

Tetramorium Ambatovy

A New Species of Ant



Dr. Brian Fisher and Mark Plamondon, President of Ambatovy.

A new endemic species of ant was discovered by Brian Fisher, a renowned entomologist and Chairman of the Department of Entomology at the California Academy of Sciences, in one of Ambatovy’s conservation areas surrounding the Mine site.

In 2009, a series of biodiversity studies was conducted in the areas impacted by Ambatovy, namely in Analamay. The California Academy of Sciences, in collaboration with the Biodiversity Center of Madagascar, directed a study on ants in the areas surrounding the mine.

The research led to the discovery of various species of ants, including a new species that was named *Tetramorium Ambatovy* in recognition of Ambatovy’s commitment to biodiversity conservation and its contribution to science. A photograph of this new species was presented by Dr. Fisher to Ambatovy’s President, Mark Plamondon, on November 21, 2012, at the annual meeting of Ambatovy’s Scientific Advisory Committee. Specimens of the *Tetramorium Ambatovy* ant were collected in the mountains and tropical forests around the mine, in the Analamay - Mantandia forest corridor as well as in Torotorofotsy, which are two of the Company’s conservation areas. The *Tetramorium Ambatovy* differs from other ants in the *Tetramorium* group by the shape of its back and its relatively large eyes. It is an unusual species that has no similarity with other groups of Malagasy ants. This discovery is important for science and for Madagascar since the new species is

endemic. It should be noted that Dr. Fisher, who is well known for the discovery and identification of African ant species, has discovered nearly 900 species of ants during his research in Madagascar.

Net Gain

Madagascar’s biodiversity is considered a unique and highly valuable treasure and is characterized by a high degree of endemism since most of the country’s plant and animal species are found nowhere else on the planet. Ambatovy meticulously considers this unparalleled natural heritage and has implemented a comprehensive biodiversity conservation program to, at a minimum, avoid a net loss and preferably achieve a net gain in biodiversity. This is the case with the Ambatovy Biodiversity Offsets Program, a pioneering program designed according to the principles of the “Business and Biodiversity Offset Program” (“BBOP”) which is a voluntary partnership between businesses and conservation experts that establishes an international framework for the development and implementation of biodiversity offset programs. Ambatovy’s compensation program particularly includes

two parcels of azonal forest, an onsite conservation area of 4,900 ha, the Analamay - Mantadia forest corridor, as well as support for the conservation of the Torotorofotsy Ramsar site. Ambatovy also has an offsite conservation area of 6,800 ha made up of endangered forests that is connected to the eastern end of the Ankerana forest.

Viability

Some programs specifically target critically endangered species found in the forests surrounding the mine’s footprint, including lemurs and amphibians. The Lemur Management Program is aimed at protecting lemurs like the *Sifaka* or the *Propithecus diadema*, which is a critically endangered species, as well as the Indri Indri in the forests surrounding the mine, and at maintaining a viable population. Ambatovy has also set up a special program for the conservation of the golden mantella frog, a rare and endangered species. Biodiversity protection is among Ambatovy’s priorities and its implementation is a long term process that is integrated with the Company’s operations.

Contents

Moramanga: Highly Apparent Rise in Social Economy	2
A Focus on Cultural Heritage : Ambatovy’s Archaeological Work Contributes to History	3
Private Sector: Over 3,000 Companies in Ambatovy’s Databases	4
Portrait: Hasina, Chemical Engineer at Ambatovy	4

MORAMANGA

Highly Apparent Rise in Social Economy

With great ease, Rodine gives instructions to the staff of her store, as if she has been a manager for so long. However, not too long ago, Rodine had a completely different job: she was selling vegetables in the market of Moramanga. Ambatovy's establishment in Madagascar has literally changed the course of the life of this young woman, who became the owner of a department store in downtown Moramanga. *"I started delivering fruits and vegetables to the Ambatovy Central Purchasing ("CAM") in 2009. On average, I delivered one tonne per week. Then, with the profits I made, I opened this store,"* she says.



Rodine's shop in Moramanga.

Rodine's story is just one example of the many other benefits generated by Ambatovy for local communities. Since the Company's establishment in Madagascar, many economic opportunities have been created around its activities. In keeping with its policy of maximizing benefits, Ambatovy intends to contribute to Madagascar's development. These benefits are not only limited to government revenue, job creation, or the construction of infrastructure. Supporting farmers and entrepreneurs is also a way to fulfill such a commitment.

