



Letters

William O. McLarney; Stephen F. Siebert; Truman P. Young

Conservation Biology, Vol. 7, No. 4 (Dec., 1993), 748-751.

Stable URL:

<http://links.jstor.org/sici?sici=0888-8892%28199312%297%3A4%3C748%3AL%3E2.0.CO%3B2-4>

Conservation Biology is currently published by Blackwell Science, Inc..

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/about/terms.html>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/journals/blacksci-inc.html>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is an independent not-for-profit organization dedicated to creating and preserving a digital archive of scholarly journals. For more information regarding JSTOR, please contact support@jstor.org.

Indigenous Peoples and Conservation

I would like to contribute to the ongoing discussion in *Conservation Biology*, and the environment/development community in general, about the relation of indigenous peoples to conservation of biodiversity. Although I had the good fortune to become quite familiar with one Native American community in my youth, and later to work closely with Native Americans in Central America, I am in no way an authority on or advocate for any indigenous culture. However, there may be some points that the experts and advocates, focusing closely on indigenous cultures, tend to slight.

It is usually not particularly relevant to conservation just how sustainable or biologically benign a given traditional culture may have been. Cultures are dynamic, especially so in today's "shrunk" world. What matters is how well a given culture, as it has evolved to the present, performs in terms of sustainability and conservation of biodiversity.

I have read and heard about cultures that are doing an excellent job of coexisting with their native ecosystems today. In the case of the indigenous culture with which I am most familiar, the situation is more complex and less encouraging. Within that culture, I am acquainted with individuals and small groups who have made elegant syntheses of their own traditions and modern concepts of conservation and who live in ways that seem to me, as a conservation biologist, are exemplary. I also know individuals as ruthless and relentless in their destruction of the environment as any "Western" exploiter.

Without knowing anything about the relative proportions of these two groups, or the majority whose attitudes and actions are intermediate, it is possible to crudely evaluate the culture's overall performance in terms of conservation. Compared to their nonindigenous neighbors, they have probably done a little better at conserving intact, connected forest stands. This is partly a consequence of cultural tradition but also has much to do with lack of access to technology and markets.

On the other hand, many Native American children growing up on remote reservations have never seen a monkey. Monkeys are commonplace in most nonindigenous areas where any amount of forest remains. The reasons are cultural. In the Indian reserves, most of the monkeys have been killed for the pot, sometimes over the protests of individuals whose arguments arise not from tradition but from exposure to concepts of conservation biology. Such individuals also exist in the nonindigenous communities, but they are not the conservation heroes of this story; monkeys persist because of an unspoken taboo against eating monkeys among most whites and blacks.

I was once criticized by a Native American leader for promoting agroforestry, an "alien" practice in a culture where shifting cultivation and game hunting were traditional ways of providing food. Yet the local extinction of game animals and increasing deforestation in his community were to a large degree consequences of his people's cultural acceptance of "alien" medical technologies, leading to unprecedented population growth.

My point is that most cultural traits are good or bad only in context, and context changes. In the

context of today's densely populated, badly polluted, and highly technological world, there is a need for conscious concern for preservation of biodiversity and intact ecosystems. Lest we conservation biologists, Westerners in our great majority, be too proud of this creation, let us remember that Western culture also created the need for conscious conservation by developing powerful technologies without powerful constraints. But neither should we deny that it is a need.

If we are convinced that there is a need for conscious conservation, then it follows that we should attempt to persuade others of that view. We do so every day within our own culture. Why should we be ashamed of our environmental advocacy before other cultures?

The conservation of ecosystems and planetary viability is everybody's business. Conservation of cultures is not. Let each cultural group decide what they wish to retain from their traditions and, assuming they can be persuaded of the environmental cause, how best to fit it to their evolving culture.

