Ecological outreach to faith-based communities

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Last winter, I spoke at a synagogue in Olympia, Washington. The congregants had come on a January night to hear my sermon on the topic of trees and spirituality. As an academic ecologist and conservationist, this event was part of my exploration of ways to discuss the critical connections between humans and nature in settings well outside of academia (Nadkarni 2004). One member of the congregation was elderly and blind, and dressed in disheveled clothes. It appeared that everything he owned was resting damply in a shopping bag beside him. He listened as I explained the complexity and importance of trees, drawing upon quotations from various religious texts. At the end of the discussion, the homeless man stood up, his unseeing eyes directed upward. "When it is raining", he said, "and I stand under a tree, I stay drier and warmer than when I am out in the open. Trees protect me." He paused. "Sort of like God."

No conservationist could have made a stronger statement. Although some scientists consider religion to fall outside of the way they understand the world, I thought that if I could communicate how people of different faiths describe trees in their own holy texts and in their own places of worship, I might inspire followers to learn more about how to be better stewards of forest ecosystems. I would also learn about trees from their perspective. The approach I used in the synagogue that night – and which I describe here – is an example of how a scientist or conservationist can connect with different communities in non-academic or overlooked contexts. This is one example of scientist-based outreach I have assembled in the "Research Ambassador Program", in which academics are trained to communicate their research by linking it with the interests or professions of non-traditional public audiences (Nadkarni 2006).

Throughout human history, many belief systems and formal religions have been rooted in the concept of Earth's cycles and their stewardship. More recently, historians of science have explored how explanations of life in scientific and religious terms are closely intertwined (Davis 1984; Brooke 1991). My approach puts these general ideas into direct, personal practice, with ecologists themselves presenting "sermons" (defined as "discourses delivered as part of a religious service") to faith-based communities on the connections between their own study organism or ecosystem, spirituality, and religion. By placing discussions about how crucial nature is to human well-being in settings outside the university, both the scientist and the non-scientist may be more open to exchanging ideas (Stilgoe *et al.* 2007).

I developed a phased protocol for this endeavor. Before taking the pulpit, I acquainted myself with the tone and practices of each group by attending their services as a guest. After several months of simply listening and observing services of different faiths, I offered clergy a sermon on trees and spirituality, not as a scholar of religious studies, nor as a particularly religious person myself, but rather as a scientist interested in understanding trees with my intellect, and as a human being who cares about forests. The 22 congregations I have addressed since 2003 ranged from fundamentalist to progressive, and included Episcopalian, Baptist, Unitarian, Zen Buddhist, Jewish (Conservative and Reform), Catholic, Methodist, and interfaith organizations.

My source materials came from web-downloading and searching the Bible, the Talmud, the Qu'ran, and Hindu and Buddhist scriptures for quotations containing the words "tree" and "forest". I categorized these by the way in which trees were used or viewed (eg practical use, adornment for temples, analogies to a deity, location markers). I integrated results into three topics for my talks: (1) trees as fulfillers of the needs of followers, (2) how trees connect humans to the divine, and (3) ways in which humans incorporate trees into spiritual practices. Congregants listened attentively, participated in discussions after the sermon, suggested texts and hymns that I had overlooked, and passed me on to other places of worship. Some continued conversations with me by telephone and e-mail. I drew upon my scientific knowledge and sources to provide depth in my responses, which included scientific topics such as effects of climate change on trees, dynamics of insect outbreaks, and water relations of plants in the Biblical desert ecosystems, subjects that extend beyond spirituality and wildland preservation.

The content of my sermons concerned trees, but nearly any aspect of ecology can serve as a springboard for scientists/conservationists. A good place to start is to download a version of the Bible (eg www.biblegateway.com) and search for words that best characterize your area of study. For example, a geologist's search using the words "mountain" and "rock" produces 439 references in the Bible, many of which are associated with places of sanctuary. A hydrologist will find 135 references for "river", associated with fertility, geographical borders, and symbols of warning. I offer five other suggestions to "spread the gospel" of ecology and conservation:

(1) To begin, enlist a member of a church or temple (perhaps yourself) who understands what you are doing and can introduce you to a church leader.
(2) Keep overly complex terminology or jargon to a minimum. However, bring handouts that provide greater depth about your science (preferably with websites that link to scientific information), and mention

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these in your sermon.

