Pre-Relevance

"All sciences, arts, philosophies are converging lines;
what seems separate today is fused tomorrow."
—Aldo Leopold; *Esthetics*, 1946

January 16, 2012. As the flock of hovering, bounding Mountain Bluebirds came closer, Erika Wilson and I had to acknowledge that their numbers far exceeded our initial estimate of twenty. When she'd first spotted them, the bluebirds were quite some distance away, near a center-pivot irrigation boom. Now, leap-frogging one over the other, they neared the road until, finally, much of the flock was obscured from our view behind a row of mesquite trees.

"Let's drive further up the road to get a better look," said Erika. Loading our scopes and tripods into the truck's king cab, we continued eastward for several hundred feet. The bluebirds were foraging for insects in a low-cropped grassy green field in the midst of desert scrub. Because this human-created oasis nurtured unusually high numbers of insects, it occurred to me that, should the flock reach the edge of the grassy circle near the road, it would likely linger, or reverse its course. And linger they did—a few bright sky-blue males amid the throng of drab females and immature males. Several American Pipits kept company with the bluebirds and we studied them as well.

Erika and I were participating in the second year of surveys to collect information on wintering Mountain Plover abundance, geographic distribution, and habitat association in Arizona. Being birders, we revel in all birds, such as the flock of Mountain Bluebirds. The plover surveys being conducted in the southern and western portion of the state are sponsored and coordinated by Arizona Field Ornithologists, an organization of birders and ornithologists. Like many grassland species, Mountain Plover populations have declined across their range. Because wintering Mountain Plovers in the state are found almost exclusively in sod farms, grazed pastures, and recently cut alfalfa and fallow fields, the surveys are concentrated in these areas, such as the irrigated field we were now looking over.

During the first year of surveys in 2011, I was reminded—as I often am—of a previous experience. During a 2005 conference sponsored by the Association for the Study of Literature and the Environment (ASLE), I attended a session hosted by Oregon State University's Spring Creek Project. The Project is a cooperative venture designed to bridge the humanities and the natural sciences. To quote its website, "The challenge of the project is to bring together the practical wisdom of the environmental sciences, the clarity of philosophical analysis, and the creative, expressive power of the written word, to find new ways to understand and re-imagine our relation to the natural world."

One of the Project's principals was Fred Swanson, a U.S. Forest Service geologist. Fred introduced session participants to the term "pre-relevance" in this fashion: In the early 1970s, there were just a handful of Northern Spotted Owl researchers. Only later was the link made between the cutting of older forests and fewer owls. Standardized, region-wide surveys that assessed Spotted Owl population trends in the late 1960s had not been

conducted because, at that time, the species was not in jeopardy. But, imagine the utility of the surveys if they had been conducted in the 60s *or sooner***:** valuable information that we now regard as "pre-relevant"—collected before its usefulness had been realized.

Fred went on to explain that Spring Creek's sending of writers to natural areas and scientific research plots to record their observations had merit, not only for what is considered relevant today, but what may very well be important tomorrow. Many of the writers who've participated in the program have extensive backgrounds in science, such as lepidopterist Robert Michael Pyle and ethnobotanist Gary Paul Nabhan. However, if one examines the written work emanating from the project it's clear that these authors' observations and reflections, while grounded in the scientific method, move beyond it to a level explored by such luminaries as Rachel Carson and Aldo Leopold.

The benefits of collecting data when they are still deemed pre-relevant applies to the Mountain Plover as well. "It's unfortunate that these surveys weren't conducted when the plover's population decline was first noted in the 1960s," Erika remarked. Namely, between 1966 and 1991, the continental population of the Mountain Plover declined an estimated 63 percent, according to analysis of Breeding Bird Survey routes. However, because the *rate* of decline between 1999 and 2009 slowed to 1.1 percent per year, the U.S. Fish and Wildlife Service cited this as one of the reasons for not listing the plover as a threatened species under the federal Endangered Species Act.

On that January day, Erika and I happened to be surveying for Mountain Plover in southeastern Arizona, far from their core winter range in the state further west. In the past nine years or so, approximately 200 to 300 Mountain Plovers have been known to winter in western Arizona, primarily in Yuma County. However, because so few birders live in the area, there is still much to learn about the winter distribution and abundance of these plovers in Arizona.

Erika and I were unable to detect any Mountain Plover that day. The fact that, during the winter, the species is found only in agricultural settings within Arizona underscores the complexities of managing for it. Decreasing agency research budgets and ongoing impacts from the ever-expanding human footprint dictate that survey efforts by citizen-scientists will become increasingly common.

During summer 2011, I participated in Black Oystercatcher surveys, another species whose numbers are thought to be declining. There are many questions to be answered. Are oystercatchers impacted by increased use of ocean resources by recreationists and fishers in sea kayaks? What about Black-backed Woodpeckers, a specialist that forages on dead trees, usually killed by fire? Are fire salvage timber sales affecting them? What are the consequences of tree-thinning and other fuels reduction treatments that seek to minimize fuels in order to stave off "the big one" on the suite of species that live there?

Clearly, there are a host of research projects that need the efforts of dedicated citizen-scientists. Data not collected years ago for species that are today imperiled have caused more than one wildlife professional to lament, "Sure wish we had those data. They

needed to be collected yesterday." To borrow the tagline of Troy Corman, coordinator for the wintering Arizona Mountain Plover surveys, "Hope to see you in the field..."