



Emil Racoviță - from the naturalist, explorer, and scientist to the creator of biospeleology

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ABSTRACT: Romania is a blessed place with many areas of unique beauty, including almost all types of ecosystems known in the world, as part of the protected natural heritage. The link between protected natural areas and ecotourism is very strong because one of the features of this form of tourism is the active contribution to the conservation of natural and cultural heritage. Natural heritage is usually under a certain form of protection because this is the only way society can ensure that the right protection measures are taken. Although sometimes human activities can be illegal and put additional pressure on the protected area, we can use the status of protection as a lever, helped by various profile institutes, to put pressure on the authorities. In this context, the purpose of this paper is to honor the centenary of the Institute of Speleology "Emil Racoviță", which contributed to the promotion and conservation of natural heritage, and to bring a philatelic tribute to Romanian scientist and polar explorer, also naturalist and creator of biospeleology - Emil Racoviță.

KEYWORDS: biospeleology, karst ecosystem, natural heritage, philately, Romanian explorer.

Received 12 Jan, 2021; Revised: 25 Jan, 2021; Accepted 27 Jan, 2021 © The author(s) 2021.

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I. INTRODUCTION

Romania, as shown in various specialized studies, is a blessed place with many areas of unique beauty, including almost all types of ecosystems known in the world, as part of the protected natural heritage. The link between protected natural areas and ecotourism (including in this context even the speleotourism) is very strong because one of the features of this form of tourism is the active contribution to the conservation of natural and cultural heritage [1]. Natural heritage is usually under a certain form of protection because this is the only way society can ensure that the right protection measures are taken [2],[3].

Although sometimes human activities can be illegal and put additional pressure on the protected area, we can use the status of protection as a lever [4]-[6], helped by various profile institutes, to put pressure on the authorities. In this context, some considerations regarding the Institute of Speleology, which contributed to the promotion and conservation of natural heritage, are exposed.

Constantly promoting philatelic thematics that use natural beauty of our country as subjects, the administrative entity (with various names over time, nowadays Romfilatelia) responsible for issuing postage effects performs a series of philatelic issues in whose images are found rarities of flora and fauna, as part of different protected natural areas, even of karst ecosystem [7].

To show that protected natural areas have a special beauty, in this paper, we bring to the discussion the most significant philatelic peculiarities regarding the Institute of Speleology "Emil Racoviță" [8], which contributed significantly to the promotion and conservation of natural heritage, through the prism of biospeleology. Biospeleology is an interdisciplinary field, located at the confluence of biology and speleology and which aims to study organisms living in caves.

The founder of biospeleology was Emil Racoviță. In 1904, after visiting the Cueva del Drach cave in Mallorca, the Romanian scientist, from the oceanological research, goes on to study the underground

ecosystems. His interest in this new field is crowned with the founding, in 1920, of the Institute of Speleology in Cluj. Biospeleology studies the biocenoses present in the underground environment and in particular in the karstic, hypogenic, and endogenous environment. In the field of biospeleology are included even those species that show signs of adaptation to underground life, as crustaceans and other invertebrates that live under the seas and oceans. In this context, for this paper, we focused on the scientist Emil Racoviță, and the way in which the thematic philately chose to respond to the various events in his life. As a result, we chose to identify, analyze, and disseminate philatelic pieces, in relation to the main stages of his life and the activity that consecrated him.

II. MATERIAL AND METHODS

The documentation for this paper started from the authors' concerns for ecological education and environmental protection [9],[10], but also because they love the idea of a harmoniously developed community with care for protected natural areas (including karst areas) and biodiversity that populates them [11]-[13]. With a range of highly relevant national studies at hand, both in terms of protected area management [2],[3], and philatelic issues published in special catalogs [14]-[16], the authors decided to extrapolate these approaches on the karst space of Romania. Where, moreover, a considerable contribution was made by the scientist Emil Racoviță, in a triple capacity - as a naturalist, explorer, and creator of biospeleology.

Data collection (mainly philatelic pieces, such as stamps, first-day covers - FDCs, illustrated and semi-illustrated postcards, maximum postcards, special envelopes, commemorative postcards, etc.), as well as their analysis, description, and dissemination was made by effective consultation of platforms with philatelic content, available online and free of charge. In addition to the philatelic-content platforms used - Allnumis [17], Colnect [18], Delcampe [19], eBay [20], Okazii [21], PickClick [22], Romfilatelia [23], and StampWorld [24], the discussion forums with collectors and philatelists were also of real use. Where information from various sources was interpretable, sometimes even inaccurate, the opinion of specialists was what mattered in the end. The collection of philatelic pieces, as well as their analysis, was done over a long period (5-6 months), a large number of sources, as well as the variety of pieces, being very difficult to manage. A chronological inventory were tried according to the philatelic format in which they are presented.

III. RESULTS AND DISCUSSION

3.1 "10 years since the death of Emil Racoviță"

The first philatelic issue, officially recorded via special catalogs (LP #458, Yv RO#1590..91, Mi RO#1731..32, Sg RO#2597..98, Sn RO#1235..36), relative to the personality of the Romanian scientist Emil Racoviță (1868-1947), appeared on July 28, 1958. It is based on two postage stamps made by photogravure, in 42x26 mm lacy format (comb14½ x 14), without watermark, in a print run of 2,000,000 pieces (see Fig. 1a,b) [25],[26]. The first stamp, under the shade of cobalt blue/violet-blue and with a face value of 55 bani, represents in the foreground the young Emil Racoviță in a double quality - as a naturalist and explorer, and in the background the Belgica ship. The second piece, under the shade olive/ purple violet and with a face value of 1.20 lei, also represents Emil Racoviță in the foreground, this time at maturity, as a creator of biospeleology, and in background the profile of the underground environment (most likely a sublime reference to the Bear Cave).



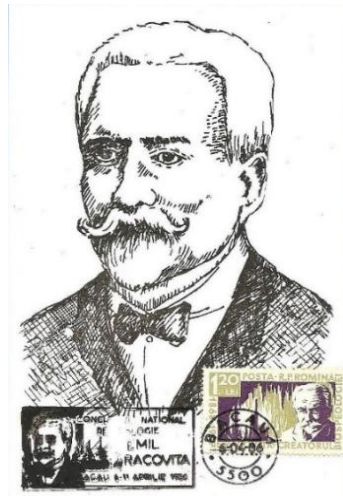
Fig. 1. Postage stamps and FDC of the "10 years since the death of Emil Racoviță", 28.07.1958, Bucherest

The personality of the scientist Emil Racoviță is really perfected by the first-day cover (FDC) related to the issue (see Fig. 1c) [27]-[30], which includes both stamps within the postage. In his semi-illustration, we find the crowning of the three qualities already mentioned (naturalist, explorer, and creator of biospeleology), as a

frame of the oval medallion that illustrates his portrait. Even the "first-day of the issue" stamp has a special connotation, summarily illustrating the port side of the Belgica ship.



(a)



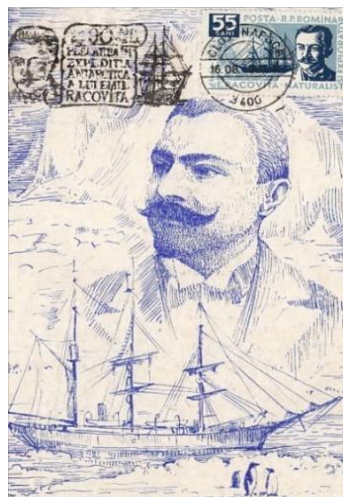
(b)



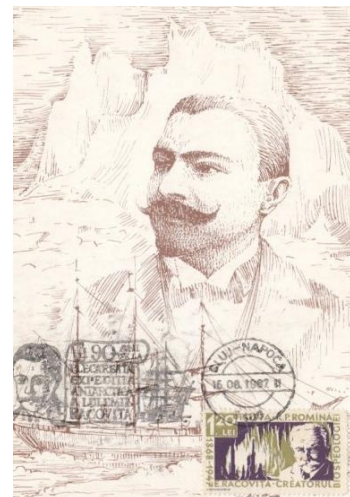
(c)



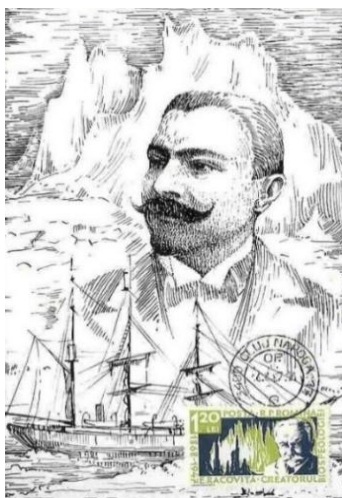
(d)



