Should single species conservation be a focus in future management decisions?

Species conservation is often regarded as a primary objective in ecosystem management. However, is this concept of human intervention for the sake of maintaining an individual species a valid one? Are humans playing “god” while trying to preserve these certain species, or is it necessary for the survival of the community, the ecosystem and even more broadly the survival of the earth? Single species protection can be costly and time consuming and could be considered as treating the symptom rather than the problem. If emphasis were taken away from single species conservation, perhaps then we could address some of the real problems, such as human overpopulation.

Many authors, including Baskerville in *Understanding Forest Management* (1986), state that ecosystems are dynamic and constantly changing. If humans, as “stewards” of the land, try to preserve a species and artificially re-introduce species into a dynamic ecosystem, they may be hindering a species’ ability to adapt to the dynamic ecosystem. An example of this is the Florida panther, whose numbers have dwindled so low (around 30 individuals) due to habitat fragmentation, that the introduction of the closely related mountain lion is needed for the species survival (Yahner, 1995, p 97). This artificial interbreeding would not have occurred without human intervention. However, species numbers would have unlikely declined so dramatically if humans had not altered the panther’s habitat. This is one of the main arguments for single species preservation – if humans are responsible for the damage then they should be responsible for the repair.

There are currently three major perspectives in resource management: anthropocentric, ecocentric and biocentric. The anthropocentric view is centered on managing the resource for the needs of the people. The ecocentric view is centered on managing the ecosystem
and maintaining the processes within the ecosystem (Miller 1992). The biocentric view, where all species are of equal value (Miller 1992), is one that is primarily a “value” issue and is not a “survival” issue. Most ecosystems will function without the presence of one of the species contained within that ecosystem. A good example of this is the Californian condor, which would not exist today without efforts for its preservation (Yahner 1995, pg 133). The ecosystem would still function without the condor’s presence, so the reason for its preservation was primarily biocentric, yet an enormous amount of money has been spent on this animal’s preservation.

Another controversial issue, which is related to single species conservation, is the type of species that is preserved. The majority of species, or subspecies, that are protected are vertebrates – particularly birds and mammals (Meffe et al, 1997, p 83). This is because they are aesthetically pleasing to humans. People are more willing to spend money on saving an endangered panther than, say, a rare mosquito. This bias towards charismatic species shows that single species conservation is perhaps too narrow a concept when dealing with communities and ecosystems.

Extinction’s occurred long before *Homo sapiens* were a species and will continue long after we are gone, “Although it is difficult to quantify exact rates of species loss through history…” (Probst and Crow, 1991). Yet much time, effort and money is spent on trying to prevent this “natural” process. I feel that preserving species in this fashion is treating the symptom rather than the problem. Some species are able to survive in the human altered environment. For example the Peregrine falcon has adapted well to the urban environment, nesting on building ledges and feeding on pigeons (Yahner, 1999).

Furthermore, all species are subject to human effects in some form. “…Not even the
largest of the national forest or national park is ecologically isolated from activities and conditions in surrounding areas” (Probst and Crow, 1991).

I do not dispute the fact that humans contribute to the degradation of the landscape. In fact, I believe that humans pollute and destroy the landscape more than all other species combined. However, I feel that this could be considered a “natural” event and could be compared to an algal bloom. The population growth rates cannot be sustained with the current resource demands. Furthermore, I believe that our population explosion will come to an end with a crash, as the environment becomes unable to support human needs. As Max Singer points out in *The Population Surprise* (1999)—“The evidence now indicates that within fifty years or so world population will peak at about eight billion before starting a fairly rapid decline.”

I feel that single species conservation is a waste of time, money, and resources. Focus should be on the preservation of ecosystems on a broad scale rather than focusing on individual species. Processes involved within an ecosystem (perhaps even including extinction) are the most important factors for species survival. If these processes can be maintained then I feel the goals of ecosystem management have been achieved.
References:


