

## **ASPECTS FROM THE CONTRIBUTIONS AND ROLE OF ICAS IN BIODIVERSITY CONSERVATION IN PROTECTED AREAS**

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A humble homage in memoriam of  
Prof. PETRE ANTONESCU (1858-1935),  
Acad. Prof. Dr. Doc. ION POPESCU-ZELETIN (1907-1974),  
remarkable researchers and protectors of the Romanian forest

### **ABSTRACT**

In order to continue the predecessors' activity for virgin forest conservation, the forest researchers have strongly involved themselves from the very beginning of ICAS, 1933, both in nature conservation in protected areas and in the direct management of the tens of reserves of ICAS.

In order to diminish the depletion of forest resources during the soviet occupancy (1944-1958), the forest researchers have developed and implemented an appropriate forest management planning system. In this respect they have promoted a Resolution of the Minister Council No. 114/1954 on the forest functional zoning which provided the efficient endemic conservation of the environment by setting up temporarily protected natural reserves in forest areas, in forest management plans endorsed by the Ministry of Forestry (Fig. 1). At the end of the '60s a concept was developed in ICAS for a large and unique system of national parks and, after 35 years, of a large unitary system of natural protected landscapes in forest area (Fig. 3). For selecting and conserving the most valuable forest samples, original methods have been developed for quantifying the biodiversity, the naturalness of our woodlands and of the landscape potential.

Due to the ICAS contribution of 15 years of researches (1988-2002): (1) the protected area increased from 0.39 %, in 1989 to 5.19% in 2002; (2) the number of small recognized protected areas in forest area increased from 41 to about 350, except those from the large protected areas; (3) the number of national parks and other protected areas increased from 1 to 17, and their area, also including non-wooded lands, increased 113 times, from about 100 km<sup>2</sup> to about 11.300 km<sup>2</sup>; (4) the problem of the Romanian virgin forests and the need to preserve them through protected areas (Fig. 2) was promoted to the Romanian and European authorities and mass-media; (5) biodiversity conservation in protected areas was taken over in governmental strategies for sus-

tainable development, in laws, national and international statistics.

The censoring of the natural reserve list in the annex of Law 5/2000, the noncompliance of the dispositions of the Governmental Emergency Ordinance No. 236/2000 and of the Laws No. 5/2000 and 462/2001 in forest management-planning regarding the natural protected areas, conservation of natural habitats, flora and fauna during forest management planning is against the stipulations of the Constitution (Art. 11) and are obstacles for the conservation of biodiversity in protected areas.

**Keywords:** forest management plan, protected areas, biodiversity, national parks, relict, virgin and quasivirgin forests, temporarily protected natural reserves in forest area.

## JUSTIFICATION

“Romania holds parts of the most important forests, biologically speaking, in the temperate region from the world. In the same time its importance as a wood supplier increases “ (Anonimus, 2002). The forest in general, and the virgin forest, in particular, has constantly suffered due to this antagonist situation. At present, the latter one “is only slightly bigger than 1 % of its initial surface and, instead of being preserved, it decreases continuously” (Stoiculescu, 1999-a). That is why the Forest Research and Experimentation Institute - ICEF (1933-1947), nowadays the Forest Research and Management Institute - ICAS, has worked constantly and coherently for its conservation. In this respect it has continued the work started by its great predecessors: C.F.Robescu - initiator of the higher forest management (1870); Prof. P. Antonescu - promoter of environment protection in Romania (1908), who has shown, already in 1881, the European importance of Letea and Caraorman virgin forests in Danube Delta; V.Golescu - initiator of national parks in Romania (1912), who stated that “the most efficient means to protect the landscape ...would be to establish several national parks like the ones in USA... in a few of the state forest “ (Stoiculescu and Varga, 1983, 1986; Stoiculescu, 1995, 2002-b). The issuing of the “Law on nature monument protection” (1930) and of the “Law on forest protection” (1935), as well as the set up of the “Commission on Nature Monuments” (CMN), which opened the way for the conservation of some re-presentative terrestrial samples and species, implicitly of the forests, as “nature monuments”. The latter law deals with protection forests, including “reserves requested by ICEF”.

