History of the Monteverde Conservation League and Children's Eternal Rainforest

by Leslie J. Burlingame (May 2016)

The Monteverde Conservation League (MCL), founded in 1986 in Monteverde, Costa Rica, initially focused on buying land for conservation. Donors from more than 40 countries and territories contributed to the purchase of almost 23,000 hectares by 2016. This protected area, known as the Children's Eternal Rainforest (or "BEN" after the Spanish "Bosque Eterno de los Niños") has become the largest private reserve in Costa Rica. MCL has emphasized long-term conservation through forest protection (via guards and legal action), environmental education, reforestation and restoration of degraded land, sustainable development and eco-tourism, and scientific research. Its mission is "to conserve, preserve, and rehabilitate tropical ecosystems and their biodiversity."

The seven of Costa Rica's twelve life zones included in the BEN have produced its great biodiversity. It forms a vital link in the larger Monteverde Reserve Complex (about 62,000 ha) composed of private and public conservation reserves/parks. The MCL has been recognized nationally and internationally for its successful conservation efforts, most recently (2015) including the highest level (5 stars) Costa Rican Blue Flag (Bandera Azul) award for protected natural areas. The Costa Rican postal service, honoring the MCL's 25th Anniversary, issued four commemorative stamps on National Parks Day, August 24, 2011. Each of the stamps, bearing the title, "Bosque Eterno de los Niños, Monteverde," carried a photo showing a special feature of the BEN: a margay, a green- eyed frog, the smallest orchid, and the Pocosol Laguna. The BEN has been supported for many years by Sister Organizations in Sweden, the United States, England, Germany, Japan, Spain, and Switzerland.

Origins and Development

By 1985, agricultural development in the Monteverde Zone was threatening much of the remaining Pacific slope forest. A group of community members, recognizing the urgent problem, founded the MCL in 1986. The MCL's attention guickly shifted from the Pacific to the Atlantic side of the Continental Divide because of a deforestation crisis threatening the Peñas Blancas Valley. Government promises to buy out claims of Valley residents and squatters had not materialized since 1977, when it was included in a Forest Reserve to protect the Arenal Hydroelectric Project. Several Monteverde residents and Canadian researchers started a fund-raising campaign to purchase claims and protect the Valley. Fund raising through the World Wildlife Fund in Canada and the US was enormously successful. A Debt-for-Nature swap in 1988 transformed the MCL from a small organization made up primarily of foreign-born volunteers to a large organization with a paid staff composed primarily of Costa Ricans. This swap provided funds during five years for land purchases, administration, environmental education, and protection programs. Settlers and squatters in Peñas Blancas lined up to sell their claims to the MCL. Problems surfaced immediately; few people had legal papers for their claims. Efforts to establish legal titles are still ongoing. Borders had to be marked and purchased land also had to be protected from new or the original squatters so the League hired its first full-time forest guard.

The Children's Eternal Rainforest (BEN) has become the MCL's central focus. In 1987, Sharon Kinsman, a U.S. biologist who had lived in Monteverde during research visits, traveled to Sweden to talk about rainforests. Teacher Eha Kern invited Kinsman to give a slide presentation at her school. The students came up with the idea of raising money to save rainforests, and Kinsman put them in touch with the MCL. The children raised money to purchase six ha of rainforest bordering what had already been purchased by the MCL. Kern and her late husband Bernd formed the Swedish non-profit Barnens Regnskog (Children's Rainforest) in 1987 to raise and channel funds for MCL's land purchase campaign. When the targeted land was purchased, MCL bought additional land, which they called Bosque Eterno de los Niños to honor the Quaker settlers who had protected their forest watershed as Bosqueterno, S.A. and the children's contributions. Barnens Regnskog expanded its support for BEN. Between 1988 and 1992, they raised \$2 million for land purchases and obtained grants from the Swedish International Development Agency (SIDA), which supported reforestation, environmental education, the guard program, and construction of a hydroelectric project for the MCL's San Gerardo biological station.

In 1988, Kinsman set up a non-profit organization, The Children's Rainforest U.S., to formalize her fundraising for land purchases and protection of the BEN. Also in 1988, Tina and Robin Jolliffe established the Children's Tropical Forests U.K. In 1990, Dirk Jörgens and others established Kinderregenwald Deutschland e. V. in Germany, and Kazumi Fukunaga founded Nippon Kodomo no Jungle in Japan. Many smaller groups, schools, and individuals -children and adults- from more than 40 countries all over the world also raised money in numerous creative ways to expand the BEN.