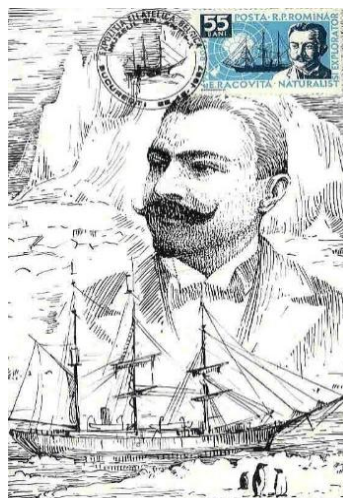
(e)



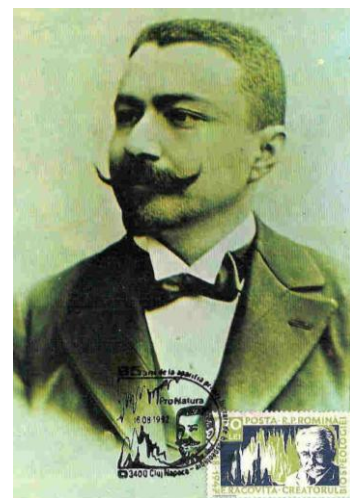
(f)



(g)



(h)



(i)

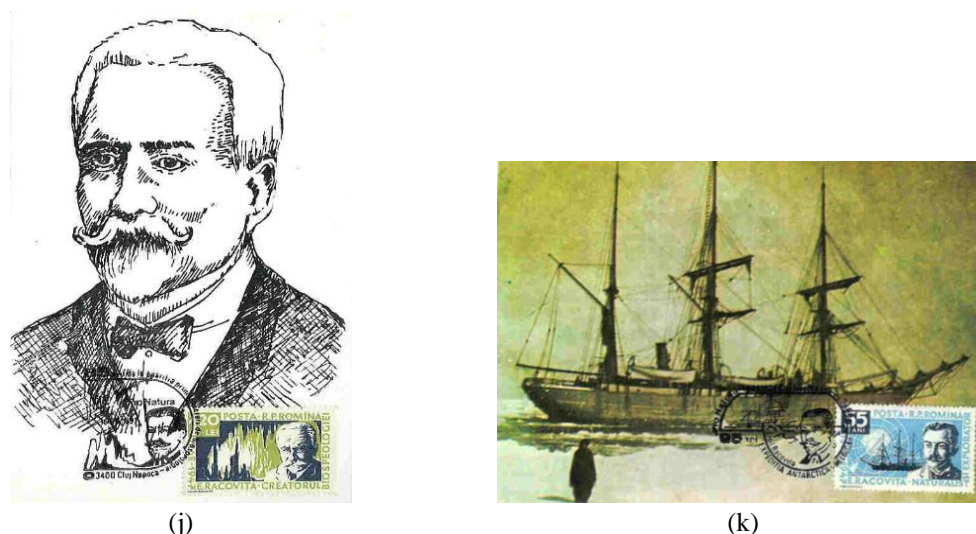


Fig. 2. Maximum postcards of the "10 years since the death of Emil Racoviță" philatelic issue

A series of maxims were made with the postage stamps (as shown in Fig. 2) [31]-[41], to commemorate, mainly, various events related to the life and activity of the Romanian scientist Emil Racoviță. As can be seen, the maximum postcards are based on various illustrated postcards, which mainly capture the bust/portrait of the scientist and the profile of Belgica - the vessel used in his expeditions, and are made in different periods. Among the pieces that were made and offered to the public on e-commerce sites are:

- a maximum postcard having as support the illustrated postcard representing the bust of the scientist, the postage stamp with the value of 1.20 lei and the homage stamp "115 years since birth", 15.11.1983, Cluj-Napoca Post Office [31];
- a maximum illustrating the portrait of the scientist, made to honor the "National Biology Contest", 06-11.04.1986, by applying the event stamp next to the day stamp, Bacău P.O. [32];
- a maximum obliterated with the stamp "30 years since the current organization of the Institute of Speleology Emil Racoviță", 25.07.1986, Cluj-Napoca P.O. [33];
- a maximum postcard with the homage stamp "90 years since the Belgica expedition to Antarctica", August 16, 1987, Alba Iulia P.O. [34];
- a maximum based on the illustrated postcard representing the bust of the scientist and the profile of the Belgica, the 55 bani stamp, and the special stamp "90 years since Emil Racoviță's departure in the Antarctic expedition", 16.08.1987, Cluj [35];
- a maximum postcard with the same support and the same stamp, only the stamp applied differs (1.20 lei), 16.08.1987, Cluj-Napoca P.O. [36];
- a maximum obliterated with the day stamp, 16.08.1987, Cluj-Napoca P.O. [37];
- a maximum postcard obliterated with the special stamp "Belgica Philatelic Exhibition", 12/22/1987, "Grigore Antipa" Museum, Bucharest P.O. [38];
- a maximum obliterated with the homage stamp "85 years since the publication of the first biospeleology work", ProNatura, 16.08.1992, Cluj-Napoca [39];
- a maximum postcard obliterated with the homage stamp "85 years since the publication of the first biospeleology work", ProNatura, 16.08.1992, Cluj-Napoca Post Office [40], and
- a maximum bearing the special stamp with the message "95 years - Antarctic Expedition - Belgica", affiliated to the "Pro Natura" event, August 14, 1992, Cluj-Napoca Post Office [41].

In terms of postal circulation, the issue in question ("10 years since the death of Emil Racoviță") abounds in parts, as can be seen in Fig. 3 [42]-[50]. The latter certify that the philatelic issue inevitably led to the promotion of the promoter of biospeleology. Among the identified pieces are:

- liliput envelope circulated loco, 27.12.1958, Giurgiu Post Office [42];
- letter circulated in the recommended regime on the Cluj-Bucharest, 09.01.1959 [43];
- letter circulated in express regime on the Cluj-Sighișoara route, 11.01.1959 [44];
- letter circulated in express regime on the Cluj-Sighișoara route, 16.01.1959 [45];
- letter circulated in the recommended regime on the Cluj-Bucharest, 10.06.1959 [46];
- simple envelope circulated on the Bucharest-Cluj route, 26.02.1960 [47];
- whole postal circulated in recommended regime, 29.08.1960, Bucium (Cluj) [48];
- cover circulated in the recommended regime on the Ploiești-Iași, 29.10.1960 [49];

- i) special envelope containing the stamp with mark “The first exhibition of the polar philately club Emil Racoviță”, 08-15.06.1975, General School 17, Cluj-Napoca [50].



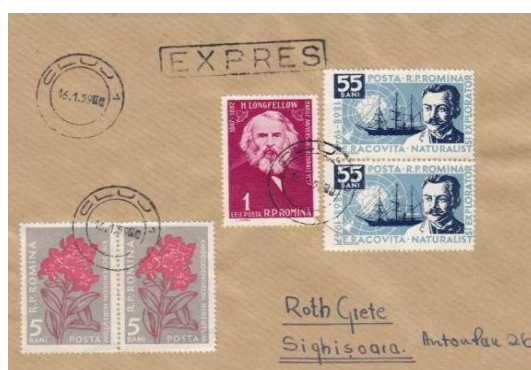
(a)



(b)



(c)



(d)



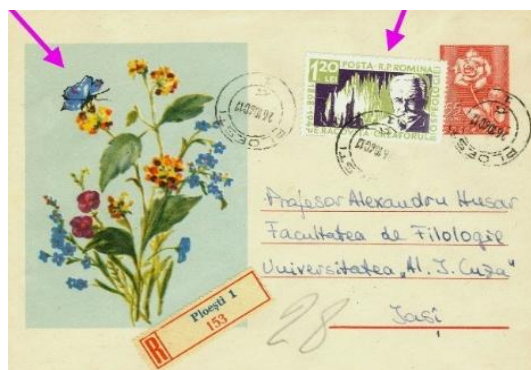
(e)



(f)



(g)



(h)



(i)

Fig. 3. Postal circulations related to the "10 years since the death of Emil Racoviță" philatelic issue

3.2 "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță"

The second most important philatelic issue, for collectors and philatelists alike, is the one published on 19.01.2007 (LP #1753, Yv RO#5178..81, Mi RO#6158..61). Made on chrome paper (England), the issue, entitled "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță", is based on four pieces (see Fig. 4) [51],[52], respectively Piatra Altarului Cave in the Bihor Mountains (nominal value of 40 bani), Emil Racoviță (1868-1947) - the founder of the first Institute of Biospeleology in the world (face value of 1.60 lei), a skull for *Ursus spelaeus* (face value of 7.20 lei) and a crustacean discovered in the Devil's Cave on the Island of Mallorca (face value of 8.70 lei).

