

CONSERVATION AND PROTECTION OF THE BIOTA OF KARST: ASSIMILATION OF SCIENTIFIC IDEAS THROUGH ARTISTIC PERCEPTION

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At the symposium, "Conservation and Protection of the Biota of Karst," organized by the Karst Waters Institute (Nashville, Tennessee, February 13-16, 1997), Dr. Stuart Pimm, one of the leading authorities in nature conservation, proposed that besides the maintenance of pristine groundwater as the rationale for conservation and protection of karstic ecosystems, one should use artistic arguments, too. He had in mind the idea to protect the karstic environment and their unique organisms because they are beautiful! I shall here develop further this argument and give a practical example that should emphasize the importance of metaphorical language using the artistic perception of the layman in order to better assimilate scientific ideas.

Naturalists, when dealing with organisms and their ecology, are often impressed by the pleasant, aesthetic appearance of their object of study. Take, as example, the appearance of the delicate cave shrimp moving in search of its food through the clear water of a subterranean lake. A sense of wonder and ecstasy permeates the study of such organisms and a deep desire exists in the scientist to communicate these aspects to a larger public in a similar way to what artists do. What Dobzhansky and Boesiger (1983: 135) wrote about the cultural mission of artists "...one of the great humanistic roles of the artist is to make natural beauty visible to those who either cannot see it or can see it only poorly..." equally applies to scientists and their research achievements.

As our knowledge and perception are organized into integrative frameworks, creative ideas are often activated through metaphorical language. Paton (1992) mentions that we often describe what is unknown in terms of what is familiar, and artistic images allow a better grasp of complex scientific ideas. As an example, we can mention the possibility of communicating to the layman how and why to conserve or to protect the unique cave dwelling animals, i.e. in order to appreciate their unusual habitat and strange habits, as evolutionary products of a long, adaptive history. Such animals are now in various locations under a strong threat of extinction through anthropogenic pollution. In this case, therefore, such an environment and its inhabitants deserve better attention and protection from

humans. Because the artistic education of people is, in many cases, better developed than their grasp of science, it would appear more useful to employ a metaphorical description of the cave dwelling animals in their home as a museum of marvellous images. Emil Racovitza, years ago (1926), pointed out that caves in Europe are filled with "living fossils" and they could be compared to common museums.

The analogy between caves with their visually attractive creatures and an Art Museum, with its unique paintings and sculptures for which our human culture tells us that the exposed artistic objects are beautiful and have to be conserved and protected, can help the layman to grasp the biological interest and importance of the former. Hence, in order to widen the cultural education of the layman, the combination of artistic perception with scientific facts can be one of the best techniques to convey a meaningful idea: the unique organisms living in karstified areas represent public goods with amenity value (Morowitz 1991) and, therefore, they have to be integrated in our cultural heritage.

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