"En que contribuye BioAlfa a la conservación?!" What does BioAlfa contribute to conservation? By D.H.Janzen and W.Hallwachs, 12nov19.

BioAlfa: "know the biodiversity of thy country". This means bioliteracy for everyone. It is the only chance for true conservation into perpetuity for large tropical wildlands.

For real and permanent conservation to occur, the population that owns the terrain and its wild biodiversity has to want those biodiverse wild areas to survive. The only way that will happen is through "everybody" knowing what it is – governments, academia, commerce, legislation, private citizens, NGOs, and all other ways people are organized. Society has to know i) what it is, ii) what it does, iii) where it is, v) how to find it, and vi) do it publicly, in order to build some portions of it into our lives. It is directly analogous to literacy. We all maintain personally and institutionally taught literacy, because it is useful to all at some time. Bioliteracy is knowing and non-damagingly use of biodiversity, its ecosystems, and its individual actions.

To know what it is, to perceive its possible or real interactions with each of us, we need to know while it goes about its life in the conserved wildland. And put all of that into the public domain, like literacy, available to everyone at any age, anywhere, anytime, at no cost then – a public service, just as is a dictionary, encyclopedia and library. Every species is a book, nearly all unread at present. That is what BioAlfa offers the conservation of the wild library.

Ten years ago we lacked the technology and the protocols to do this for a whole country, and its 5 million people and 1 million multicellular species. Today, for \$100 m spread over ten years, Costa Rica can do it if the cash is available to match Costa Rica's sweat equity, plus surgically directed international collaborations. DNA barcode Costa Rica in 10 years.

By Costa Rica itself coming to know its own biodiversity -- discovering and documenting it -rather than by expeditionary self-interested groups from international academia and the conservation industry, many sectors of Costa Rican society will achieve a very healthy dose of bioliteracy – high school and university students, park guards, medical workers, transportation workers, ecotourism guides, farmers, pest control workers, fishers, loggers, amateur enthusiasts, and many as yet unrealized. And then, like learning to read, the next generation will construct on that technology and discovery process, just as you learned about libraries, the internet, documents, and all the other things we do with literacy. Note that you started very simple, and then you constructed outward according to your needs. Some of us write poetry and novels, some do legal documents and scientific publications, some write and read manuals, and we all write home to family.

ACG has been derived from a classical legislated guns-and-gold badge national park. Today it is a 35-year-old working model of the new BioAlfa way of thinking about conservation of 169,000 ha of tropical very diverse forest by its local, national and international integration. It works. It works so well that even its government staff was able to deter the government, its own strong-arm boss, from beginning to destroy it several years ago. Integration underlines a key trait of BioAlfa – it combines government stolid bureaucracy with the entrepreneurial spirt of persons and companies. This proposal to CRXS is an example as well. BioAlfa is a tentative first pass at extending the proven ACG conservation philosophy to its own entire country.

To repeat, the BioAlfa process is an attempt to spread, by example, South-South, a new kind of conservation. It is a kind that has a serious chance of surviving indefinitely because it facilitates the rendering of wild biodiversity and its ecosystems into being wanted by many sectors of its surrounding biodiversity, each by different persons and groups for their own agendas – just as is the case with why we maintain and legalize hospitals, schools, universities, companies, highways, internets/web sites, medical insurance, football matches, dances, airports, laws, libraries, religions, elections, and children.

I do not dwell here on the thousands of ways we already, nearly blindly and bioilliterately, incorporate the realities of wild biodiversity into our lives. For millions of years, our genome has focused on removing wild biodiversity to consume it and to make room for more of us and our domestic extensions of our genomes. We have been burning the world's natural libraries and treating the world as our city dump for CO2, plastics and other industrial chemicals. However, simultaneously, we have selected important biobits for someone here and there, usually by serendipity. But the inheritors of those pieces in general do not honor, protect, cherish, and give existence to them in their wild state. Who cares about the fungi who gave us penicillin? Who invests in the survival of the wild ancestors of our livestock and coffee, and their ecosystems? Who cares for mahogany trees except to kill them when they are older? Costa Rica earns at least \$3.5 billion annually from its friendly greenness, but invests back less than \$150 million in managing and understanding it; but then again how can you have a viable business plan if you are ignorant of the properties of the items in your green warehouse and library? Yes, a bank does need guards and transactional security, but if that is all it has, how long will that bank be viable and desired? BioAlfa aims to reverse a serious portion of national bioilliteracy, for as many of the sufficiently large relatively intact tropical ecosystems as are willing to take it on. Costa Rica's 25% of its land mass will be a good start. The "the word" needs to spread south-south by example rather than by preaching.

A different style of conservation into perpetuity requires minor to major shifts in attitudes by various social sectors – perhaps most dramatically by the conservation industry and academia, both of which have well-entrenched traditional reactions and interactions with agendas of guns-gold-badges, laws, museums and research. On the other hand, many tropical conserved wildlands are quite devoid of any beneficial social interaction other than to hire some protection, are therefore somewhat of a clean slate for willing bioliterate writers. The largest enemy will of course be the very human tendency for this or that person or group to decide to commandeer the wild area for a particular agenda.

In sum, Bioalfa offers a new way of viewing conservation of the wild systems that molded us evolutionarily into what we are. It can simultaneously render the "wild" into being yet another kind of highly sustainable crop for humans, one that almost entirely takes care of itself if gardened cautiously. Unfortunately, we are now not at all gardening cautiously. Perhaps would we could be friendly to the survivors by welcoming them to society's negotiating table?