even those living in so-called primitive cultures, generally seek to weave their knowledge of the objective world into some sort of meaningful pattern, and usually do so by telling stories – stories expressed as or embedded in mythologies, religious doctrines, cosmologies, and so on. And this has been no less true of those living in technologically advanced societies. As naturalist and sociobiologist E. O. Wilson has written: *No matter how much we see, or how beautifully theory falls out to however many decimal places, all of experience is still processed by the sensory and nervous systems peculiar to our species, and all of knowledge is still evaluated by our idiosyncratically evolved emotions. (...) Art is in our bones: We all live by narrative and metaphor* (Wilson, 2000, p. 358).

Environmentalism of our time hasn't been simply about objective, scientifically-measurable environmental destruction; more precisely, it has been about reactions to changes in the physical world that have been interpreted and given meaning through various types of narratives about the relationship between humanity and nature – and hence the necessity of analyzing these narratives, to help reset our perceptual filters and gain greater clarity.

To begin with, the analysis of the *Arcadian* school and its historical antecedents thus seems to corroborate the view expressed by some that a purely ecocentric point of view may be humanly impossible to achieve (Pawłowski, 2011, p. 61). As numerous commentators on the *Arcadian* school have noted, despite its pretensions to ecocentrism, it is based on an idealized image of nature – usually defined as the antithesis of civilization – which is essentially a human construct (e.g., Cronon, 1995). It remains, in other words, a form of anthropocentrism. Furthermore, it is difficult to disagree with the observation of those like historian Keith Thomas (1983) that, Lynn White's thesis notwithstanding, it is not so much anthropocentrism which has been the West's unique contribution, but, on the contrary, environmentalism of the *Arcadian* variety – with its longing for the preservation of nature in its pristine state, its hostility toward technology,

industrialism, consumerism, and other main springs of modern civilization, and its advocacy of limiting or even arresting economic growth and development – which has been chiefly Western in origin.

Going further, understanding the history of the *Arcadian* school, and its antecedents, helps us better see why, despite its many notable achievements, it has proven to be of limited appeal to some:

- (1) Because it is an expression of *the discontent of the civilized over civilization*, it is usually backward-looking, and cannot help being hostile to what others consider *progress*. In particular, it has been generally suspicious of advances in science and technology, since they are looked upon as an instrument for the subjugation of nature.
- (2) Historically, this school and its predecessors have often found its votaries among those who have already enjoyed the best that the civilization of their time has to offer, and could therefore afford to feel jaded and disillusioned. It is no coincidence that *Arcadian* environmentalism originated in developed countries, and within those countries, from the ranks of the best educated. The somewhat cynical view of some that the environmentalist lifestyle and *nature fetish* are the latest fad pursued by those who have experienced everything else has numerous historical parallels. The Epicureans and the Stoics of the Greco-Roman tradition – who anticipate much that is advocated by the *Arcadian* school – were subject to a similar suspicion, for example.
- (3) Because it regards itself as representing the most enlightened perspective, this school has often shown little sympathy for those who do not share its views. Historically, this stance has been known to result in, at its worst, social snobbery and insensitivity to other human beings in need. Keith Thomas, who has documented the beginnings of *Arcadian* sensibilities in early modern England, has noted that the early advocates of animal rights, for example, were not necessarily *lovers of humanity*. A late-eighteenth-century writer observed, *I knew an old maiden lady whose tears would tenderly flow at the relation of the sufferings of a cat, but who did not exhibit any active benevolence at the call of the wants of her poor or suffering neighbors* (Thomas, 1983, p. 185). This quote could easily be re-used today to represent the perspective of the developing countries in the so-called North-South debate on environmental issues.

The Search for New Alternatives

As I pointed out in the *ES&T* article, the *Arcadian* school showed an early initiative in the current phase of environmentalism, and consequently has

tended to dominate the environment-related debates of our time, *to the extent that those who do not share its views sometimes find it difficult even to identify themselves as environmentalists* (Pak, 2011, p. 6). Yet, as I further noted, those who do not share the *Arcadian* perspective, but who nonetheless care a great deal about the environment, have also been increasingly active in making themselves heard. Though various names have been given to the point of view that seeks to find an appropriate balance between the protection of the environment and the progress of human civilization, it can be said to constitute the *Utilitarian* school of environmentalism, since its emphasis is less on the preservation of nature and more on its beneficial and more sustainable uses.