The postage stamps were printed in a print run of 80968 series, in 5 colors and in 33x48 mm format, 13¼ lace, according to the models made by R. Oltean. Also in the same context, the block of 4 stamps (130x110 mm) appeared, in a circulation of 12,000 series.

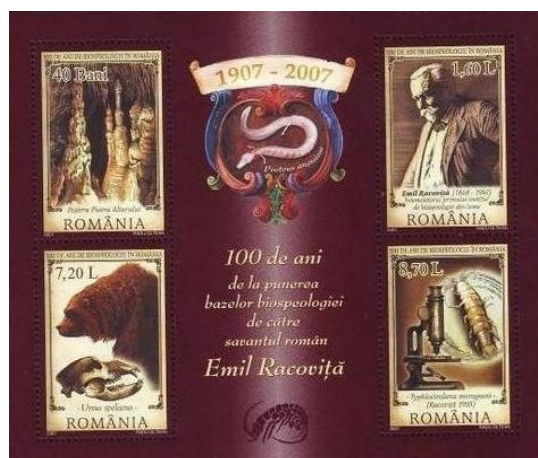


(a)

(b)

(c)

(d)



(e)

Fig. 4. Postage stamps and 4-stamps block related to the "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță"

Regarding the other elements, the official situation is limited to two FDCs, in total 400 sets (as presented in Fig. 5) [53], and four maximum postcards, in total 340 sets (see Fig. 6) [53],[54]. As you can see, the maximum postcards highlight, at the macro level, the main elements illustrated in the postage stamps. The most faithful maximum representation being that of the illustrious scientist Emil Racoviță together with other prominent members of the Institute of Speleology, with whom he collaborated closely.

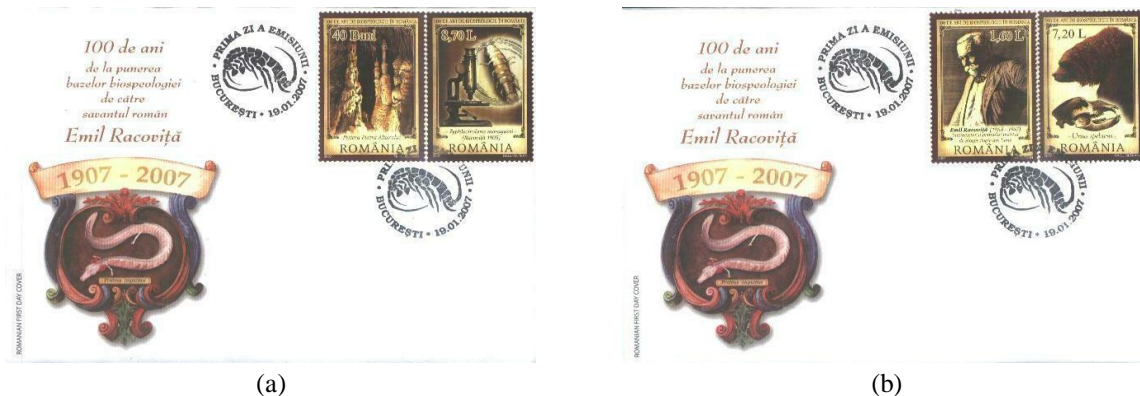


Fig. 5. FDCs related to the "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță"

Other philatelic materials, also interesting and of great value to collectors, are special envelopes (see Fig. 7) [55], which take on the image of postage stamps at the level of the semi-illustration, along with a stamp specially designed to mark "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță". Pieces with the day stamp of the post office in Bucharest were also identified.



Fig. 6. Official maximum of the "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță"



Fig. 7. Special covers of the "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță"

For the simplicity of exposing the documentary content regarding the philatelic issue, Romfilatelia has made, as usual in other profile events, a promotional poster, including technical details. In Fig. 8 we reproduce the poster [56], together with two „loco” circulations, dated 19.01.2007 [57],[58].