In instances where setting aside of lands for indigenous people is presented for the support of the environmental community, we need not concern ourselves with whether a given traditional culture tended to conserve biodiversity, how that culture may be evolving, or even whether their representatives are sincerely interested in conservation. We can condition our support on specific conservation commitments. Properly done, this need not impugn the integrity of the indigenous group any more than the signing of a contract between two business people who trust each other diminishes that trust.

The world's indigenous people long ago realized that the "West" has control of many things they need or want. At least some part of the West is now beginning to realize that indigenous peoples control things we need—not just "natural resources" in the sense of raw materials, but less tangible goods such as cultural knowledge and a goodly share of the Earth's biodiversity. If we can desist from romanticizing other cultures and begin to negotiate with them as equals, on the basis of mutual needs, we may assist not only in the conservation of ecosystems on lands controlled by indigenous peoples, but also in the preservation and positive evolution of indigenous cultures.

William O. McLarney
ANAI, Inc.
1176 Bryson City Road
Franklin, NC 28734, U.S.A.

Rattan and Extractive Reserves

In the March 1993 issue of *Conservation Biology*, Salafsky et al. present a valuable framework of key ecological, socioeconomic, and political factors in the design and implementation of extractive reserves. While the conceptual framework they develop should prove useful in a variety of locations, their comparative analysis fails to include rattan, the most important nontimber forest product in their West Kalimantan case study.

The authors observe (p. 41) that rattan products accounted for 80–90% of the total value of nontimber forest products exported from West Kalimantan in the early 1980s; a similar situation probably prevails in many other areas of Indonesia. However, their subsequent analysis ignores rattan and instead focuses on products derived from trees (such as damar, gaharu, medang, and illipe nuts). Thus, they conclude that "In Kalimantan . . . prevailing ecological and socioeconomic conditions make it unlikely that extractive re-

serves will play a major part in saving the rain forest." Had the authors included rattan, they might have reached a different conclusion.

Evaluated by the same criteria developed by Salafsky et al., rattan exhibit a number of ecological and socioeconomic characteristics that are highly desirable in extractive reserve management.

(1) The density of exploited species is high for some economically important rattans, notwithstanding the fact that low densities of individual tree taxa prevail. For example, an average of 284 *Calamus exilis* plants and 191 harvestable canes were observed per hectare in a lower montane forest near Kerinci, Sumatra, while 38 *Calamus zollingeri* plants and 86 harvestable canes were observed per hectare in a lowland forest near Dumoga, Sulawesi (Siebert 1993).

(2) The temporal availability of rattan does not vary seasonally; canes can be harvested at any time of the year. This is advantageous as it enables collectors to gather canes when labor demands in rainfed agriculture, irrigated rice production, and other household livelihood activities are low.

(3) Product and ecosystem sustainability are at least potentially high with some rattan species. Both *C. exilis* and *C. zollingeri* are clustering species (they produce multiple canes) that are capable of vegetative propagation (canes sprout following harvest). In fact, 30 months after harvesting, the same *C. exilis* plants had produced an average of 3.17 new harvestable canes per plant (Siebert, unpublished data). Whether this level of harvesting intensity can be sustained over the long term remains to be determined, but it does suggest the potential for sustained-yield management.

(4) Product demand for rattan canes is strong and shows no evidence of declining. In fact, strong international demand for rattan has led to excessive exploitation and

near extinction for several species (Dransfield 1987).

(5) Pressure for alternative land uses, particularly the cultivation of export cash crops, certainly constrains the development of extractive reserves for rattan and other nontimber forest products. However, a majority of rattan collectors and artisans in at least one village adjacent to Kerinci-Seblat National Park in Sumatra expressed a preference for continuing rattan collecting and handicraft manufacturing rather than converting forests to cinnamon and coffee farms, even though they recognized that such farms are more profitable (Siebert 1989).

(6) Rattan and other nontimber forest product harvesting is often pursued by the poorest of the poor—those who lack access to economic resources such as irrigated rice lands (Siebert & Belsky 1985).

