

Saving the little bolts

BY TOM DICKSON



You’ve probably never heard of the reidside shiner or the grasshopper sparrow. For good reason. No one fishes for shiners, so they are pretty much invisible. And few people could distinguish the grasshopper sparrow from any of the dozen or so other “LBJs” (little brown jobs) flying around a field.

Yet people do know and care about these and hundreds of other species that live in Montana. For years they’ve tried to explain why the rest of us should, too.

One argument maintains that the natural world is important simply for its own sake. This “intrinsic value” thinking compels many conservationists and environmentalists. An organism or species is worthy enough as itself, regardless of its economic “instrumental value.” A tree is still valuable even if it can’t be converted into timber.

Besides being abstract, the problem with this approach is that it grants all species equal importance. Sure, a majestic old-growth cedar has value, but what about a scrubby shrub?

Or, for that matter, a woodtick?

Basing conservation on the intrinsic value of nature implies that our responsibility for saving shiners and sparrows equals that of protecting trout and bald eagles. Yet we know that most people see greater worth in game fish and large raptors than in smaller, less entertaining species.

Values beyond intrinsic ones, then, are required to make a compelling case for caring about all wild things.

Starting in the 1990s, conservationists

Tom Dickson is editor of Montana Outdoors.

began to calculate ways animals and plants enrich our lives just by being there—benefits known as “ecosystem services.” Some services come from individual species. Bees pollinate crops. Bats eat disease-carrying mosquitoes. Foxes prey on pesky rodents. Yews provide medicine for treating cancer. The field of biomimicry echoes animal biology and ecology in engineering and design principles, such as aerodynamic trains modeled after a kingfisher’s beak, and energy-efficient buildings based on termite mound construction.

Other benefits come from ecosystems themselves. Wetlands act as sponges that lessen flooding by absorbing runoff, then purify the water for human consumption downstream. Insects and microbes break

land ecology, perhaps by consuming insects that would otherwise damage crops.

Allowing these or any other species to disappear might not make much difference, or it might disrupt an entire ecosystem. The thing is, for most species, we don’t really know.

Maybe Montana’s hundreds of obscure species are like the small bolts in a truck engine. If you lost some of the bolts holding, for instance, the cover to the cylinder head, the truck might hum along for weeks, maybe months. But at some point the cover would come loose and the engine would conk out.

“To keep every cog and wheel is the first precaution of intelligent tinkering,” Aldo Leopold wrote 70 years ago. To enrich our lives, we humans have tinkered a lot with the

natural world. The food we eat, the electricity we use, the wood and metal that build our homes and vehicles—all that and more comes from altering the environment to meet our needs. We can’t turn back time and not plow prairies, log forests, build dams, or mine copper—even if we wanted to. But we can value and

conserve the shiners, sparrows, and other seemingly insignificant species still out there. Not out of moral duty or guilt, but because it’s the wise thing to do.

We still don’t fully understand how the natural world works, and may never get there. But we should still retain all the parts. We might need them someday to keep the engine running. There’s no auto parts store for these pieces. Once they’re gone, they’re gone for good. 🐾

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down organic material into soil that grows trees. Forests and grasslands take in carbon dioxide and produce oxygen.

Even if we don’t know exactly how any specific part contributes to an ecosystem, we can assume it has a role; otherwise it wouldn’t be there. The reidside shiner somehow fits into northwestern Montana river ecosystems that produce westslope cutthroat trout prized by anglers. The grasshopper sparrow plays a role in grass-