The foresters that managed the “Orthodox-Romanian Church Estates in Bucovina” established in 1904 (Seghedin, 1983), the first natural reserve in this country - Slatioara Old Growth Forest. After the Great Union (1918), biodiversity conservation in protected areas was brought again into attention. After the first Congress of the Naturalists in Romania, held in Cluj (1928) and due to the impact of the papers presented during its works (Borza and Pop, 1930), the idea of protecting the nature in natural reserves and national parks requested by the foresters (Antonescu, 1907-1908, 1915, 1923, 1925; Golescu, 1912) has stimulated the entire forest-related community in the country. The

results of the efforts made by ICAS are presented by stages.

#### **FIRST PERIOD, 1933-1944**

Starting with 1935, ICEF participated directly, through its representatives - M. Dracea, At. Haralamb, S. Pascovschi, C.D. Chirita, Al. Beldie etc - in the establishment of most of the 55 legal reserves over this period, of which 30 forest reserves. Moreover, at the end of 1942, ICEF managed directly 52 “reserves” with an area of 2,072 hectare, of which only two virgin forest reserves on 366 hectares (Anonimus, 1946, pp 7, 18-19).

#### **SECOND PERIOD, 1944-1989**

After the occupation and loss of the eastern territories, only 39 natural reserves were still managed by the Romanian authorities, of which 24, on 3.380 hectares (Stoiculescu, 1990), in forest area, and the quasi-forest Retezat National Park on “about 100 km<sup>2</sup>” (BCMN, 1943, year. XI, no. 1-4, p 21). The initial CMN was dissolved. A new commission was set up under the same name. Starting from the need to establish at least four other national parks, in Apuseni, Bucegi, Ceahlau Mountains and Danube Delta (Popescu-Zeletin, 1971), at the end of the ‘60s the concept of a unique Romanian system for national parks was developed in ICAS (Oarcea, 1979). Over the period 1973-1978, ICAS, through dr. Z. Oarcea, has developed the first studies for the establishment of 11 national parks. A statistical situation of the reserves in 1965 shows that “their number has increased from 34 (in fact 39) in 1944, with a total area of almost 15,000 hectares, to 130 on about 75,000 hectares, together with many forest reserves” (Pop et Salageanu, 1965). It is emphasized that, as a special law was missing, the enforcement of the Resolution of the Minister Council No. 114/1954 on the functional zoning of the forests based on the researches of the Academician I. Popescu-Zeletin, lead to the establishment of temporarily protected reserves, through management plans endorsed by the Ministry of Forestry (MS). This method was continued and intensified until 2001. The protected areas and other reserves increased from about 64,800 ha, in 1955 to about 190.300 ha, in 1984 (Barbu et Marin, 1999). ICAS, represented by Acad. I. Popescu-Zeletin and dr. F. Carcea, supported by Prof. Val. Puscariu, from CMN, initiated the establishment in forest area of many reserves, through management plans, including “Apuseni Mountains National Park”- 1962 (Carcea, 2003). Also, dr. Z. Oarcea, with the agreement of the foresters from Hunedoara region and from the Ministry, has successively developed the Retezat National Park that reached the area of about 20,000 ha (Oarcea, 1999) in 1987.

