

Introduction

I'll start with a major understatement: Amphibians have been around a long time. Amphibia is the world's oldest terrestrial vertebrate class at some 350 million years of age. Amphibians have been on the planet long before and ever since the dinosaurs. Their diversity is truly amazing. They have adapted to live in aquatic environments, wetlands, forests, deserts, savannas, agricultural developments, and in urban environments. As you read through the species accounts that follow, even the amphibian "experts" among you should find surprises in the differences in food habits, habitats used, life histories, and even how little we know about some of them.

Suddenly, many amphibian populations are declining around the world and some have become extinct. It appears the more we think we understand this decline, the more mysterious it becomes. Are amphibians like a "canary of the coal mine" telling us of dangers we are facing? Will we (or can we) act to stop the decline? We have the moral and legal responsibility to try.

For possible reasons for amphibian declines and information about the values of amphibians, I refer you to the articles "Amphibian Declines: An Issue Overview" by Reaser (2000) and "Why The Amphibians?" by Mattoon (2000). A quick list of possible causes would include (1) habitat loss, especially anything that would raise the temperature and reduce humidity, (2) toxins from industrial toxins and agricultural runoff, both as chemical herbicides and fertilizers, (3) increased exposure to ultraviolet light from weakening of the ozone layer, (4) introduction of exotic species such as bullfrogs, (5) intensive stocking of trout into new waters, (6) diseases, such as virulent, waterborne pathogens such as chytrid fungus, iridoviruses, and bacterium, (7) climate changes, and (8) even such seemingly innocent activities such as fishermen dumping their excess "nightcrawlers" after fishing trips and the exotic worms consuming humus on the forest floor to a degree that reduces habitat for salamanders. Habitat loss is probably the largest cause of amphibian declines and the area that BLM can have the most influence.

I have restricted the species accounts to 71 species for the eleven western states and Alaska that the Bureau of Land Management (BLM) is most interested in. While taxonomists are busily "lumping and splitting" populations of similar amphibians into additional or fewer species or subspecies, in most cases all necessary information is not yet known to develop a useful account. Important subspecies and isolated populations certainly exist that need special management consideration, and I've tried to indicate them on the species accounts, with the "Status by states" list, and with the reference lists. Common names, scientific names, and federal, global, and state rankings were developed in part using www.natureserve.org. The BLM sensitive species were acquired from individual state coordinators, recognizing that the BLM sensitive species lists are under revision and some may change. For instance, I could acquire no information about the Alaska worm salamander other than the name.

The Important Sources of Amphibian Information section lists key references for the western United States and various regions or states, some specific references for certain species and groups of amphibians, some general references, and a number of amphibian reports which were developed by BLM specialists or their cooperators through efforts such as the Challenge Cost Share program. From one to three of these

references were selected as “Important References” for each species account, although information from additional references often was used. The book by Stebbins (1985) was used for most species accounts as it appeared to be the overall best from the standpoint of descriptions and distributions. For regional references, the most important references were Csuti et al. (1997) and Groves et al. (1997) for the Pacific Northwest, Verner and Boss (1980) for California, Degenhardt et al. (1996) for the Southwest, and Baxter and Stone (1980) and Hammerson (1999) for the Wyoming-Colorado vicinity. I’m sure that there are other important references that I did not find. Of special usefulness, are the “Photographic Identification Cards for Idaho Amphibians by Peterson and Fabian (1997). These cards are ideal for field use and contain nearly all information necessary for the identification of all stages of Idaho amphibians. The development of these cards was partly financed by BLM, and similar cards for all states should be encouraged.

I am indebted to those BLM state coordinators who not only supplied me with information about the status of amphibians in their areas, but also turned me on to the key references in their regions, and sometimes even supplied me with copies. I also thank Dr. Chuck Peterson of Idaho State University, Dr. Gary Fellers of USGS in California, Dr. Chuck Harris of the Idaho Department of Fish and Game Department, and Jill Silvey of the BLM Washington Office for their help with the project. Finally, without the map-making and other computer skills of my wife Harriet and the artistic skills of my daughter Robin, this product never would have been completed.