Several land acquisitions are of particular interest. The 30 hectare Bajo del Tigre reserve in Monteverde was acquired in 1988, primarily as a donation. The Pacific slope site is in the rain shadow of several hills, producing a seasonal dry forest. The parcel (with elevations ranging from 1020 to 1380 m above sea level) contains primary and secondary forest, pasture that has regenerated as forest, and an arboretum featuring native trees established by local biologists in a former cattle pasture.

San Gerardo and Pocosol became sites for MCL's two biological field stations. A debt swap in 1991 funded the MCL's purchase of land in the San Gerardo area on the Caribbean slope and funds for guards to protect all of MCL's land. About 60% of the land purchased was still primary Premontane rainforest; it is about 1200 meters above sea level and receives about 4000 mm of rain per year with a very limited dry season. Visitors to the station have to hike 3.5 km down a muddy road from the parking lot of the Santa Elena Reserve. However, they are rewarded by spectacular views of Arenal Volcano, two waterfalls, great bird watching and other impressive examples of biodiversity in primary and secondary forests and regenerating pastures.

In 1991, the MCL bought the Laguna Pocosol and was interested in establishing a biological field station there. This land is on the eastern Caribbean side of the BEN; it is now possible to drive to the station with 4-wheel drive from La Tigra and San Miguel. Although it is in the same life zone as San Gerardo, it is at a lower elevation (720 meters above sea level). The name of the area translates as Little Sun, a sure clue to the heavy rainfall it receives. In addition to the lagoon, there are boiling mud pots and a waterfall.

The third area of particular interest involves the land purchased in the initial Peñas Blancas campaign (1986 to mid-1989). There was a long dispute between the MCL and the Tropical Science Center (TSC), owners of the Monteverde Cloud Forest Preserve (MCFP). The League had said it would turn over the land purchased in this campaign to TSC, whose guards had been protecting it. However, the League wanted certain conservation guarantees placed on the land;

TSC said they should get the land with no restrictions. The only people to profit from this dispute were the lawyers on each side. A settlement was finally reached in 2007; MCL kept the 5300 ha from its campaign, and some horse-trading of land parcels smoothed out the border between the BEN and the MCFP.

In 1992, MCL's Board of Directors consolidated all land holdings under BEN. By 2016, the BEN had grown to nearly 23,000 ha spread among three provinces (Puntarenas, Guanacaste, and Alajuela). Also in 1992, the MCL launched its "Rain Forest Partners" program. As money from the Debt-for-Nature swap and other grants was spent, funds for protection (forest guards) and maintenance, reforestation, and environmental education dried up. MCL urged donors to become Rainforest Partners to support these other necessary programs; however, most donors still preferred to donate money to buy land.

The League's financial difficulties in the 1990s made additional land purchases a low priority until 2002, when Rachel Crandell, a teacher, founded the Monteverde Conservation League, U.S. (MCLUS) in Missouri; it became the main US Non-profit supporter of MCL. She and her husband Dwight wanted to help create an educational nature center on the eastern Caribbean side; their 1997 donation made the Finca Steller Educational Center a reality. She traveled the US, fundraising, and she brought groups to BEN's two field stations. Crandell had learned that giving donors the option of contributing to programs that protected BEN did not work. In consultation with MCL's leadership, she launched a new Land Purchase and Protection Campaign, using 50% of the donation for Land Purchase, 40% for protection (which includes the operation of MCL and MCLUS), and 10% for endowment. She said, "We reason that you cannot 'protect' the forest without operating trucks, computers, office staff, phones, guards, etc." The land purchase percentage included costs of surveying and legal costs related to title transfer.

Meanwhile, the League established a prioritized list of actual properties to buy. Top priorities were: filling out the borders of BEN to natural boundaries and blocking points of easy entrance, buying land to connect pieces of BEN, and buying inholdings. In a return to the original vision for the League, they also wanted to extend BEN on the Pacific slope to help create a corridor for altitudinal migrants such as quetzals, bellbirds, butterflies, and for cats including the jaguar that require large territories. They also decided to buy only land with clear legal title. Unfortunately the land they wanted to buy was much more expensive and more deforested than previously purchased land. MCLUS started fundraising for the Land Purchase and Protection Program in 2004. By 2011, about 270 ha of strategic land purchases had been added to the BEN. MCL sister organizations in the U.K. and Germany and other groups and individuals also contributed to the land purchases. Although Rachel Crandell died in 2009, a year after her husband, her legacy is very much alive. Friends and support BEN and the League. MCLUS changed their name in 2012 to Friends of Children's Eternal Rainforest (FCER). Two years later they broadened

their mission to include other conservation efforts in Monteverde and became Friends of the Rainforest.

