

Conservation through Poverty Alleviation, International



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The triple bottom line

CPALI is working to introduce a new approach to conservation biology that mixes philanthropy "patient capital" and conservation science.

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CPALI's non-spun textile goes to New York

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Welcome SEPALI

Mamy Ratsimbazafy organizes Madagascar's newest NGO, Sehatry ny Mpamokatra Landy Ifotony (SEPALI), Silk Producers Coooperative

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Mamy Ratsimbazafy
CPALI project leader
and SEPALI founder
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Fun facts about silk

Wild silk differs from domesticated silk in structure and properties.

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**Tom Corcoran**

Arrives in Maroantsetra 23 March to learn how SEPALI works with farmers.

News from the Field

Farmer numbers grow

CPALI is working to introduce wild silk production to farmers economically displaced from the Makira Protected Area.

Ambodivoangy, Ambalamahogo, Marovovonana, Andaparaty

In December 2009 CPALI reported that 50 farmers had joined the CPALI team. The farmers are from four communities. Twenty-eight of the farmer group are from Ambodivoangy, the community where CPALI initiated its work.. The remaining farmers are from three communities that edge Ambodivoangy. Increase in farmer interest reflects both the work of the CPALI team as well as the current economic conditions in the Madagascar. Previously, the region where CPALI works was a



Farmers germinate the seeds of silk moth host plants and transplant them into family gardens that border the Makira Protected Area.

center for the production and sale of vanilla. That market is no longer available to local farmers due new production sites around the world around as well as the lower cost of synthetic vanilla. These factors, plus the instability of the current Malagasy government, make the training that the CPALI team offers and markets it is developing an important economic option for local farmers. In some cases, wild silk production may be the only opportunity for families to earn income

that can lift them from subsistence lifestyles.

The wild silk option

The CPALI program is based on market demand—not subsidy. In August 2009, we sold our first crop of cocoons to an international furnishings designer, Angus Hutcheson (www.angoworld.com). With increased silk production we will be able to produce finished products from our unique, new, non-spun textile in Madagascar and achieve higher earnings for more people.

Assisted families that produce 10,000 cocoons per year will increase their income by \$80/yr annually (about 30% of their current income). Family members who participate in product finishing will be able to increase family income by \$150-\$400/year or enough to send 2 children to 1 year of private school (\$400). To ensure that our efforts enhance border forest protective value, we have partnered with the Wildlife Conservation Society who monitors the effects of wild silk production in the Makira Protected Area.

THE TRIPLE BOTTOM LINE

Philanthropy and social impact, "patient capital" and conservation science.

CPALI is working to develop a new approaches to conservation that focuses on the "Triple Bottom Line". We are measuring the success of our program on its economic, environmental and social impacts.

Our goal is to meld the environmental benefits of conservation and habitat restoration with economic investment and social impact. We draw inspiration from Wangari Maathai and Jacqueline Novogratz.

Wangarii Maathai, Nobel laureate and founder of the Green Belt, introduced community based tree planting to support poverty reduction and environmental conservation. Her environmental movement has assisted women in planting over 40 million trees on community lands and farms.

Jacqueline Novogratz uses the concept of "patient capital". Patient capital investment bridges the gap of efficiency and scale of market-based approaches and the social impact of pure philanthropy. While investments are slow to mature, social impact effects are long-lasting and sustainable.

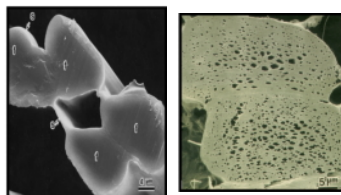
CPALI's long-term goal is to meld these two approaches with rigorous environmental planning to result in poverty alleviation conservation and forest restoration. Our economic goal is to introduce new livelihoods that can yield higher than subsistence income and hence support family health care, education and purchase food during the "période de soudure" or bridging period between rice harvests. To make the program sustainable, we need to produce enough silk to meet commercial market demands. With 500 farmers we can make the SEPALI Madagascar program sustainable; with 20,000 farmers we hope to reduce or even eliminate slash and burn agriculture in the Makira Protected Area. These ambitious dreams, however, require patience, time and long term investment by our partners and team. We are poised to scale-up our efforts in the next, most exciting, period of CPALI's development.

Catherine L. Craig

Fun facts about Silk.

Wild silk differs from domesticated silk in structure and properties.

Fun Fact 1, The internal structure of silk: The silk from the wild moths we are raising is porous. Each fiber has empty channels that run along the length of the fiber, which make it lighter weight than the silk from the domesticated silkworm. The electron micrograph below shows silk from two different genera of moths. The left picture shows a cross-section of a bundle of four fibrils of silk produced by the domesticated moth from the genus *Bombyx*. The right panel shows a cross-section of two fibrils from a wild, saturniid moth, like the ones we are raising in Madagascar. The tiny pores are produced in the silk gland before the moth exudes the fiber. Ah, you ask, why do the saturniid moths care about the pore structure of their silk and, if porous silk is good for the Saturniidae then why isn't it also good for the Bombycidae? I'm afraid that we don't know but of course we are glad to speculate at least on the first question. The saturniid moths are large and make correspondingly large cocoons. Perhaps they have evolved to save on the amount of the silk protein they have to produce by hollowing out the fibers (much like a corrugated box can be strong without the use of lots of material. But then why haven't the Bombycidae adopted the same strategy. I regret that we don't even have a simplistic engineering answer for that question - perhaps energy savings on silk? temperature control? fast drying? Nor do we yet have a compelling commercial use for the pores in the saturniid silk. Your suggestions are welcome. R.S. Weber



Electron micrographs of cross-sections of fibers of domesticated silk (left) and wild silk (right). (H.Akai)

CPALI's non-spun textile goes to New York

Thanks to a grant from the Rufford Small Grants for Conservation Foundation, CPALI produced its first non-spun textile last fall. Thanks to the skillful craft and generosity of Sylvia Weber, CPALI's non-spun textile is going to New York



CPALI copyright 2009

The textile will be considered for the Material Connexion's Libraries, a source of new, innovative and sustainable materials used by students, artists, and designers in New York, Milano, Bangkok, Cologne, Dong-gu Deagu.

Welcome SEPALI

Mamy Ratsimbazafy, CPALI's program director, has organized the Malagasy NGO Sehatry ny Mpamokatra Landy Ifotony (Silk Workers Cooperative), to partner with CPALI in Madagascar. SEPALI and CPALI will work together to expand the wild silk initiative in the Makira area as well as to other regions of the country. SEPALI will provide technical support to farmers and textile producers. CPALI will develop investor opportunities and products that will link local businesses, artisans and farmers to profitable markets. Together these two organizations will offer sustainable conservation and poverty alleviation services to communities. Together they will work with partners from the Malagasy conservation and development community to promote wild silk as a unique Madagascar product that supports and protects Madagascar's unique fauna and flora.