As Salafsky et al. note, political factors at the state level will be important in determining the viability of extractive reserves. In this regard there is little reason to be optimistic about sustainable harvesting of rattan in Indonesia—whether in extractive reserves or elsewhere. Rattan, like timber, has been harvested at unsustainable rates, with enormous profits going to powerful elites.

As the supplies of timber and rattan dwindle, it is interesting to ponder what will happen next. Salafsky et al. observe (p. 47) that "timber production maybe the most profitable use of forest lands, especially in the face of high discount rates and logging incentives." If, however, we seek to implement sustainable natural forest management practices, it may be necessary to simultaneously manage timber and nontimber resources for natural forests to compete economically with agricultural alternatives or timber mining.

As Salafsky, et al. correctly note (p. 50) "extractive reserves are not the panacea some people would have them be." On the other hand, sustained-yield harvesting of rattan

is a potentially valuable component in overall land-use planning, extractive reserve management, and natural forest management throughout much of Southeast Asia.

Stephen F. Siebert

School of Forestry
University of Montana
Missoula, MT 59812, U.S.A.

Literature Cited

Dransfield, J. 1987. The conservation status of rattans in 1987: A cause for great concern. Paper presented at the International Rattan Seminar, November 12–14, 1987, Chiang Mai, Thailand.

Salafsky, N., B. L. Dugelby, J. W. Terborgh. 1993. Can extractive reserves save the rain forest? An ecological and socioeconomic comparison of nontimber forest product extraction systems in Peten, Guatemala, and West Kalimantan, Indonesia. *Conservation Biology* 7:39–52.

Siebert, S. F. 1989. The dilemma of a dwindling resource: Rattan in Kerinci, Sumatra. *Principes* 33:79–87.

Siebert, S. F. 1993. The abundance and site preferences of rattan (*Calamus exilis* and *Calamus zollingeri*) in two Indonesian national Parks. *Forest Ecology and Management* 59:105–113.

Siebert, S. F., and J. M. Belsky. 1985. Forest-product trade in a lowland Filipino village. *Economic Botany* 39:522–533.

Development and Conservation: More on *Caring*

Caring for the Earth (International Union for the Conservation of Nature and Natural Resources/United Nations Environmental Program/World Wildlife Fund 1991) is a curious attempt to equate the goals of conservation and “sustainable” development. The result is a document that reads more like a development manifesto written with conservation in mind, rather than the other way around. While it is true the conservation of biodiversity requires sustainable economies, it is not true that sustainable economies require the conservation of biodiversity. In

other words, sustainable living is a necessary but not sufficient prerequisite for conservation. *Caring for the Earth* does include the conservation of biodiversity as one of the defining characteristics of “sustainability,” but without convincing evidence. Robinson (1993) makes the case that there is a failure to fully recognize the fundamental conflict between economic use of ecosystems and their conservation. Ludwig et al. (1993) point out that sustainability itself lacks a sound scientific and historical basis. I would like to suggest that our understanding of the relationship between conservation and development is hindered by two additional misconceptions.

First, it is often assumed that the biggest immediate threat to ecosystem conservation—habitat loss—is positively related to short-term economic development. However, much of the land currently being converted to agriculture in the Third World produces farms for the desperately poor that provide only subsistence, and often not even that (Winiger et al. 1990; Gullison & Lossos 1993). The same is true for the degradation of range lands (Prins 1992). These activities do not assist in national development, which today is usually based on urban industries, and contribute only minimally to feeding the nation. (I do not mean to imply that urbanization and industrial economic development are environmentally sound, but rather that the current extinction spasm in the Third World is being driven mostly by other forces.) The solution to large-scale habitat loss is not in finding additional economic incentives for the rural poor to continue to live off the land, but in generating more attractive alternatives elsewhere (Terborgh 1989).

In the United States, land has been going out of production for decades (Williams 1989) as people find more rewarding employment in non-agricultural work. We know that the United States does not require nearly as much land under the

plow (or the cow) as we had 100 years ago (we probably did not require it then either). Need the Third World suffer large-scale habitat destruction today similar to ours in the Nineteenth Century? Only if we do not offer better opportunities for the poor.