The idea of a corridor to connect the conserved areas in Monteverde all the way down to the Gulf of Nicoya had been talked about for years. The TSC had taken the lead with the purchase of the largest remaining forest patch on the Pacific side, a 240 ha farm subsequently called the San Luis Biological Station. The MCL, in 1994, had sponsored its first scientific symposium, "Altitudinal Migrations in Tropical Forests" at the San Gerardo station. In 2002, local residents, including biologists, established the Costa Rican Conservation Foundation (CRCF) to begin buying land extending down the Pacific slope from BEN and MCFP and reforesting it. MCL and CRCF joined other area conservation organizations in 2008 to form a Local Council to develop the Bellbird Biological Corridor. They are implementing their Strategic Plan, whose mission is to reestablish and maintain: biological connectivity, conservation of natural resources, and the wellbeing of local communities across 66,000 hectares from the Monteverde Reserve Complex through 4 watersheds and 11 life zones down to the Gulf of Nicoya.

Protection, Maintenance, and Operations

As soon as the League acquired land, it had to protect it from various threats. The MCL hired its first full-time forest guard in 1987, and then added more guards. Following the 2007 Peñas agreement between MCL and TSC, MCL had an additional 5,300 ha to protect in the BEN. Squatters are no longer much of a problem, but there are still serious problems with illegal poaching, logging, capture of live animals, and removal of plant material such as orchids and palms, particularly on the Caribbean side of BEN. The MCL's guards communicate and cooperate with their counterparts in the other nearby private and public protected areas. Maintenance work is also essential for the BEN. The changing outside borders of the BEN have to be clearly marked and posted. Workers maintain all of MCL's facilities and their grounds and the trails in the BEN, a challenge with the rapidly growing vegetation and landslides in rainy season. In addition to trails around facilities, two long trails cross the BEN. Volunteers have helped with such projects as cleaning and repairing trails, making and painting signs, building an observation platform at Bajo Tigre and structures at the field stations, and working at the Visitor's Center at Bajo Tigre and at the Information Center in Cerro Plano.

BEN guards and maintenance workers provide environmental education to visitors and area residents, guide people on the long trails, help researchers, and rescue hurt and orphaned animals. They monitor species through reports, photographs, motion-sensing cameras, and plaster casts of footprints. There was great excitement in 2012 when motion-sensing cameras first photographed a jaguar and tapirs; the cameras have also documented the return of other cats, such as pumas and the smaller spotted cats, to the BEN.

Accurate maps have been crucial as the BEN expanded its land holdings, for the siting of field stations and trails, for scientific studies, and now for keeping track of what lands are and have been enrolled in the Environmental Service Payments program. For many years, the MCL used paper topographical maps made by Costa Rica's Instituto Geográfica Nacional. MCL's mapping capabilities evolved to a sophisticated Geographic Information System (GIS); plotters can print out maps showing many different aspects of the BEN. The very important Land Ordering Project that

5

began in 2006 employs GIS and GPS to produce an accurate survey of BEN's borders that can be used in legal defenses of those borders and in pursuit of legal titles. In 2012, a volunteer used GPS, GIS, and Google Earth to create accurate interactive maps of all trails in BEN; the maps are available on MCL's website.

Environmental Education

The League launched its Environmental Education Program (EEP) in 1986 by working in local schools and taking children on field trips. Money from the first Debt-for-Nature Swap and SIDA supported the expansion of EEP, which also ran environmental workshops for adults, including teachers, parents, groups of farmers and women. The goals were to ensure the long-term survival of the BEN by helping people in areas around the BEN understand the importance of protecting it while improving their own land use practices in adjacent areas.

MCL's economic difficulties ended the EEP in 1995, except for projects supported by outside grants. However, many programs and efforts that MCL's EEP initiated continue through other conservation organizations, and the government-approved curriculum now requires Environmental Education (EE). Most of MCL's personnel continue some EE activities, including leadership roles in community recycling and roadside and stream clean-up. Staff and educational displays at MCL's facilities provide EE information to Costa Rican and international children and adults. MCL is a member of the Commission on Environmental Education of Monteverde (Comisión de Educación Ambiental de Monteverde; CEAM), a cooperative group of local environmental educators that formed in 2003. They coordinate environmental activities including special fairs focused on environmental issues such as water, raise local environmental consciousness, and contribute to sustainability. CEAM has also sponsored annual prize contests for ecological stories by students from 14 schools and ran a 3-year training program for adults involved in EE.

A revival of funding has helped support more EE activities. MCLUS/FCER increased funding for EE beginning in 2007. Bob Law developed the idea of using sculptures of extinct large animals and threatened existing animals as a magnet to draw people in and educate them about biodiversity and extinction. The Megafauna Park project opened in 2006 on the InterAmerican Highway in the Chomes area. Law funded the sculptures and stipulated that 25% of the net profits from the Park go to reestablishing Environmental Education by MCL. Local children have been coming to Bajo del Tigre for EE activities, thanks to transportation funded since 2010 by BESA and to the Finca Steller Education Center on the Caribbean side of the BEN near La Tigra. In 2012, a five-year grant provided for an environmental educator to work with schools on the Caribbean side of the BEN on such topics as "recycling, biodiversity, animal welfare and abuse, water resources and the importance of wetlands."