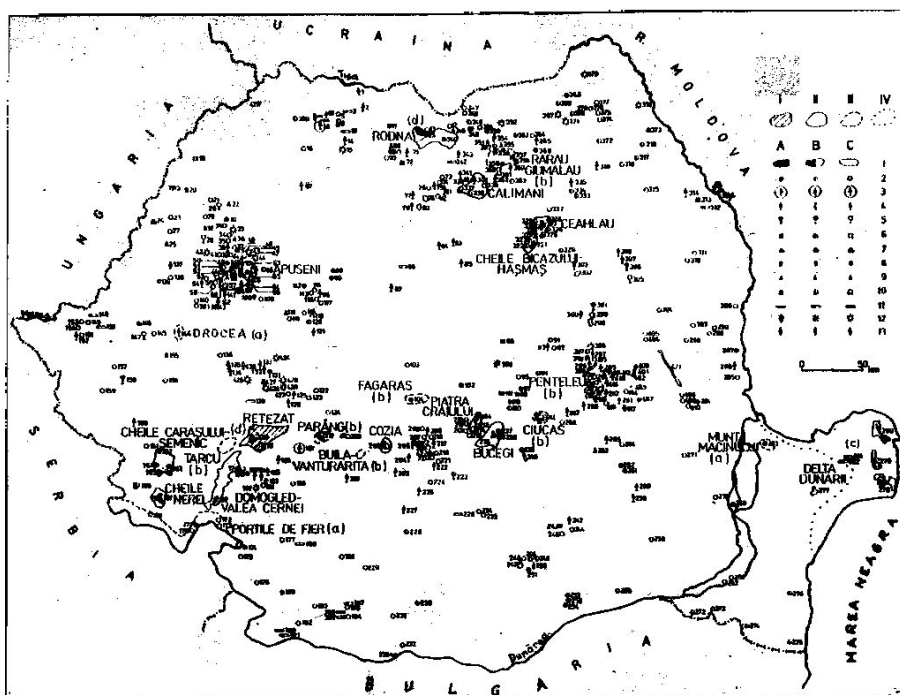
The endorsement of the “Technical norms for forest management planning”, ensured the continuation of the establishment of natural reserves in forest area through management plans. Therefore, in the framework of ICAS researches (Stoiculescu, 1988-1994), with the support of progressive ICAS’s forest planners and the staff working in the forest administration, many other protected areas have been temporarily established in woodlands. But the top of this action was represented, as will be shown below, by the

acknowledgement of the 13 national parks in woodlands.

The first researches on the protected areas in woodlands have identified a heterogeneous network with “216 natural and scientific reserves, totally or only partially in forest areas”, on a total area of about 60,000 hectares (Donita, 1987).

Later systematic researches over the 1988-2002, developed by the undersigned, have been developed in six stages. Here are some of the results:

1st stage (1988-1989) ended with the development of “The list on national parks, natural reserves and nature monuments established and proposed to be established in forest area” and their presentation on maps, scale 1:1 000 000 (Figure 1). This list included 403 natural objectives (626,968 ha or 2.64 % of the country): 41 legalized areas, of which: a national park (Retezat) without an own administration, 18 natural reserves, 2 scientific reserves, 2 landscape reserves, 11 nature monuments, 8 natural reserves without a protection forest area (36,476 ha or 0,15 %); 125 area temporarily protected by forest management plans endorsed by the Ministry of Forestry: 91 natural reserves, 16 scientific reserves, 18 nature monuments (29.466 ha or 0.12 %); 237 proposed areas, of which: 13 national parks, 193 natural reserves, 16 scientific reserves, 14 landscape reserves, 1 nature monument (561,026 ha or 2.36 %). In the last category, 58 small areas were already temporarily protected according to county resolutions (Stoiculescu, 1989).



**Figure 1.** Natural objectives established and proposed in the forest area (Cr. D. Stoiculescu and Z. Oarcea, 1989, updated 1994). I-III national parks, IV biosphere reserves, 1-13 categories of natural nature reserves and monuments: A - officially recognized, B - temporarily protected, C - lanned.

Over this 45-year period of, only 11 natural reserves have been officially recognized in forest area on 8,003 ha (Stoiculescu, 1990, 1995). "Law 9/1973 on environment protection", which was expected with enthusiasm, proved to be out of complaisance. During its 23 years of validity, the new CMN did not managed to fulfill its legal obligations. Making concessions to different companies, it has caused the groundless destruction of "some protected natural objectives of European interest", including forest ones (Stoiculescu, 1998-a). In 1989, compared with the other socialist countries in Europe, as number (65) and surface of national protected areas (0.39 %), Romania was on the last position (Stoiculescu and Bândiu, 1991). Compared to other European countries, these comparisons were even worse and showed the attitude of the totalitarian regime towards protection and conservation of the environment.

