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Comment

New Conservation: Setting the Record Straight and Finding Common Ground

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In a recent editorial one of the founding fathers of conservation biology, Michael Soule, expressed concern about ideas that he fears stray from conservation's core principles and the primary goal of protecting nature (Soule 2013). Michael has inspired generations of students to pursue conservation biology, including me. When I was a university professor, Michael's papers figured prominently in my course syllabus, and a conservation textbook I coauthored (Kareiva & Marvier 2011) features several of Michael's publications. Because of his stature in the field of conservation, Michael's concerns warrant thoughtful consideration. The purposes of this Comment are to correct some misimpressions Michael expressed in his editorial; to better explain what these new ideas in conservation are intended to do and, in doing so, reassure the conservation community that there exists much common ground between more traditional conservation approaches and the so-called "new conservation," and to admit candidly that some of the proposed strategies associated with the "new conservation" remain as yet unproven.

Beginning with the misimpressions about new conservation, I assume Michael refers to the popular magazine article (Kareiva et al. 2012), a more scholarly peer-reviewed article on a similar topic (Kareiva & Marvier 2012), the textbook *Conservation Science* (Kareiva & Marvier 2011), or perhaps reports on The Nature Conservancy's (TNC) website (www.nature.org). Concisely, my colleagues at TNC and I

(1) Do not promote economic growth and corporate partnerships as surrogates or substitutes for protected areas or endangered species listings,
(2) do not want to replace biological-diversity based conservation with a humanitarian movement,
(3) do not argue that the goal of conservation is to spur economic growth in habitat-eradicating sectors,
(4) do not advocate for conservation that would exclude keystone species,
(5) do not demand that nature not be protected for its own sake, and
(6) do not suggest that wild nature and national parks be converted into gardens and farms.

So what is actually going on with this new conservation? The new conservation is a reaction to a frank assessment of global trends in human population growth, resource demands, habitat loss, and species loss and asks what we can do that really makes a difference on a global scale in the face of these huge counterforces. In particular, new conservation does not assert that protected areas be abandoned, but it does assert that, by themselves, protected areas are unlikely to be sufficient to accomplish our goals. The ecological reasons for this are well-known. First, from a strictly species-area consideration, there simply cannot be enough land set aside in nature reserves to capture more than 20% to 30% of the world's biodiversity. This means unprotected lands with resource extraction, agriculture, grazing, and forestry also must be managed in ways that minimize damage to biodiversity. Second, the environment outside protected areas is important to a protected area's sustainability—due to pollution, greenhouse gasses, non-native species, and the need for dispersal. Finally, people who live in and around protected areas can be an additional threat if poverty, political unrest, or anger over the protected area itself incites activities that work against the protected area's interests. As many have pointed out, the matrix matters. For all of these reasons and in light of global trends, we feel an urgency to try new approaches. It is important to recognize, however, that these new approaches are additive to the traditional ones.

Soule's editorial implies that TNC might not care about protected areas and that this new conservation is a

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threat to biodiversity. Nothing could be further from the truth. Over its history, TNC has protected 48 million ha, transferring much of this land to governments or local land trusts. The Nature Conservancy recently protected much of the Palmyra atoll, recognized as among the world's most pristine coral ecosystems. And, in collaboration with Trust for Public Land, TNC recently completed the largest private land conservation transaction ever—spending $490 million to conserve more than 125,000 ha of forestland in Montana. But TNC is worried about climate change and other global trends that tell us we need to do even more, at larger scales, to tackle the root causes of biodiversity loss. This has prompted us, in addition to traditional land-preservation approaches, to experiment with innovative ideas and strategies.

One of these new approaches entails working with corporations to minimize the impact of development and steer it toward better conservation outcomes. Thus, TNC is working with companies such as Rio Tinto and BP, as part of its Development by Design strategy, to guide development away from places of high conservation value. Soule believes this implies a goal to "spur economic growth in the habitat-eradicating sectors." The reality is that the development is happening whether we like it or not, and there is much to be gained by working to steer the impacts of this development away from populations of rare species or rare habitat types. Evidence indicates development by design is having great conservation benefit. In Wyoming over 68,000 ha have been protected, and in the steppe and sage brush regions of the western United States, mining and development have been strictly restricted on 2.4 million ha of core Sage Grouse (*Centrocercus urophasianus*) habitat (Kiesecker et al. 2013). The Mongolian government recently designated 400,000 ha of new protected areas where mining is prohibited and is drafting regulations for offsets as a compensatory mechanism that could generate millions of dollars for conservation (Kiesecker et al. 2009). Development by design is achieving effective conservation on the ground, in the real world.