Environmental Education for children and young-at-heart adults featuring MCL, BEN, and the Monteverde Zone has continued in books, videos, and other media. Illustrated children's books, such as Patent's Children Save the Rain Forest (1996) and Cherry's Flute's Journey: The Life of a Wood Thrush (1997), are still available. The Internet has opened up whole new possibilities for communication, environmental education, and fundraising. Websites and Facebook pages for the League, its sister Organizations, and the Children's Eternal Rainforest/Bosque Eterno de los Niños offer a wide variety of material, including photos and videos, blogs, e-newsletters, annual reports, and archives.

Reforestation and Rehabilitation of Degraded Land

MCL's Reforestation Program was successful because it appeared to improve production on farms, decreased pressure on remaining forest, and created more habitat for wildlife. More than half a million trees were planted in MCL's windbreak project; many more were planted under special projects and grants. Forest fragments are being preserved on farms, and corridors that connect forest fragments with reserves are becoming a reality. The League's tree nurseries have produced 1.6 million trees!

Adrian Forsyth, a Canadian naturalist and author, played a key role in the establishment of MCL's reforestation program. In 1988, he obtained a three-year grant for MCL from the Canadian International Development Agency (CIDA) and WWF-Canada. Other reforestation funds came from a grant obtained by the Kerns from SIDA.

The windbreak project meshed MCL's push for reforestation with the stated needs of farmers. Most of the farms in the Zone are small, so farmers could not afford to use a large portion of their farms for reforestation. The negative effects of strong winds during the dry season in the Zone (e.g., soil erosion, stresses on grasses and crops, and resulting decreases in milk and crop production) created intense interest among farmers to plant windbreaks. Farmers also needed trees for fence posts, lumber, fuel wood, food for cattle, and soil enrichment. Windbreaks that included leguminous trees were the solution. Tree seedlings were produced with help from the U.S. Peace Corps and other volunteers and delivered to farms by MCL personnel, who also provided technical assistance. The farmers had to invest their own labor, which tied them to the project. They received financial incentives provided by The Netherlands through the Costa Rican Forest Service (DGF) to cover their expenses in the form of a loan, which was forgiven if the farmer cared for the trees for three years. By 1994, more than 500,000 trees produced in the nurseries had been planted in 320 windbreak projects. Later, scientific studies showed that the windbreaks served as corridors for many species of birds, particularly if they were connected to forest fragments.

At first, exotic tree species were planted because they were known to farmers and foresters and were on the DGF list of species approved for incentives. The MCL investigated the use of native species in its nurseries and found several species that worked better than exotics for windbreaks. DGF eventually added some native species to their list of approved trees. In 1995, MCL's grants for windbreaks ran out and government restructuring ended DGF's incentive program, so the Reforestation Program closed down. Most windbreaks remain since they benefit the farmers.

The Forests on Farms and Corridors Project started in 1993, funded by international conservation organizations. It focused on buffer zone management around the Monteverde Reserve Complex, particularly the protection of forest fragments on farms that researchers had deemed important for altitudinal migrations of birds and butterflies. A grant from the Dutch government in 1995 supported sustainable development and watershed rehabilitation outside the eastern border of BEN near La Tigra. It also promoted reforestation (including a corridor from the

BEN to lower areas along the La Tigra River), soil improvement with emphasis on organic fertilizers, involvement of women in tree nurseries and organic gardening, and environmental education in local schools. These projects ended when their funding did. The Finca Steller Education Center on the eastern Caribbean side of the BEN does have an active, though small, native tree nursery that produces a few thousand native tree species per year (24 different species by 2015) for reforestation on the Finca and in neighboring communities. The Fundación Conservacionista Costarricense (FCC) has produced about 175,000 native tree seedlings of 93 species in nurseries on the Pacific slope; MCL has used some of these for reforestation of degraded pastureland in its recent land purchases. Willow Zuchowski's ProNativa organization promoting the use of native plants that began with the greenhouse and demonstration project at Bajo Tigre has expanded; native plants have been planted in many locations, including around MCL facilities.

Infrastructure

MCL has offices on the western Monteverde side and on the eastern La Tigra side of BEN as well as facilities at Bajo del Tigre and two biological stations. The League has occupied a variety of offices in Monteverde. In 2014, to save money, MCL moved all office personnel to the Information Center in Cerro Plano. The Information Center continues to educate visitors, promote visitation to BEN, and earn money from the sale of items related to the BEN, Monteverde, and rainforests.