Of course, habitat is lost not only to small-scale farmers, but also to large-scale interests such as ranchers in the Amazon and lumbering industries in Asia. But again, there is little evidence that these activities contribute appreciably to national economies (Gullison & Lossos 1993), even if they produce great wealth for particular individuals. And already in the Amazon, large areas of ranch land are reverting to forest for lack of sufficient economic return (R. Bierregaard, personal communication). The question is not how to maximize economic return from each habitat, but which habitats are unnecessary for national development and can be set aside, even if they could be profitably or even sustainably exploited. This question can only be asked, of course, if people value habitats other than for economic return.

This brings me to the second point. Arguments for conservation through sustainable development often imply that poor people in general, and in the Third World especially, are not swayed by non-economic arguments. While it is likely that hungrier people put higher value on extractive use of habitat, it is not true that economic advantage is the only criterion of people with living standards far lower than ours (Newmark et al. 1993). Based on my own experience, the environmental ethic in East Africa, for example, is as high as in many parts of the industrial world. It is inappropriate, and poor strategy, to suggest that the people of the Third World are less able to have altruistic attitudes toward their environment, even if we excuse it by pointing to their poverty. The Wildlife Clubs of Kenya and similar

programs in Costa Rica have probably done more through education to ensure the future of biodiversity in their countries than all of the "wildlife must pay its way" initiatives of recent years. While environmental ethics are most prominent among the educated (often urban) class, these are the very people making the decisions that will have the greatest impact on long-term conservation.

I do not deny that profiting from conservation can be a powerful force for good, as is the case of Kenya's tourism industry. I also believe that reconciling conservation and development on multi-use lands through mutual compromise is an attainable, worthwhile goal, and I am actively working to help achieve this goal in Kenya. A consideration of sustainable economics alone, however, will lead to the inevitable extinction spasm we all are working to prevent. Non-economic values of biodiversity must be, and currently are being, invoked with success in

both developed and developing countries.

The more the Third World finds a way out of its poverty (with our help?), the more that the inherent aesthetic value of the natural world will outweigh the wasteful exploitation of its resources. But the way out of poverty need not be paved with material from biodiversity's demise.

Truman P. Young

Louis Calder Center
Fordham University, Drawer K
Armonk, NY 10504, U.S.A.

Literature Cited

Gullison, R. E., and E. C. Lossos. 1993. The role of foreign debt in deforestation in Latin America. *Conservation Biology* 7:140-147.

International Union for the Conservation of Nature and Natural Resources/United Nations EP/World Wildlife Fund. 1991. *Caring for the earth: A strategy for sustainable living*. Gland, Switzerland.

Ludwig, D., R. Hilborn, and C. Walters. 1993. Uncertainty, resource exploita-

tion, and conservation: Lessons from history. *Science* 260:17-36.

Newmark, W. D., N. L. Leonard, H. I. Sariiko, and D. M. Gamassa. 1993. Conservation attitudes of local people living adjacent to five protected areas in Tanzania. *Biological Conservation* 63:177-183.

Prins, H. H. T. 1992. The pastoral road to extinction: Competition between wildlife and traditional pastoralism in East Africa. *Environmental Conservation* 19:117-123.

Robinson, J. G. 1993. The limits of caring: Sustainable living and the loss of biodiversity. *Conservation Biology* 7:20-28.

Terborgh, J. 1989. *Where have all the birds gone?* Princeton University Press, Princeton, New Jersey.

Williams, M. 1989. *Americans and their forests*. Cambridge University Press, Cambridge, England.

Winiger, M., U. Wiesman, and J. R. Rehker, eds. 1990. *Mount Kenya area: Differentiation and dynamics of a tropical mountain ecosystem*. African Studies Series A8. Geographica Bernensia. Berne, Switzerland.

