



Genes, Genius, And Genocide

BY JASON CLAY



Modern technology's relentless consumption of the Developing World is producing one interesting side effect: a belated and growing respect for native cultures. Hollywood makes Indians the good guys in Dances With Wolves. Archaeological officialdom evolves beyond grave-robbers with Ph.D.s, and museums actually begin to give bones and artifacts back to the tribes they were taken from. But what about the living, what about tribal cultures that understand and preserve entire ecosystems by virtue of having learned how to live in them sustainably? Do they have rights to the useful things found in their world once those things leave it?

Jason Clay argues that they should. He is the marketing director of Cultural Survival Enterprises, an attempt to create an ethical middleman for marketing sustainably harvested nontimber rainforest products to First World consumers. This article ran as an editorial in Cultural Survival Quarterly. For information or a subscription, contact Cultural Survival, Inc., 53A Church Street, Cambridge, MA 02138; 617/495-2562.

—Richard Nilsen

THE LAST GREAT RESOURCE RUSH HAS BEGUN. It's not land, minerals, timber, or water that are at stake. This time, it's genes, and how to use them. The most genetically diverse areas of the world are inhabited by indigenous peoples. Their areas, and their knowledge, are once again being mined — for information. Unless indigenous rights to this material and knowledge are respected, this gene rush will leave indigenous people in the same hole as the other resource rushes.

The genetic materials in question make up the building blocks of life. The advent of genetic engineering has intensified the search for genes that can be used to make existing food crops hardier or more nutritious, and for new, more advanced foods and medicines.

Indigenous residents hold the keys to these remote, biologically diverse areas. Their knowledge is the genius that unlocks the genes, often shortcutting decades of costly research and experimentation.

Genetic diversity and local knowledge about its useful properties will pave the way for all humans to adapt to changing circumstances. This is why maintaining the world's genetic diversity and recognizing those who are most familiar with interpreting it are so important. However, this gene rush, merely the latest in a series of assaults on the Earth's resources, will not help biological diversity.

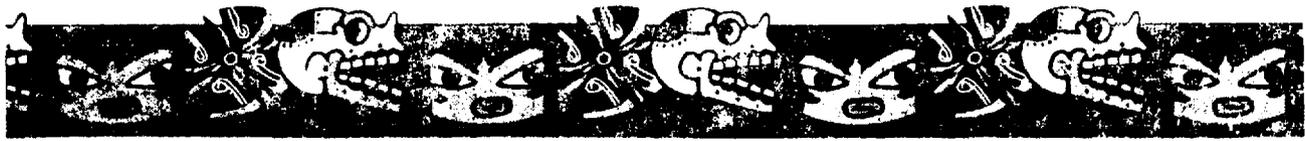
The destruction of the world's biological diversity is related as much, if not more, to poverty as it is to greed. The current rush to discover genetic resources shows no signs of alleviating poverty. The fundamental question is, Who rightfully owns the wide variety of genetic materials currently in demand? Ownership and wealth go hand in hand: if you own something, you can sell it to generate income.

Ownership is an extremely complicated issue, however. Rights to genetic material should depend, to some extent at least, on having knowledge of, maintaining, and manipulating it. Here are a few examples.

If an indigenous group has created a compound of two or more plants that produces known and predictable pharmacological effects, then that group should have as many rights to its discovery — even though it may have taken generations to perfect — as would any scientist or research team in any university or corporate lab.

Likewise, if, over the centuries, a group has used a plant for a specific purpose and has selected it for specific properties, thereby changing the plant from its wild state through such use, then that group should have rights to the "new" plant.

These rights — the more obvious rights that indigenous people should have — are not respected, much less guaranteed, anywhere in the world today. Missionaries working with an indigenous group in western Brazil are reported to have recently taken a sample of an arrow poison compound made by the group and given it to botanists who were conducting inventories of possibly useful plants. The botanists then passed a sample of the arrow poison on to a large, US-based chemical company, the supporter of their research. The company reportedly took out a patent on the poison's muscle-relaxant properties — precisely the properties that made the poison effective for use in hunting. The indigenous group did not receive a cent of royalties, and its rights to the material were not acknowledged in any way. While this "transfer" was taking place, half of the indigenous group's land was seized by the Brazilian government. Patenting the group's knowledge neither benefited the group nor protected the region's biological diversity.



