THE HISTORY OF BIODIVERSITY CONSERVATION IN ROMANIA

Corneliu MAIOR
Petru Aurel DARAU
Viorel SORAN

"VASILE GOLDIS" WESTERN UNIVERSITY OF ARAD,
310025 ARAD, no. 94-96, Revolution Blvd., ROMANIA
Phone /fax: +40257/284899
E- mail: miovan@uvvg.ro

Abstract
The article briefly discusses the history of biodiversity conservation
in Romania. It summaries the current situation of the protected areas.
Key words: biodiversity, nature protection, Romania

INTRODUCTION

Romania covers almost 238,000 km² in South-Eastern Europe. It has
a significant diversity of plant species and habitats, according to its five bio-
geographic zones: Continental, Pannonian, Alpine, Steppe and Black Sea.
The country is characterized by a temperate climate, a variety of relief forms
and a remarkable diversity of vegetation (Săvulescu, 1952-1976; Ciocârlan,
2000). The main zones of natural and seminatural vegetation are correlated
with latitude and altitude as follow: (1) latitudinal units (steppe zone, forest–
steppe zone and oak tree forest zone), (2) altitudinal units (nemorose level,
boreal level, sub-alpine and alpine levels). Unfortunately, Romania does not
have up-dated information on flora and habitat types, and has no centralized
information data base.
SHORT HISTORY OF NATURE PROTECTION

The history of ideas and practices concerning nature protection in Romania show that there has been “a long tradition or custom”. But the meanings of “tradition” and “custom” are, in many respects, different in western and eastern European countries.

In the east, tradition is not a body of facts or initiatives without interruption, handed down from generation to generation as in western countries, especially England. It is rather a resumption, after a while, of some good enterprises of the past.

Taking into account this state of affairs, we may divide the history of nature conservation in Romania into the following distinct periods: (a) precursory period; (b) scientific period between First and Second World Wars; (c) affliction period during communist rule in Romania, and (d) transition period of carelessness of the authorities after collapse of communist power in Romania.

Precursory period

Stephen the Great (1457-1504), king of Moldavia (eastern part of today’s Romania), was among the first rulers who tried to protect some wooded areas with their hunted wild animals (Topa 1972). Stephen the Great set up several “natural reserves” named with an old Slavonic word braniste (branishte), which means a forest with a low density of trees and abundant grass vegetation. In such areas, the cutting of trees or hunting was forbidden.

Similar royal services were also set up during that period (XIV and XVth centuries) in Wallachia by some kings (Giurescu 1980). But from all these achievements only some terms (e.g. braniste, bran), topographic names (e.g. Branistea, Branisca) and tales remain today.

Scientific period (between the First and Second World Wars)

During this period there were many Romanian scientists who showed a special interest in nature protection, for instance, Grigore Antipa (1867-1944), former pupil of Ernst Haeckel at Jena (1885-1891). But the main champions in this field were two biologists from the University of Cluj (Transylvania).
The first was a botanist, Alexander Borza (1887-1971), who developed the applied science of nature conservation, and the second a zoologist, Emil Racovitsa (1868-1947), who took part in the “Belgica” scientific expedition (1897-1899) in Antarctica. He dealt mainly with the theoretical aspects of nature protection following his valuable observations and studies on wildlife in the memorable voyage towards South Pole (Borcea and Soran 1984).

Borza’s main achievement was the drawing up of the first Romanian Law for the protection of “natural environments” (today we might say protection of “natural bioetic areas”). He succeeded after 6 years of unceasing campaigning, the law being finally promulgated by Royal degree no.2/478 on 4 July 1930. Soon after that, the Committee for Protection of Nature Monuments was set up. 36 scientific reserves, among them the Retezat National Park (South Carpathian Mountains), were founded.

Borza (1924) was the first Romanian biologist who attended to ecological education. In 1924 he underlined that, “The lack of culture and of training, as well as wickedness and indolence permanently destroy the beauty of landscapes and natural monuments in Romania”. Unfortunately, his words are true even today.

Racovitsa (1937) focused his attention on the problems of how to know and how to establish the “right” size for a protected area. He said that if we want to have a sustainable scientific reserve or national park, it is necessary to make a reasonable choice followed by efficient ecological monitoring and administration. In order to achieve this goal, he advised the setting up of larger protected areas, rather than small ones.

Affliction period during communist rule

The first step made by communist rulers, immediately after banishing of King Michael I of Romania (30 December 1947), was to repeal the royal constitution from 1923 and all constitutional laws of Romania. The country was ruled then (1948-1989) only by dictatorial decrees.

Nature and environment protection in Romania lasted without any lawful settlement for several years (1948-1954). But from 1954 to 1985, the number of protected areas was increased about 11-fold and their total areas were expanded about 13 times (Table 1). This was possible after the publication of Ministry Council Resolution no.518 in 1954 and which laid the ground for legal activity for nature protection in Romania.
All these activities stimulated the botanist Emil Pop (1897-1974), formerly Borza’s pupil, to publish several important papers on this subject (1963, 1968, 1972, 1973, and 1975). In a similar manner, the zoologist Valeriu Puscariu (1896-1987), formerly Racovitsa’s disciple (see Puscariu 1963, 1973) undertook the same. He managed nature protection in Romania from 1955 to near his death. The most important papers in this respect are those of Boscaiu (1973, 1975, 1976), Botnariuc (1968), Botnariuc et al. (1975), Cristea (1983), Puia and Soran (1980), Soran (1973, 1974), Soran and Borcea (1983, 1985) and Soran and Boscaiu (1974).