### **THIRD PERIOD, AFTER 1989**

For the first time in the Romanian history, at the request of the forest researchers from ICAS, a disposition was issued by the newly established Ministry of Waters, Forests and Environment Protection (MAPMI) 7/27.01.1990. This disposition stipulated that 13 forest lands, with a total area of 397,400 ha, of which 126,100 ha of total reserves have been established as "national parks under the direct management of forestry districts and inspectorates" (Stoiculescu, 1992, 1994-a, b, 1999-e, 2002-b, 2003-a).

This network of large protected areas in Romania was made up of national parks located entirely in forest area: Rodna 54,400 ha (of which strict reserve 14,000 ha), Caliman 15,300 ha (8,300 ha), Ceahlau 17,200 ha (5,400), Bicazului-Hasmas Gorge 11,600 ha (6,200), Bucegi 35,700 ha (9,000 ha), Piatra Craiului 14,800 ha (6,100 ha), Cozia 17,100 ha (7,300 ha), Retezat - legally recognized in 1935 on about 10,000 ha, mainly forest - was expanded to 54,400 ha forest area (18,400 ha), Domogled-Valea Cernei 60,100 (24,400 ha), Semenic- Carasului Gorge 30,400 ha (8,600 ha), Cheile Nerei-Beusnita 37,100 (8,800 ha), Apuseni Mountains 37,900 ha (9,600 ha), Danube Delta 9,100 ha. These results have been included in the international (IUCN, 1990-a, 1990-b; 1991; 1994-a, 1994-b etc.) and national statistics (Anonimus, 1994).

In 1990, after the temporary marking out of the lands, the total area of the parks was almost the same, 397,211 ha, but the total area of complete reserves increased to 144,652 ha, of which 5,176 ha only in Danube Delta. This last one was taken over almost as it was as a "strictly protected area" in the Resolution of the Romanian Government No. 284/1994 endorsing some measures in the enforcement of the Law 82/1992 on the creation of Danube Delta Biosphere Reserve. The increase of complete reserves area, except the ones in Danube Delta, resulted from the inclusion of the "unproductive lands" in forest area. Although unsuitable for forest vegetation (rocky, steep slopes, dunes, peat areas, swamps, etc.) they are specific habitats and landscape areas with a high naturalistic value, excellently preserved, whose preservation ensures the biodiversity conservation, in protected areas, at maximal parameters (Stoiculescu, 1991-a, 1992, 2002-b).

Other 186 protected areas (71,479 ha) included in the list of 403 natural objectives mentioned above have been recognized by the Disposition 43/ 30.03.1990 of MAPMI.

The second (1990-1992), third (1993-1994) and fourth (1995-1997) stages were completed with: development of updated syntheses on the 13 national parks recognized in the Disposition 7/1990, including their mapping on a scale 1:50000 and 1:200000; showing the inobservance of the stipulations of this Disposition (decrease of the strict reserves area in the forestry districts re-planned on almost 45% of the area) which is in contradiction with the stipulations of Laws 13/1993 and 58/1994; development of a list with 45 new natural reserves, existing or proposed to be established in the forest area; opposition to a law draft on environment protection, including on biodiversity in protected areas, developed by the central public authorities for environment, not taking into consideration the future needs, etc.

Also, it was shown that the natural environment, and not the cultural landscape, predominates in the southeast of Europe. This situation is clearly shown in the process "Parks for Life" involving protected areas in Europe, which "identifies the possibilities and needs for creating more areas in the second category, national parks, especially in the South-Eastern Europe and not in the fifth category, protected landscapes" (Phillips, 1994). Considering the first five IUCN management categories, it resulted that compared with the entire world, the area in the second category (national parks) is four times lower in Europe, while the fifth category (protected landscapes) is four times