While from our perspective – the perspective, that is, of those who have experienced only the current phase of environmentalism and are hence used to equating the *Arcadian* message with the entirety of environmentalism – the *Utilitarian* school may seem to represent a new development. Yet history shows that this school is also not new. In fact, among historians and philosophers, there has been a considerable effort recently to rediscover the forgotten history, as it were, of the *Utilitarian* school, which also turns out to have a long lineage.

In the *ES&T* article, I drew attention to the *Utilitarian* environmentalists of the late nineteenth and the early twentieth century, noting that the first wave of environmentalism ended with the resolution of the legendary battle between John Muir and Gifford Pinchot, respectively representing the *Arcadian* and *Utilitarian* schools, which also coincided with the beginning of the First World War. The development of the *Utilitarian* school before and since has also begun to be traced by other scholars. Philosopher Ben A. Minteer (2006), for example, has written on the *pragmatic environmentalism* or *the third way* represented by seminal thinkers of the first half of the twentieth century, who did their main work during the contraction phase following the first wave of environmentalism. Minteer has brought back to light the perspectives of now largely forgotten figures like Liberty Hyde Bailey and Benton MacKaye, and also has made a compelling case for viewing such well-known figures as Lewis Mumford and Aldo Leopold in a new light.

Yet perhaps the most important breakthrough in what might be called the genealogical research on the *Utilitarian* school thus far has been an article published earlier this year by environmental historian Mark A. Stoll (2011). Stoll has been able to show more or less definitively that the modern school of *Utilitarian* environmentalism traces its origins to the French Calvinist thinkers (*Huguenots*) of the sixteenth century, especially the seminal writings of the scientific conservation-advocate *extraordinaire* Bernard Palissy. This has been a remarkable coup in scholarship, not the least be-

cause it has been able to show that the Christian doctrine of humanity's stewardship over other creatures, and by inference anthropocentrism as such, indeed does not necessarily have to lead to environmentally destructive practices. Just as different sects within Christianity have disagreed on the correct interpretation of the Bible, the doctrine of stewardship has been open to different interpretations, and at least in the tradition originating with French Calvinism, has served as a basis for an ecophilosophy with an emphasis on finding an appropriate balance between the protection of the environment and the progress of human civilization.

In the Calvinist tradition, selfishness and *idleness* (or laziness) are both considered mortal sins. Accordingly, Palissy considered the destruction of the environment for the fulfillment of selfish desires sinful; he also considered it inexcusable that poverty should be allowed to exist in society, especially when it is due to a lack of effort to gain and implement scientific knowledge that could lead to more productive and less wasteful uses of the natural resources. As a self-trained scientist of renown, Palissy, along with other Huguenots, played a major role in promoting programs for the conservation of forestry, the development of scientific agriculture, and the creation of natural parks in their time. Though along with other Huguenots, Palissy eventually fell victim to the persecution of Protestants in France and died in the Bastille in 1590, his legacy continued to live on. His writings exerted a major influence on the policy for the management of forestry and other natural resources in the European overseas colonies, and until the second half of the twentieth century, when his reputation fell into undeserved obscurity, he remained a major source of inspiration and guidance for seminal thinkers and activists of the *Utilitarian* school of environmentalism – i.e., those advocating scientific conservation and the efficient management of the natural resources. George Perkins Marsh, for example, whose book of 1869, *Man and Nature*, helped to launch the first wave of environmentalism, acknowledged Palissy as a central influence on his thinking. The French Calvinist scientist was likewise a figure of critical importance for Gifford Pinchot, the U.S. National Forester and the founder of the Yale School of Forestry and Environmental Studies.