The Bajo del Tigre sector is the only part of the BEN that is easily accessible from the Monteverde area and the sector receives about 75% of the visits to the BEN. Volunteers built and signed more than 4 k of trails and reforested a pasture with native trees, creating an arboretum. In 1996, MCL constructed a Visitors' Center and, in 1997, a Children's Nature Center near the entrance to the trails. Regular staff and volunteers provide information and sell merchandise. Several local guides started Twilight Walks at Bajo Tigre in 2003, and night walks have become a significant source of funds for the League; since 2013, about half of the nearly 6000 annual visitors to this sector came for the night walks. A native plant greenhouse was constructed in 2005 and a labeled demonstration garden was replanted around the Visitors' Center. In 2012, an observation platform overlooking a regenerated forest, a meeting/picnic area, and a gray water treatment system were added. The following year, donors funded the construction of an open-air classroom next to the greenhouse.

To aid in the administration of the eastern section of the BEN, MCL established a second office in La Tigra in 1994 on the road between San Ramon and La Fortuna. Donations made it possible for the League to buy a farm with degraded pasture on the eastern edge of the BEN and construct the Finca Steller Education Center and a native tree nursery in 1997. The administrative office was relocated to a remodeled farmhouse at the Finca Steller in 2014. The Pocosol Biological Station is accessible by rough road from the eastern side on land that MCL purchased in 1991. A simple shelter near the lake was replaced by the mid-1990s with two buildings that could accommodate 20 people and included a screened classroom/laboratory. MCL developed a 10 km trail network around the station that featured the lake and primary and secondary forest. From 2007 to 2010, grants funded the construction of a much-needed new biological station with 3 buildings to accommodate up to 32 people. A gray water treatment plant, renewable energy sources, Internet, and improved access road and trails have been added.

An international debt-swap in 1990-1991 funded MCL's purchase of 1102 ha in San Gerardo Arriba that bordered BEN land. A large donation from the Walker Foundation (1994-96) funded the construction of the two story San Gerardo Biological Station that accommodates up to 32 people and provides classroom space. Improvements to the Station since the mid-1990s, again thanks to grants and donations, have included a small hydro-electric generator, a spring house to cool food, a gray water treatment system, a phone connection, 7 km of trails, road access upgrades, and replacement of the building's wooden foundation and floors.

Finances and Revival of the League

By 1994, MCL was having serious financial problems because the original Debt-for-Nature Swap and several major grants ran out of funds and contributions were still earmarked for land purchase. MCL cancelled programs, reorganized, and cut personnel sharply. The financial deficit was at its worst in 2001; then, gradually, the League's finances began to improve with the growth of new sources of income. The most important of these was payment for environmental services or PSA (using the Spanish acronym) by the government program FONAFIFO (Fondo Nacional de Financiamiento Forestal) that started in 1997 and two private hydroelectric companies. Maps and bar graphs in MCL's Annual Reports show the dramatic increase in the areas of the BEN included in PSAs; complicated rules determine what can count and for how long. There was an equally dramatic increase in income for the League, going from no income in 1996 to an average 62% of MCL's operation's income from 2009 to 2011. Other income came from fees for entry to trails, mainly at Bajo del Tigre, especially from the night walks; unrestricted donations for operations; the sale of merchandise in MCL facilities, and net income from the biological stations. Donations for specific projects, including land purchase, remain an important source of income. Another source of funds is interest on investment, including a growing endowment fund; Rachel Crandell had made MCL the beneficiary of her substantial life insurance policy, and this became the base of an endowment fund. According to MCL's Board President, the League needs a minimum of about a half-million dollars per year to run the organization at the most basic level.

Unfortunately, in 2012, FONAFIFO changed its policies on PSAs, deciding to help small landholders with 50 ha or less instead of giving preference to larger farms as it had previously done. MCL and several other conservation organizations in Monteverde saw their incomes dropping dramatically as land under PSA phased out under staggered 5-year contracts. Responding to the FONAFIFO changes, the League cut back dramatically on expenses, including personnel, and it put unnecessary office buildings and their lots up for sale. Fortunately, the League was able to find a way to take 50 ha parcels of the BEN for PSA applications (this involved a lot more paperwork); the result by 2015 was the "highest annual placement" ever of hectares under PSAs, resulting in an increase in income. MCL also worked with owners of farms around the BEN to help them apply for PSA payments, thus building goodwill and earning a small fee for the League. The League plans to expand both these efforts, and they are looking for other ways to increase income. A key focus is increasing the number of visitors to Bajo Tigre and the two biological stations. MCL also wants to attract more researchers to BEN; most researchers have been undergraduate students undertaking short-term projects. The League is searching for new funding for environmental education, especially on the eastern Caribbean side of BEN. They are also building closer relations with their Sister Organizations and other donors. MCL hopes to add

new funding options, especially carbon offset payments for forest protection and reforestation, but first they have to get legal title to all the land in the BEN and change the current policies for the carbon offset market that exclude forests, such as the BEN, that are within official government protected areas. More information on these proposals for increasing funding may be found in MCL's Annual Report for 2015, which should be available on-line as soon as the League's new website is launched. The League is also developing a major new Strategic Plan, which will elaborate on MCL's goals, priorities, and means to achieve them.