Fig. 8. Special poster and two postal circulations related to the "100 years since the foundations of biospeleology were laid by the Romanian scientist Emil Racoviță"

3.3 "Institute of Speleology Emil Racoviță - a century of research"

To honor the centenary of a famous Institute, under the auspices of the Romanian Academy, Romfilatelia, as a promotor for national values, introduced into circulation, on June 18, 2020, the issue of stamps "Institute of Speleology "Emil Racoviță" - a century of research [59]. The Institute of Speleology "Emil Racoviță", the first of its kind in the world, owes its existence to the genius of the great scientist Emil Racoviță (1868-1947), in the triple capacity - of a biologist (naturalist), polar explorer and founder of biospeleology.

Creation of this institute was consecrated by a special law, promulgated on April 26, 1920, by King Ferdinand I himself [59]. For a start, the institute functioned as a part of the Faculty of Sciences of the

University of Cluj, representing the official framework in which its founder moved the headquarters of the Scientific Society "Biospeleologica", which he founded in 1907, as an international tool to coordinate the activity of all zoologists interested in the study of underground fauna. Within the issue of postage stamps, consisting of four stamps, are represented significant images from the caves of Romania, of great importance for the speleological research activity. The illustration of the stamps is made in an attractive graphic for collectors, with elements reproduced with a special color - UV yellow [59],[60].

The stamp with a face value of 3.30 lei reproduces a parietal painting from the Coliboaia Cave (Bihor), one of the oldest cave representations in Europe, in which a woolly rhino can be seen. The calcite organ, located in the Paradise Gallery in the Pietra Altarului Cave, is reproduced on the stamp with a face value of 5 lei. On the third stamp of the issue, with a face value of 8.50 lei, are depicted cave bear skulls in the Cold Cave, the bear being the representative mammal of the last Ice Age in the Carpathians. On the last stamp of the series, with a face value of 12 lei, are highlighted the largest gurus in Romania, located in the Șura Mare Cave (Hunedoara) [61],[62]. On the first-day cover of the issue, huge stalagmites are illustrated, located in the Mammoths' Hall, the Cave from the Dâmniin Wall (Alba), as shown in Fig. 9 [59].

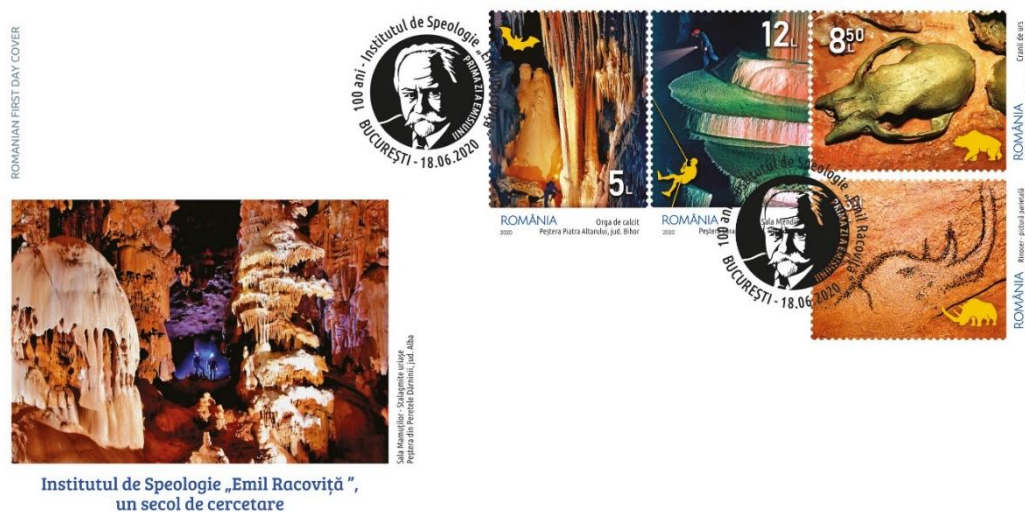


Fig. 9. Official FDC of "Institute of Speleology Emil Racoviță - a century of research"

Even if the pieces do not make a direct reference to the scientist Emil Racoviță, it can be noticed that the only element with such implications is the commemorative stamp, which takes the place of the stamp on the first-day of the issue. This illustrates the profile of the scientist, surrounded by the text "100 years - Institute of Speleology Emil Racoviță, 18.06.2020, Bucharest" [59],[60]. In the same context, the commemorative sheet appeared (Fig. 10) [61], which in addition to four pieces of each stamp, contain a representative image for a cave in Romania. Exceptionally, on each of the images appears the official logo of the Institute of Speleology "Emil Racoviță", after which those who created the stamp that obliterates the FDC were certainly inspired.

