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Editor's Choice: Aldo Leopold Conservation Award

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Fig. 1.—Aldo Leopold (11 January 1887 to 21 April 1948), at Río Gavilán, Chihuahua, Mexico, January 1938. Photo by A. Starker Leopold, courtesy of the Aldo Leopold Foundation and University of Wisconsin–Madison Archives. See Leopold (1937) and Fleming and Forbes (2006) for details of Leopold's trips to Río Gavilán.

Every year since 2003, the American Society of Mammalogists confers during its annual meeting the Aldo Leopold Conservation Award on a highly deserving individual. A consequence of the award for the awardee is the responsibility to write a feature article in the pages of this journal. Aldo Leopold, the namesake of the award, is considered by an overwhelming majority of biologists to be the father of contemporary conservation biology. Born in Burlington, Iowa, Leopold graduated with a Master's degree from the Yale Forest School, which had been endowed in 1902 by the Pinchot family and was one of the first institutions to grant graduate degrees in forestry in the United States. At Yale, Leopold was educated in the tradition of Gifford Pinchot's Resource Conservation Ethic, which, while advocating for "the greatest good of the greatest number for the longest time" (Pinchot 1947) nevertheless reduced the environment to "just two things on this material earth—people and natural resources" (Pinchot 1947), with natural resources to be used by and for people.

Fig. 2.—Andrew T. Smith in the summer of 2020 ("with my covid hair"). Bennettville Mining Town, Sierra Nevada, California. Photo by Harriet Smith, courtesy of Andrew T. Smith.

Leopold in contrast saw the Resource Conservation Ethic as inadequate and unscientific (Meffe et al. 2006)—and even untrue (Callicott 1990)—and developed a contrasting vision: the Evolutionary-Ecological Land Ethic. Leopold's departure from the Pinchot framework could not have been more radical. As he elegantly stated it in the preface to his Sand County Almanac (Leopold 1949) "Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." As Callicott (1990) noted, Leopold saw nature as "a vast, intricately organized and tightly integrated system of complex processes […] more like a vast organism."

While many now may take for granted the Evolutionary-Ecological Land Ethic, there remains ample penetration throughout the world of Pinchot's extractive and anthropocentric Resource Conservation Ethic. It is fitting therefore that the recipient of the 2015 Leopold Award, Andrew T. Smith (Fig. 2), whose paper follows, has spent much of his professional career attempting to catalyze the transition from the Pinchot perspective to a framework more aligned with the integrative philosophy of Leopold. Most of Smith's career has been devoted to the study of lagomorphs, in particular pikas. His first papers on these organisms (Smith 1974a, 1974b) resulted from his 1973 dissertation on American pikas (*Ochotona princeps*) at UCLA. Most of his papers since have been on aspects of the biology of these small, cold-adapted lagomorphs, both in Asia and in the Intermontane West of the United States.

In 1985, Smith published his first collaboration on pikas in China (Smith et al. 1985). At that time, no species of pika was listed in any category of the IUCN Red List (Groombridge 1983; summary in Smith 2008). Today, 29 of the 34 recognized species of *Ochotona* are Red Listed; the five unlisted were described (three) or removed from synonymy (two) in 2017. Among the 29 species most recently assessed, four are "Endangered," one is "Data Deficient," and the remainder are of "Least Concern." The five newly recognized *Ochotona* species will likely be listed in a Red List threatened category. Smith (2018) pointed out that many pika species are so-called "Extremely Isolated Species": highly range restricted species that occur in extremely remote localities (e.g., Li and Smith 2018).

But it is with species considered of "Least Concern" where the essential tension between the Pinchot and Leopold perspectives of conservation ethics comes into greater focus. Many of the species accounts of *Ochotona* in the most recent compendium on lagomorphs (Smith et al. 2018b) list the species in the category of Least Concern. But careful reading of the accounts, most by Smith or Smith and collaborators, shows that not all is well: *O. curzoniae* populations are declining because the species has been widely considered an agricultural pest and persecuted with aggressive poisoning programs. Similarly, several other pika species, such as *O. dauurica*, *O. ladacensis*, *O. rufescens*, and *O. pallasii*, have been targeted by pest control programs. Numerous isolated populations of the widespread *O. pallasii* have markedly declined if not outright vanished. The range of *O. pusilla* has severely contracted in historical times due to conversion of its steppe habitat to agriculture. Smith has been actively combating the Pinchot paradigm of pikas as animals needing to be controlled as damaging to the environment or somehow harmful to domestic animals, both in the scientific literature (e.g., Wilson and Smith 2015) as well as with a remarkably rich field guide to the mammals of China (Smith and Xie 2013). His works collectively are leading to a new, more positive version of pikas where once they were reviled (e.g., Zhao et al. 2020). In particular, just as Leopold (1949) predicted, Smith et al. (2018a) showed the interconnectedness among species in an ecological system by demonstrating

that local removal of a common yet oft ignored species, *O. curzoniae*, results in a catastrophic collapse of other species that depend on it.

It gives me great pleasure to introduce the 2015 recipient of the American Society of Mammalogists' Aldo Leopold Conservation Award, who over his storied career in conservation has shown us that nature truly is "a vast, intricately organized and tightly integrated system of complex processes."

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