Conclusion

The founders of the Monteverde Conservation League could not have imagined in 1986 that they were starting to create the largest private reserve in Costa Rica. Debt for Nature swaps, government support (especially from Sweden), grants from international conservation agencies and Sister Organizations, grants from family foundations, and private donations big and small from adults and children from many countries all contributed the rapid growth of the Children's Eternal Rainforest. The League also had major local impacts through its Environmental Education and Reforestation Programs and learned how to mount effective forest protection and reserve maintenance. The League was realizing its mission "to conserve, preserve, and rehabilitate tropical ecosystems and their biodiversity." Yet, all was not perfect. The League was not prepared for the day that the money ran out, and it had to work through very difficult times and choices to make sure that CER could be "eternal." A wiser and more frugal MCL has emerged, again helped by government and many friends and ecotourists. In 2016, the League celebrated its 30th Anniversary with special gatherings at two of its centers. In her report to the League's Annual Assembly in February 2016, the new Director concluded: "As we look ahead to our next 30 years, I believe the Monteverde Conservation League can expect increasing visitation, continued support from communities near and far, and an increasing financial stability that will permit the Children's Eternal Rainforest to be truly eternal in every sense of the word."

MCL SOURCES

Acknowledgments: This history of the MCL was made possible by very generous help from many individuals involved with MCL over the years who provided essential oral and documentary information as well as corrections and additions to previous drafts. Most of the material sources by and about MCL are "gray literature," unpublished computer generated reports, newsletters, and documents as well as photo albums held by the League in its files and by involved individuals, including Bob Law and Leslie Burlingame. Several people have also provided detailed helpful feedback on previous versions of this history: Wendy Brenes, Rachel and Dwight Crandell, Wilford Guindon, Bill Haber, Frank Joyce, Berni Kern, Sharon Kinsman, Richard LaVal, Bob Law, Nalini Nadkarni, Alan Pounds, Ree Sheck, Susan Sprague, Lindsay Stallcup, Guillermo Vargas, Luis Vivanco, and Willow Zuchowski. Portions of this work were published in Burlingame, 2000 and 2014.

Association for Tropical Biology and Conservation (ATBC). 2013. The Perfect Storm: Educational, Conservation, and Community Synergisms for Tropical Ecology Research in Monteverde, Costa Rica. atbc.confex.com/.../2013/webprogram/.../ATBC-OTS-2013_Progra...S-11 (June 25).

Burlingame, L. 1992-date. Interviews, correspondence, e-mail (forms of pers. comms.).

- Burlingame, L. 2000. "Conservation in the Monteverde Zone: Contributions of Conservation Organizations." Ch. 10 (Pages 351-388) in N. Nadkarni and N. Wheelwright, editors. Monteverde: Ecology and Conservation of a Tropical Cloud Forest. Oxford University Press, New York. Available online since 2014 at digitalcommons.bowdoin.edu/scholarsbookshelf/1/
- Burlingame, L. 2014. Chapter 10 Update (2014): Conservation in the Monteverde zone. Available online in 2016 at digitalcommons.bowdoin.edu/scholars-bookshelf/5/. Spanish translation by E. Vargas of Ch. 10 and Update posted in 2014 at digitalcommons.bowdoin.edu/scholars-bookshelf/3/

Cherry, L. 1997. Flute's Journey: The Life of a Wood Thrush. Harcourt Brace & Co., New York USA.

Children's Rainforest U.S. 1994. The Children's Rainforest U.S. P.O. Box 936. Lewiston, Maine, USA.

_____. 1996. Rainforest routes: an occasional newsletter for teachers and others. P.O. Box 936. Lewiston, Maine, USA.

- Chornook, K. and W. Guindon. 2007. Walking with Wolf: Reflections on a life spent protecting the Costa Rican wilderness. Wandering Words Press, Hamilton, Ontario, Canada.
- Collard, S. B., III. 1997. Monteverde: Science and scientists in a Costa Rican cloud forest. Grolier, Danbury, Connecticut.

Corredor Biológica Pájaro Campana. 2011. Plan estratégico 2011-2016. www.cbpc.