But working with the communist rulers was not an easy task, because any idea that did not fit the Marxist pattern of thinking was always treated with suspicion. As Isaiah (6:9) said they “be ever hearing, but never understanding, be ever seeing, but never perceiving”. For this reason, nature, biodiversity and conservation were usually sacrificed on the altar to economic Gods.

Table 1. Increase of protected areas in Romania (after Cristea 1995, 1996 b).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of scientific reserves</th>
<th>Total protected areas (ha)</th>
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<tbody>
<tr>
<td>1940</td>
<td>36</td>
<td>1551</td>
</tr>
<tr>
<td>1960</td>
<td>No accurate data</td>
<td>6581</td>
</tr>
<tr>
<td>1970</td>
<td>130</td>
<td>43 683</td>
</tr>
<tr>
<td>1985</td>
<td>395</td>
<td>222 545</td>
</tr>
<tr>
<td>1991</td>
<td>539</td>
<td>1 140 388 (only proposals)</td>
</tr>
</tbody>
</table>

Carelessness of the authorities after collapse of communist power in Romania (the so-called transition period)

Unfortunately, throughout history, changes in outlook have been a very slow process. This is the reason why many communist ideas, even in the field of nature and environmental protection, are still alive in Romania. The methods used for establishment and administration of National Parks or nature reserves in Romania reminds us of Hardin’s (1968) ideas regarding
the tragedy of the commons. The protected areas of Romania, with their forests, peat bogs, lakes, meadows, alpine and subalpine tundra, endangered species and wildlife generally, are subject to savage deforestation, poaching, and other ecological retrogressions. Moreover, in some counties, various new rich people, some former communist rulers, have built many luxurious houses within scientific and nature reserves. Very recently, during spring of 1999, several newspapers reported that in the Danube Delta, about 300 nests with eggs of pelicans (Pelecanus onocrotalus) (a very rare bird in the Red Book of European Birds), were destroyed by unknown fishermen. This happened because the planned new law of environment and nature protection has been waiting for about 10 years in the Romanian Parliament!


PROTECTED AREAS IN ROMANIA

Tables 1-4 summarize information on the protected areas of Romania. Table 1 suggests that biodiversity conservation in Romania is excellent. Compared with 1940, the number of protected areas has increased 15-fold and their total surface around 735 times. But this first impression is misleading, as seen by Table 2. Romania has only one immense protected area in the Danube Delta and other 12 of extensive size. From this category (IV) only one, the National Parks of the Retezat Mountains (about 24 000 ha), really exists. The other 11 (about 342 000 ha) National Park are awaiting promulgation of the new law. Until then, they are vulnerable to adverse human impacts (Figure 1).

But biodiversity conservation in Romania relies on only 7.4% of all the protected areas having efficient conservation management (types III, IV and V in Table 2) and another 16.3% of inefficient conservation (type II). But the majority (76.2%) of Romanian scientific and nature reserves has no conservation management. Moreover, 56.2% of the reserves which belong to type I have an area less than 5 ha! Indeed, most of them are only 1 ha or less. All these will require great input from Romanian ecologists and protectionists, because, as noted earlier, “the smaller the size of a protected area, the greater its upkeep” (Soran et. al. 1998). We must notice here that the categories III, IV, and V (Table 2) were set up by taking into account logistic and financial costs needed to sustain the populations of large species.
and those at the top of trophic pyramids, especially large herbivores and carnivores.

*Table 2.* Protected natural biotic areas of Romania understood from scale-ecology’s point of view. The size of scales in ha were computed into account the energetic needs of large mammals at the top of the ecological pyramid (after Soran et al. 1991, 1998)

<table>
<thead>
<tr>
<th>Types of protected areas</th>
<th>Scale: size per protected areas (ha)</th>
<th>Number and % and scientific reserves and other areas per type</th>
<th>Notes on conservation effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Botanical gardens and zoos</td>
<td>0.1-100</td>
<td>411 (76, 2 %)</td>
<td>Without human mediation their conservation effectiveness is equal to zero.</td>
</tr>
<tr>
<td>II. Small protected areas</td>
<td>101-1000</td>
<td>88 (16, 3%)</td>
<td>Weak conservation effectiveness. Protect only some herbaceous plants and invertebrates.</td>
</tr>
<tr>
<td>III. Protected areas with an average size</td>
<td>1001-10 000</td>
<td>27 (5, 0 %)</td>
<td>Good conservation effectiveness for some birds and mammals. They have only a minimal sustainable community structure.</td>
</tr>
<tr>
<td>IV. Protected areas large in size</td>
<td>10 001-100 000</td>
<td>12 (2, 2 %)</td>
<td>Good conservation of ecosystems. They have high ecological integrity.</td>
</tr>
<tr>
<td>V. Protected areas of great size</td>
<td>100 001- over 1 000 .000</td>
<td>1 (0, 2 %)</td>
<td>Highest possible conservation value. They have multiple and dynamic ecological integrity.</td>
</tr>
</tbody>
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REFERENCES