Beyond showing that there indeed has been a school of environmental thought which is distinct from the *Arcadian*, and that it too has a venerable lineage, historical research on the *Utilitarian* school has also been able to provide insights that may prove helpful to those in search of an ecophilosophy more consistent with the notion of sustainable development. These insights may be summarized as follows:

(1) Maintaining a deep reverence for nature may not necessarily require preserving it in a pris-

tine state or protecting it against all forms of human intervention. The reverence Palissy felt toward nature appears to have been second to none. *I have no other book*, he wrote, *than the sky and the earth, which is known to all, and it is given to all to know and to read in this beautiful book* (Stoll, 2011, p. 10). The passage might easily have been written by such well-known *Arcadians* as, say, John Muir. The differences between *Arcadian* and *Utilitarian* environmentalists may be said to have been mainly over what constitutes a proper form of veneration – merely contemplating nature from a safe distance or actively participating in its productive process.

- (2) Similarly, depending on the perspective, human civilization may be regarded, not as the antithesis of nature, but as an extension of nature. *Civilization*, Aldo Leopold wrote, *is not, as they often assume, the enslavement of a stable and consistent earth. It is a state of mutual and interdependent cooperation between human animals, other animals, plants and soils, which may be disrupted at any moment by the failure of any of them* (Leopold, 1933, p. 635). In this sense, Minter (2004) is absolutely right in identifying Leopold, not as an *Arcadian*, as is often done, but as a *Utilitarian* environmentalist, whose emphasis is on a seamless interaction between civilization and nature.
- (3) According to some, the love of all natural creatures – which may be one of the interpretations of the meaning of *biocentrism* – should be extended to fellow human beings as well, or otherwise it contains an element of contradiction. The elimination of poverty was one of the key agenda in what Palissy called his *true formulas* (*recepte véritable*).
- (4) One of the least fortunate consequences of the *Arcadian*-influenced thinking in recent times has been the notion that we have already tapped the limits of nature, and we therefore need to arrest further development in order to prevent environmental disasters. Calvinists might contend that this type of defeatist attitude is a product of laziness and, ultimately, what they consider the worst sin of all: the arrogance of the human ego. Have we really reached the end of our understanding of nature? Is the state of our scientific knowledge such that nature has no secrets left for us? While some secrets may never be revealed to us, there must surely be those still within the reach of human ingenuity and diligence, which may hold the key to some of our problems, environmental and otherwise. E. O. Wilson (1996) estimates that as many as 90% of living organisms have yet to be catalogued and given scientific names.

(5) To arrive at a truly workable ecophilosophy, it may help to maintain an active dialogue among different cultural traditions. This type of dialogue has been fruitful for both schools of environmentalism. Among *Arcadians*, Arné Naess's doctrines of *deep ecology* were famously inspired by Eastern philosophy, as to be expected of a philosopher who wrote his doctoral dissertation on Gandhi. In the *Utilitarian* tradition as well, historical research has shown that early Western pioneers in scientific farming drew part of their inspiration from East Asian sources, especially from the farming practices of China. Justus Liebig, the great German agricultural chemist of the nineteenth century, for example, claimed that Chinese farmers had solved the problem of sustainable agriculture long ago and had been practicing it for thousands of years (Radkau, 2008, p. 13). Just as in the case of the *Arcadian* appropriation of non-Western traditions, an element of romanticization also may not have been absent in the case of the *Utilitarian*. Yet since the most critical environmental issues of our time prove to be increasingly global in scope, the dialogue should also become increasingly and truly global, and in the process, cross-cultural understanding will likely improve.

Conclusions

In the *ES&T* article I maintained that, while the resurgence of the *Utilitarian* school of environmentalism is a welcome development, the current state of the world still requires the contributions of both schools. By way of conclusion, I would like to elaborate on this point.

One of the lessons to be drawn from the history of environmentalism since the nineteenth century is that the *Utilitarian* school tends not to thrive without the stimulus provided by the *Arcadian* school. In the first wave of environmentalism, for example, dam projects were pursued as *Utilitarian* projects in the United States, where the protection of the environment remained an utmost concern. In the period of contraction which followed, when the *Arcadians* went underground, as it were, numerous dam projects continued to be pursued, but the concern for the environment all but ceased to enter their planning and construction. In our time, it was only after the *Arcadians* had been preparing the grounds for more than two decades (1960s and 70s) that the *Utilitarians* have been able to stage a comeback. It was only towards the late 1980s that *sustainable development*, the key *Utilitarian* concept of our time, thus came to be formulated.