There are other, even grayer areas where indigenous people should arguably have rights to their resources. Under British law, for example, one can make the case that people have rights to materials that they have allowed to flourish, even if they have never utilized them.

By extension, then, indigenous people, in maintaining the world's rainforests and other fragile ecosystems, have rights to any resources discovered there. As the logic of the argument goes, if the groups had not served as guardians of the resource base, it would have disappeared long ago. In this light it would be difficult for any Third World state to stake a claim to the rights of genetic resources existing within its borders. Most of these states (e.g., Brazil, Ethiopia, Malaysia) have done everything they can to develop the resources to death.

This is not to deny other parties' legitimate claims or rights to genetic knowledge. Scientists, corporations, and states alike can incur considerable costs in bringing new materials onto the market. To date, however, indigenous people's rights to either the basic raw materials or to the knowledge that often unlocks their use has been consistently denied. This imbalance must change.

The 1990s have already seen the rise of nationalism and the assertion of local, group control over resources. Genetic material and knowledge are certain to become part of these resources. If we are serious about our desire to protect the world's most fragile ecosystems and most endangered peoples, then we must ensure that these groups be allowed — both legally and economically — to continue to protect fragile areas, as they have done for generations. ☛

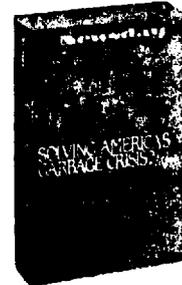
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Rush to Burn

Garbage piling up into mountains as landfills close. Landfills leaking toxins into the groundwater. Oceans burping disgusting glop onto beaches. This magazine usually refrains from reviewing cries of outrage and despair well served elsewhere. But the garbage problem has proven to be uniquely intractable to easy solutions. Some people — including certain environmentalists — think one answer is to burn the stuff, which can have the added advantage of replacing fossil fuel to make steam for the turbines of electrical generating plants. That strategy is a typical example of a "technological fix" for problems rooted in technology. But is burning a good idea? For one thing, it actually gives value to garbage — the more the better.

What to do? The idealistic "make less garbage" and recycling have so far not done much good. The only long-term answer: mean major changes across our entire society, and others around the world. It may well be that the garbage problem will spur the first major battle between Earth-trashers and Earth-stewards — metaphorically the first unhidden skirmish of world war III. This multifaceted book uses a wonderful mix of real-life examples to show that we are at last forced to more rigorous standards of honesty, regardless of political expediency. Strong stuff. —J. Baldwin

- Jorie MacKinnon offers a prophetic warning. "Without question, anything that you just don't want to know about is going to come back and get you."
- When Oyster Bay's landfill closed in 1986, it shipped its garbage 160 miles to the Scranton, Pennsylvania, area. A year later, it was forced to go as far as the woodlands of southern Michigan, 635 miles away, and the bluegrass hills of western Kentucky, an 850-mile odyssey, to find landfills that would take Long Island trash.
- To cut costs at those distances, East Coast haulers are shipping out garbage on interstate trucks that come from the Midwest carrying consumer products, including foodstuffs, and are looking for a load for the return trip.
- There are no laws to prevent the hauling of garbage in refrigerated trucks or other rigs that haul food products. Several health experts warned that, even with steam-cleaning of the trailers, this practice might spread disease and should be stopped, at least until sanitary tests can be carried out.
- Consultants have become such a big part of the world of garbage that, when western Suffolk's Multi-Town Solid Waste Management Authority closed down in 1983 without building an incinerator, its books revealed that it had spent \$8 million for little more than advice and public relations.



Rush to Burn

(Solving America's Garbage Crisis?)
Newsday staff, 1989; 269 pp.

\$14.95 (\$17.95 postpaid) from Island Press, Box 7, Covelo, CA 95428; 800/828-1302 (or Whole Earth Access)

These are only the most recent demonstrations of a fact of municipal life: Private enterprise and public works make a profitable combination — especially when politics plays a role. A *Newsday* computer tabulation found that most of the major commercial contributors to the Nassau County Republican Party over the last few years have been resource recovery contractors, ranging from engineers to electricians.

Because incineration has become their business, resource recovery engineers tend to inform and advise their clients in ways that promote the industry.

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