Book Review

The Chelonian Emperor has no Clothes: When and where did Red Listing go Wrong?

A Review of Predicting extinction: Fundamental flaws in IUCN's Red List System, Exemplified by the Case of Sea Turtles. Nicholas Mrosovsky, Department of Zoology, University of Toronto, private publication, 2004 (57 Pages)

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For nearly 40 years, the World Conservation Union (IUCN) Red List Programme has been classifying the extinction risk of imperiled animal and plant species around the globe. But according to author Nicholas Mrosovsky, these classifications are often erroneous due to inadequacies in both the Red List Programme's criteria for identifying species' extinction risks as well as an overly precautionary approach by those employing the system. This argument is not new, as Mrosovsky and others have written about this on a number of other occasions (eg. Mrosovsky 1983; 1996; 1997, Webb and Carillo 2000). However, in Predicting Extinction, Mrosovsky goes beyond the general problems and provides detailed accounts of why the system is flawed, using several of the most recent sea turtle assessments to illustrate his points. For the most part, he focuses on four main shortcomings with the IUCN Red List Program: i) inadequate recognition in the differences between species, ii) inconsistency in application of the Red List criteria among assessors, iii) insufficient scientific documentation, and iv) lack of transparency in the Red Listing Process. The text is filled with witty, investigative, and at times scathing passages regarding the current Red Listing system. It's a rather short read that will be interesting to sea turtle enthusiasts and wildlife biologists alike.

Predicting Extinction starts out chronicling the changes in Red List Categories and Definitions, from the initial Red Data Books of the 1960s with their Category 1, 2, etc. labels to those in the new millennium with their 9-tiered system (Critically Endangered, Endangered, Vulnerable, etc.). Here, Mrosovsky makes an interesting point regarding the increasingly liberal use of the term 'Endangered': whereas the term was initially applied to species considered to be 'in immediate danger of extinction (Honegger 1968)', by 1979 a species was considered Endangered when it was simply "in danger of extinction (Honegger 1979)." The dropping of the term 'immediate' may seem trivial to some, but it is the initial step toward an overly precautionary approach to Red Listing. Such precaution, as Mrosovsky argues, introduces bias toward listing in a higher category of threat than is warranted by the facts.

"…a global listing for a species that is widespread is not in itself very useful or informative, and may even lead to confusion"

Although the IUCN would argue that the single system employed by Red Listing is beneficial for comparing the predicaments of a wide diversity of taxa, Predicting Extinction points out that this lack of recognition of the differences among species is one of Red Listing's gravest inadequacies. Why, as Mrosovsky questions, would any system use the same assessment approach for species with dramatically different biology and demographics? Assessing a species with a 35-year generation time may very well require a different approach than when assessing a species with a 5-year generation time. Likewise, assessments of globally distributed species would surely require a different approach than assessments of species with restricted ranges. In Predicting Extinction, Mrosovsky elaborates on these points, detailing why the IUCN stumbles when

from the distant past to monitor long-term changes? With globally distributed species, how can we address local and regional trends when the assessments are painted with such a broad, global stroke?

"The Critically Endangered category has become debased."

Certainly the more problematic cases are the ones that open the Red List up to criticism, sea turtles being a prime example. Of the seven species found worldwide, six are globally classified as vulnerable, endangered, or critically endangered, the seventh (the flatback turtle) is listed as Data Deficient. With respect to the most recent leatherback, hawksbill, and olive ridley turtle global assessments, Predicting Extinction presents stern, effective cases for why the Red List severely overstates the true risk of extinction. How, for example, can leatherback turtles be considered Critically Endangered when several Atlantic subpopulations are actually increasing. Similarly, how can olive ridley turtles be considered Endangered when the Mexican subpopulation now has upwards of 1 million nests per annum? And with the hawksbill, a classification of Critically Endangered has been used, despite the fact that several sea turtle authorities have gone on record stating that the species is not going extinct any time soon. Indeed there are fewer adult nesting hawksbill turtles today than there were, say, 50 years ago, but that does not necessarily mean the species is going to be extinct anytime in our lifetimes. To right these wrongs, Mrosovsky suggests that "the entire system should be overhauled or replaced by a new system". He further explains that sea turtles should be reexamined, and perhaps most importantly, the categories should be restated so that they better describe extinction risks.

Having personally undertaken the recent MTSG green turtle assessment (Seminoff 2004), I must say that I agree with many of the points raised by Mrosovsky in this article. Clearly, the 'one size fits all' approach to assessing species leads to problems. And any sea turtle expert would be hard pressed to come up with an argument for why any sea turtle species is on the brink of extinction. That said, there are also several points that I believe are missed in this document, perhaps due to the timing of this writing. Namely, it is important to note that the Red List criteria do have the capacity to address species with different generation times (see '10 years or 3 generations', IUCN 2001a), and they have prescribed an assessment method for widely distributed species (IUCN 2001b). Moreover, the newest criteria do in fact mandate the use of literature and personal accounts that are either available to the public or must be made available by assessors. Nevertheless, as I'm sure Mrosovsky would agree, these accommodations fall far short from their intended goal.

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