Costa Rican Conservation Foundation. 2012-date. www.fccmontverde.org.

- Fogden, M. 1993. An annotated checklist of the birds of Monteverde and Peñas Blancas. Litografía e Imprenta LIL, S.A., San José, Costa Rica.
- Forsyth, A. 1988. Journey through a tropical jungle. Simon and Schuster Inc., New York, New York, USA.
- Forsyth, A., M. Fogden, and P. Fogden. 1988. The lessons of Monteverde. Equinox Mar./Apr.:56-61.
- Friends of the Rainforest (Monteverde Conservation League US, Inc. to 2012; Friends of the Children's Eternal Rainforest to 2014). Annual Reports since 2003, Blogs, e-newsletters, videos, etc. available from website: friendsofthe rainforest.org.
- Fundación Conservacionista Costarricense (FCC). www.fccmonteverde.org.
- Garrigues, R., R. Dean. 2007. The Birds of Costa Rica: A Field Guide. Cornell University Press. Ithaca, NY, USA.
- Guindon, C. 1996. The importance of forest fragments to the maintenance of regional biodiversity in Costa Rica. Pages 168-186 *in* J. Schelhas and R. Greenberg, editors. Forest patches in tropical landscapes. Island Press, Washington, D.C., USA.
- Guindon, L., M. Moss, M. Rockwell, J. Trostle, S. Trostle (eds.). 2001. Monteverde Jubilee Family Album, April 19, 1951-April 19, 2001. Printed by Ricardo Barrantes Sibaja, Monteverde, Costa Rica.
- Haber, W., W. Zuchowski, and E. Bello. 2000. An introduction to cloud forest trees: Monteverde, Costa Rica (2nd ed.). Mountain Gem Publications, Monteverde de Puntarenas, Costa Rica.
- Honey, M. 2008. Ecotourism and sustainable development. (2nd. ed). Island Press, Washington, D.C., USA.
- Janzen, D., editor. 1983. Costa Rican natural history. University of Chicago Press, Chicago, Illinois, USA.
- Kappelle, M., editor. 2016. Costa Rican Ecosystems. University of Chicago Press, Chicago, Illinois, USA.
- Kinsman, S. 1991. Education and empowerment: conservation lessons from children. Conservation Biology **5**:9-10.
- Law, B. 1991. The birds of Monteverde. 7th ed. Tropical Science Center, San José, Costa Rica.
- _____. 1993, 1999(rev.), 2002(rev.). Birds of Bajo del Tigre/Aves del Bajo del Tigre. Monteverde Conservation League, Monteverde, Costa Rica.
- _____. 2011. MCL History Timeline. Hand written document, Monteverde, Costa Rica.

Law, B., R. LaVal, and W. Zuchowski. 2005. Bajo del Tigre Trail Guide (3rd ed.). Monteverde Conservation League, Monteverde, Costa Rica.

Lonely Planet, N. Cavalieri, A. Skolnick, W. Yanagihara. 2012. Lonely Planet: Discover Costa Rica (2nd. ed). Lonely Planet Publications Pty Ltd., n.p.

Madrigal, A. 2014. Tourist Flocked to Costa Rica in Record Numbers in 2013. The Tico Times. www.ticotimes.net/2014/01/17/tourists-flocked....

- Memhard, S., J. Crisp. Dream the forest wild. How children saved a rainforest. www.dreamtheforestwild.com.
- Miller, K., and L. Tangley. 1991. Trees of life: saving tropical forests and their biological wealth. Beacon Press, Boston, Massachusetts, USA.
- MINAE (Ministerio de Ambiente y Energia). 1996. Area de Conservación Arenal. MINAE, San José, Costa Rica.
- _____. 1996. Sistema Nacional de Areas de Conservación. MINAE, San José, Costa Rica.
- MIRENEM (Ministerio de Recursos Naturales Energia y Minas). 1992. Sistema Nacional de Areas de Conservación. MIRENEM, San José, Costa Rica.
- _____. 1993. Conozcamos Arenal Area de Conservación Arenal. MIRENEM, San José, Costa Rica.
- _____. 1993. Parques Nacionales de Costa Rica. MIRENEM, San José, Costa Rica.

Monteverde Conservation League (MCL).