Certainly, other philatelic issues refer to the outstanding personality of Emil Racoviță (see Fig. 11), but the most remarkable are the three on which we focused. Because we brought in discussion the idea that there would be other issues dedicated to Emil Racoviță, we decided to make only a brief review of them. Thus, back in June 24, 1968, we meet another round event - the "100 years since the birth of Emil Racoviță" philatelic issue (LP #676, Yv RO#2387, Mi RO#2685, Sg RO#3561, Sn RO#2017 indexed), composed of the postage stamp reproduced in Fig. 11a [63],[64]. The postage stamp, with a face value of 55 bani, illustrating the scientist's portrait, was made on chrome paper, in 33x48 mm format, 13¼ lace, after a model by I. Dumitrana. Its circulation of 1 million pieces was accompanied by a single official FDC.

The second philatelic issue, from the short list on which we focus only synthetically, respectively "Great discoverers and darers", appeared on December 25, 1985 (LP #1148, Yv RO#3648, Mi RO#4225, Sg RO#5011, Sn RO#3350). The postage stamp, with a face value of 4 lei (as shown in Fig. 11b) [65],[66], represents Emil Racoviță, as a speleologist, in the company of the American explorer Robert Edwin Peary (1856-1920). It was printed on chrome paper, in 33x48 mm format, laced 13¼, after a C. Cole model. The 200,000 series reflecting the circulation are accompanied by three official FDCs.

In purely chronological order, the third issue regarding the topic of this article appeared on July 23, 1986. Under the title "Romanian researchers in the polar areas", the issue is based on six stamps. Of interest for the present study is only the postage stamp with the nominal value of 2 lei (Fig. 11c) [67],[68]. This surprises

the scientist Emil Racoviță, along with the map of Antarctica and the ship Belgica. The piece considered (LP #1163, Yv RO#3692, Mi RO#4283, Sg RO#5060, Sn RO#3395), like the others in the series, was made on chrome paper, in 54x42 mm format, laced 13¼, after a model made by A. Ștefan. The issue's two FDCs complete the 200,000 series run.



Fig. 10. Official commemorative sheet of the "Institute of Speleology Emil Racoviță - a century of research"

The last issue taken into account appeared on August 18, 1997. Titled "Centenary of the Antarctic Expedition - Belgica", it illustrates the biologist Emil Racoviță in the postage stamp with a face value of 450 lei (LP #1440, Yv RO#4409, Mi RO#5276, Sg RO#5903, Sn RO#4175), as shown in Fig. 11d [69]. Made on chrome paper (England), in 48x33 mm format, laced 13½, after a model by Gh. Leahu, the piece was part of a circulation of 50,000 complete series. It also appeared in the franking of one of the two official FDCs, out of a total of 1350 sets.



Fig. 11. Other notable mentions in relation to the philatelic issues that immortalize the scientist Emil Racoviță

The philatelic pieces considered illustrate not only "round events" related to the life and work of the Romanian scientist, but also express the desire to commemorate and promote his work among the community, both nationally and internationally. The same principles were the basis of this article, made as a philatelic laudatio in memory of Emil Racoviță.

IV. CONCLUSIONS

Through this paper, we tried to present some philatelic issues, probably the most impactful in relation to the theme, respectively the life and activity of the naturalist, explorer and creator of biospeleology - Emil Racoviță. As the topic of the article was debated, with an emphasis on identifying and analyzing various philatelic effects, there was a slight inclination towards promoting the illustrious scientist with his activity, carried out both in the field, but especially within the Institute that carries his name.

At the same time, we were deeply impressed by how the national postal entity, but especially the collectives of philatelic enthusiasts as part of the community, managed to configure, create and capitalize on the image of the Romanian scientist. The great scientist deserves all the consideration of future generations, as well as other new philatelic issues, including those made abroad, which we have not been able to identify.

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