The downside of the *Utilitarian* school has always been that, with its emphasis on technical solutions, it constantly skirts the danger of reverting to practices more consistent with attempts at conquering

and establishing mastery over nature. What saved Palissy and many of his notable followers from transgressing the limit was the deep reverence they continue to maintain for nature, which ultimately sprang from their religious faith (Marsh and Pinchot, for example, were both reared in the Calvinist tradition as well). For all their failings, the *Arcadians* of our time, with their emphasis on pursuing environmentalism as a form of spiritual practice, have been exerting a powerful gravitational pull on others.

Indeed, if environmentalism has now become, as some claim, a *rapidly-growing 'secular religion'* (Dyson, 2008), this has been largely thanks to the *Arcadians*. The next stage of the debate will likely prove more productive if this *secular religion* successfully takes hold of a significant portion of humanity – if, that is, enough people become converts when it comes to maintaining a deep reverence for nature. Then, when there is a critical mass of people who share a similar spiritual outlook on nature, we may more fruitfully debate what constitutes a proper form of veneration: contemplating nature from a distance or actively participating in its productive process. That day, one hopes, may not be as far off as it might appear to some.

References

1. CARSON R., *Silent Spring*, Houghton Mifflin, Boston 1962.
2. CRONON W., *Uncommon Ground: Rethinking the Human Place in Nature*, Norton, New York 1995.
3. DYSON F., 2008, The Question of Global Warming, in: *New York Review of Books*, vol. 55 no. 10.
4. FLEMING D., 1972, Roots of the New Conservation Movement, in: *Perspectives in American History*, vol. 6, p. 7-91.
5. GUHA R., *Environmentalism: A Global History*, Longman, New York 2000.
6. LEOPOLD A., 1933, The Conservation Ethic, in: *Journal of Forestry*, vol. 31 no. 6, p. 634-643.
7. LÉVI-STRAUSS C., *La Pensée Sauvage*, Plon, Paris 1962.
8. LOVEJOY A., BOAS G., *Primitivism and Related Ideas in Antiquity*, Johns Hopkins, Baltimore and London, 1935.
9. MARSH G., *Man and Nature*, Charles Scribner, New York 1964.
10. MERCHANT C. *Reinventing Eden: The Fate of Nature in Western Culture*, Routledge, New York 2004.
11. MINTEER B., *The Landscape of Reform: Civic Pragmatism and Environmental Thought in America*, MIT, Cambridge 2006.

12. PAK M., 2011, Environmentalism Then and Now: From Fears to Opportunities, 1970-2010, in: *Environmental Science & Technology*, vol. 45 no. 1, p. 5-9.
13. PAWLOWSKI A., *Sustainable Development as a Civilizational Revolution: A Multidisciplinary Approach to the Challenges of the 21st Century*, CRC Press 2011.
14. RADKAU J., *Nature and Power: A Global History of the Environment*, Cambridge UP 2008.
15. STOLL M., 2011, 'Sagacious' Bernard Palissy: Pinchot, Marsh, and the Connecticut Origins of American Conservation,, in: *Environmental History* vol. 16 no. 1, p. 4-37.
16. THOMAS K., *Man and the Natural World: Changing Attitudes in England 1500-1800*, Penguin, London 1983.
17. WHITE L., 1967, The Historical Roots of Our Ecologic Crisis, in: *Science*, vol. 55, p. 1203-7, reprinted in: *Western Man and Environmental Ethics: Attitudes Toward Nature and Technology*, ed. Barbour I., Addison-Wesley, Reading 1973, p. 18-30.
18. WILSON E., 2000, Natural Selections, in: *The Writing Life: Writers on How They Think and Work*, ed. Arana M., Public Affairs, New York 2003.
19. WILSON E., *In Search of Nature*, Island Press, Washington, D.C. 1996.