- _____.1986. Statutes of The Monteverde Conservation League. Monteverde, Costa Rica.
- _____. 1987-date . Annual Report/Informe Anual. MCL. Monteverde, Costa Rica.
- _____. 1986-1995. Tapir Tracks. 1, 1 (July-Aug.) -10, 1 (Aug.). MCL, Monteverde, Costa Rica.
- _____. 1994. Bosque Eterno de los Niños. MCL. Monteverde, Costa Rica. Videocassette.
- _____. 1994. Colpachi (Croton niveus Jacq.). MCL, Monteverde, Costa Rica.
- _____. 1994. Guachipelin (Diphysa robinioides Benth.). MCL, Monteverde, Costa Rica.
- _____. 1994. Tubú (Montanoa guatemalensis Klatt). MCL, Monteverde, Costa Rica.
- _____. Bulletin. 2009-date. MCL. www: acmcr.org.
- _____. Website: www: acmcr.org
- Nadkarni, N. and N. Wheelwright, editors. 2000. Monteverde: Ecology and Conservation of a Tropical Cloud Forest. Oxford University Press, New York. Available online in 2014 at digitalcommons.bowdoin.edu/scholars-bookshelf/1/. Updated chapters from 2014 available online in 2016 at digitalcommons.bowdoin.edu/scholars-bookshelf/5/

Patent, D. M. 1996. Children save the rain forest. Cobblehill/Dutton, New York, New York, USA.

- Pratt-Serafini, K., R. Crandell. 2008. The Forever Forest: Kids Save a Tropical Treasure. Dawn Publications, Nevada City, California, USA
- Rainforest Alliance, 1991. Unique debt swap to protect forest. The Canopy, Spring:1-2.
- Rovinski, Y. 1991. Private reserves, parks, and ecotourism in Costa Rica. Pages 39-57 in T. Whelan, editor. Nature tourism. Island Press, Washington, D.C., USA.
- Sheck, R. S. 1996. Costa Rica, a natural destination. 4th ed. John Muir Publications, Santa Fe, New Mexico, USA.
- Stiles, F. G., and A. Skutch. 1989. A guide to the birds of Costa Rica. Cornell University Press, Ithaca, New York, USA.
- Stuckey, J. 1992. Organizaciones de Monteverde. (Monteverde Institute, Monteverde, Costa Rica, photocopy).
- Umaña, A., and K. Brandon. 1992. Inventing institutions for conservation: lessons From Costa Rica. Pages 85-107 *in* S. Annis, editor. Poverty, natural resources, and public policy in Central America. Transaction Publishers, New Brunswick, New Jersey, USA.
- Vivanco, L. 2006. Green Encounters: Shaping and Contesting Environmentalism in Rural Costa Rica. Berghahn Books, New York, USA.
- Wainwright, M. 2007. The Mammals of Costa Rica. Cornell University Press, Ithaca, New York, USA.
- Wallace, D. R. 1992. The quetzal and the macaw: the story of Costa Rica's National Parks. Sierra Club Books, San Francisco, California, USA.
- Wheelwright, N. and N. Nadkarni, editors. 2014. Monteverde: ecología y conservación de un bosque nuboso tropical. [Spanish translation of 2000 book edited by Nadkarni and Wheelwright plus chapter Updates from 2014] Available online in 2014 at digitalcommons.bowdoin.edu/scholars-bookshelf/3/
- Zuchowski, W. 1987. Common flowering plants of the Monteverde Cloud Forest Preserve. 3rd ed. Tropical Science Center, San José, Costa Rica.
- _____. 1995. Guide to the cloud forest of Monteverde, Costa Rica. Massachusetts Audubon Society, Lincoln, Massachusetts, USA.
- _____. 2007. Tropical Plants of Costa Rica: A Guide to Native and Exotic Flora. Distribuidores Zona Tropical, S.A., Miami, Florida, USA.

WEB SITES:

Monteverde Conservation League (Costa Rica) Friends of the Rainforest (USA) Barnens Regnskog (Sweden) Children's Tropical Forests U.K. Kinderregenwald (Germany) Nippon Kodomono Jungle (Japan) www.acmcr.orgwww.friendsoftherainforest.orgwww.barnensregnskog.sewww.tropical-forests.comwww.kinderregenwald.dewww.nipponjungle.blogspot.com

EXECUTIVE DIRECTORS :

William Haber (1986-June 1988)
Jim Crisp (June 1988-June 1991)
Omar Coto (June 1991-Dec. 1994)
Bob Law, Interim Director (Dec. 1994-Feb. 1995)
Johnny Rosales (Feb. 1995-2003)
Carlos Muñoz (2004-2008)
Yúber Rodríguez (2009-2015)
Lindsay Stallcup (2015 to present)

Leslie J. Burlingame, PhD, a retired professor of the History of Science and Environmental Studies at Franklin and Marshall College, Lancaster, PA., has been doing research in Costa Rica and Monteverde since 1991. She published a history of conservation organizations in the Monteverde zone (including MCL) in 2000 with an update in 2014 (see Source list above). Leslie continues to write about and visit Monteverde's educational and conservation organizations and serves on the Board of the US non-profit Alliance for the Monteverde Institute. You may contact her at: leslie.burlingame@fandm.edu.