(3) Recognize your own limitations and welcome alternative interpretations. When you address a faith-based community in their place of worship, you are only one of the experts in this setting.

(4) Treat the texts, objects, clothing, and settings you encounter with respect. When you ascend a church pulpit, show that you honor this as a sacrosanct place, steeped in the hallowed and the historical. Before speaking at a Buddhist temple, learn how to put on a Zen robe, and rehearse how to sit properly in zazen. Just as scientists expect visitors to treat laboratory equipment with care, so congregants expect a visitor to treat their relics with respect.

(5) Present information from different faiths to reinforce the universality of the spiritual importance of trees (or the biological focus of your choosing). For example, when I speak to Protestants, in addition to Bible references, I report that Jews celebrate the holiday of *Tu B'Shvat*, the New Year for the Trees, that Buddha found enlightenment under the Bo tree (*Ficus religiosa*), and that sacred groves in India, established centuries ago by Hindus who believed them to be homes of their deities, now preserve stands of rare trees.

This approach is one example of a growing movement among ecologists and religious groups to improve humans' relationship with nature (Haught 1995; Ferngue 2002). Hundreds of projects involve "the greening of religion", with Harvard University's *Forum on religion and ecology* (Tucker and Grim 2007) at the academic vanguard of this dialogue. As environmental issues grow more urgent, an unexpected but effective collaboration between environmentalists and conservative evangelical Christians has occurred. In 2006, 86 evangelical leaders signed the Evangelical Climate Initiative, a statement that calls upon believers to urge federal legislation to reduce CO_2 emissions through a cap-and-trade market system. Signatories of the statement included the presidents of 39 evangelical colleges and pastors of mega-churches. They preach a gospel of "creation care", wherein God gives people dominion over the Earth, and with it an obligation to carry out good stewardship of the land, air, and water.

This aligns evangelicals with many grassroots environmental groups: cleaning streams, planting trees, and advocating against over-consumption. In his book, *The creation* (2006), eminent biologist EO Wilson articulates that humans must preserve the biodiversity of Earth, whether its creation is explained by the Big Bang theory over millennia or by the hand of God over 7 days. Wilson's nationwide tour in 2006 attracted tremendous positive interest from ecologists, those of religious faith, and the media.

Thus, ecologists and conservationists at all levels can work in places of worship to connect humans, nature, science, and society. As a full-time academic, my time for outreach is limited, but I have found that using these religious channels provides an efficient and engaging conduit for exchange of information. With minimal effort and almost no expense, this church-by-synagogue-by-temple approach can be a useful way to fulfill our responsibility to communicate with non-scientists – and, incidentally, meet the Broader Impacts requirements for grants from the National Science Foundation. By engaging with people who have different points of view and experiences, we can also gain different perspectives on our own interests. I urge you to step out and step up – not just to the classroom podium, but to the pulpit.

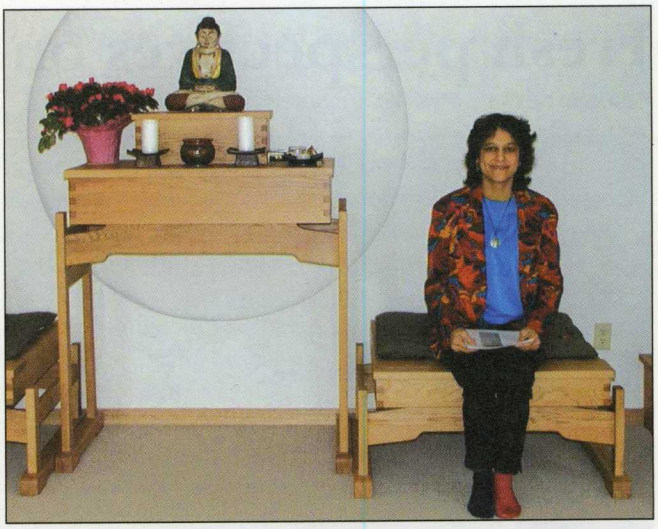

Figure 1. *The author speaks to congregants at the Olympia Zen Center in Washington State.*

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