More controversial perhaps is TNC's work with Dow, where there is no obvious or immediate link to setting aside land as protected. But even here the long-term gains could be substantial. The number of companies issuing sustainability reports has increased exponentially over the past decade. If this corporate interest in sustainability can be nudged toward accounting for land conversion in addition to the more typical focus on greenhouse gasses, then ultimately habitat degradation could be reduced (Molnar & Kubiszewski 2012). Large-scale restoration projects could also emerge as potentially worthy corporate investments, as is the case of hardwood forests and ozone mitigation for a Dow facility in Freeport, Texas (see Figure 2 in TNC & Dow 2012).

We think that more can be accomplished for conservation by working with, rather than against, resource users. This is not a certainty, but it is a hypothesis that merits testing. We are aware that working with corporations poses some risk to our organization's reputation, but we believe we cannot afford to be timid when the threats to nature are so grave.

Another emphasis of new conservation involves paying attention to the value of conservation to people and making sure people benefit from conservation. In this vein, TNC is establishing links between conservation and the well-being of people who live in cities. For example, we are establishing water funds around the world whereby city dwellers support upstream conservation to protect their water supplies (Goldman-Benner et al. 2012). The Nature Conservancy has also initiated a program called LEAF to engage urban high school students at our field sites, where they learn science, conservation, and useful life skills (http://www.nature.org/aboutus/careers/leaf/index.htm). Soule takes issue with the fact we consider "relevance to people, including city dwellers" an important objective. But the majority of the world's people are urbanites. If conservation is not relevant to city dwellers, what hope of success do we have? Relevance to urbanites is not a sellout or a compromise of principles. Relevance is a strategy for success.

The Nature Conservancy and my coauthors on various papers fully recognize that the so-called new conservation entails some risks that warrant attention. The primary risks include approaches that treat protected areas as something other than walled-off fortresses may be less effective at biodiversity conservation; working with corporations and resource extractors may increase environmental degradation relative to hard-line efforts to halt development altogether; and emphasizing nature for the self-interest of people may weaken support for conservation. We are tracking outcomes to determine whether these risks turn into reality.

The following examples speak to 2 of these concerns. First, promoting conservation for the benefit of people increases support for conservation. For example in the 2012 elections, TNC helped 11 out of 13 state ballots for public conservation funding pass by using a nature-for-people message. These initiatives yielded over $600 million of state funding designated for conservation activities and included some amazing turnarounds in public attitudes. For example, in November 2011, 75% of the Alabama electorate was against using state fees to pay for Alabama wild lands. But within 1 year, messages of "we rely on clean water" and "if we trash our outdoors we hurt our kids" totally reversed public opinion so that in November 2012 over 75% voted for funding conservation. This is not an isolated example. Focus groups and randomized stratified surveys show with

tremendous consistency that asking the public to support conservation because of nature's benefits to people can broaden conservation's appeal (Marvier & Wong 2012). Second, protected areas can suffer more degradation and deforestation than community-based management areas or even forest concessions. A meta-analysis of case studies involving 40 protected areas and 33 community-managed forests reveals that community-managed forests across the tropics experienced lower and less variable annual deforestation rates than protected forests (Porter-Bolland et al. 2012).

That the new conservation may facilitate habitat loss by working with rather than against resource extractors is the one risk for which evidence is lacking concerning outcomes. It is worth noting that several global corporations have explicit environmental goals such as "net positive gain in biodiversity" (Rio Tinto) and zero negative impacts for Puma (the athletic apparel company). These companies undertake serious annual reporting on their ability to meet these management objectives. In general, TNC has turned to a working-with strategy because we believe the hard-line alternative of completely shutting down development has little chance of success and has the downside of interfering with economic development in regions where people need the development. This is not to say that the flood gates should be held wide open for all manner of development; rather, it reflects a recognition that some development is occurring and can be directed toward places and actions that are more compatible with conservation goals.

The mission at TNC is to save the lands and waters on which all life depends. The organization does everything it can to achieve this goal. In so doing, it continues to successfully execute land protection projects of the type Michael Soule would support. The Nature Conservancy is enormously grateful to its supporters and partners who make these accomplishments possible. But here is the crux: TNC thinks it needs to do even more. Threats to the natural world are only intensifying. Additional supporters and partners are needed to take TNC's work to the next level. That's why TNC advocates for a broad diversity of approaches.

I would prefer a world in which everyone believes that saving nature for nature's sake is simply the right thing to do and a moral imperative. But that is not the world we live in. However, if TNC can help more people understand why protecting nature is in their best interest, needed breakthroughs may be achieved before it's too late.

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