Like Rodine, many people have indeed benefited from the opportunities offered by Ambatovy. This is the case for Yves Randriambololona, owner of a successful sawmill and woodworking business in Moramanga. He has worked with Ambatovy since 2007, on the Company's resettlement villages, and is still working on other projects. *"Since I've worked with Ambatovy, the number of safety incidents in my business has dropped significantly. I can even say that there are virtually no more incidents."* Arnold Livingstone, another entrepreneur who benefits from Ambatovy's establishment in the country has been an Ambatovy car rental, sawmill, and general merchandise subcontractor since 2008. *"The advantage of being an Ambatovy subcontractor is that your business has to comply with the international norms and standards required by the Company. So you have to change and progress. Being with Ambatovy offers an opportunity to continuously improve."*

According to him, almost all areas of his business have recorded significant progress, including technology, quality, safety, staff management, and leadership.

Seven Associations

Ambatovy has also implemented various programs aligned with the national development policies of different sectors such as health, education, or the economy. This is why Ambatovy promotes the income-generating activities of the people affected by its activities. Among them are the training sessions at the Agricultural Training Center in Ambarilava ("CFA Moramanga"), which offer training to more than 2,000 people every year. Viviane Ranaivoson, a farmer coordinator in the neighborhood of Tanamandroso, Moramanga, gives her

testimonials. She began delivering products to CAM in 2010. As a former student at the CFA, she has witnessed the evolution of agriculture and livestock farming since she started collaborating with Ambatovy. *"The progress, especially in techniques, is really tangible. Today, thanks to the training we have received, we produce much more and continuously."* After her training, with the support of the Rural Development Support Programme ("PSDR") and Ambatovy, Viviane was able to create a "foie gras" producers' association, which integrates seven associations.

Contributing to Prosperity

Finally, in addition to the significant rise in agricultural and entrepreneurship activities, there are also indirect – but tangible – benefits for other community members. In fact, the direct beneficiaries of Ambatovy's operations also generate opportunities in their respective communities. Rodine said: *"I am really pleased with this collaboration because that way I can help my farmer friends by collecting their products. This encourages them to keep improving their work."*

Same thing for Viviane. For Harivola Rajaonarison, manager of a transportation company, much of the benefits from his contracts went to social deeds: *"Not only can I create jobs for my neighbours and for the youth in my neighbourhood, but I can also organize sport events. It is my duty to life."*

Therefore, whether the benefits are purely social or economic, they all unite towards a single objective: to contribute to the prosperity of Madagascar.



Yves Randriambololona, owner of a sawmill and woodworking business.

“A FOCUS ON CULTURAL HERITAGE”

Ambatovy’s Archaeological Work Contributes to History

We are witnessing the first archaeological research ever conducted in Madagascar with the work conducted on the archaeological sites located between Mangoro and Ivondro, in the eastern part of the island. The results of the work conducted by Ambatovy’s Archaeological Team are currently documented in a book entitled “*A Focus on Cultural Heritage: A Contribution to the Cultural History of the Eastern Region of Madagascar.*” This book, written by Professor Jean Aimé Rakotoarisoa, with the support of Ambatovy, was presented to the public in late October.



Artifact samples.

“*A Focus on Cultural Heritage: A Contribution to the Cultural History of the Eastern Region of Madagascar*” provides an overview of the archaeological research conducted at the archaeological sites located between Mangoro and Ivondro. The information on Ambatovy’s archaeological work during the construction of its facilities and its different steps are detailed in this book. Early in its establishment in Madagascar in 2005, Ambatovy committed to making a comprehensive survey of all existing cultural and religious sites in its future intervention areas in the localities of Moramanga and Toamasina. The Company’s archaeological team then began the surveys, during which some archaeological rescue excavations had to be made. The work continued throughout Ambatovy’s construction phase (2007-2011), leading to the discovery of many sacred sites, monuments, archaeological sites, and artifacts.

sites) were discovered throughout the preventive archaeological work carried out during Ambatovy’s construction phase. This archaeological work is an important contribution to the cultural history of the eastern region of Madagascar, from Moramanga to Toamasina. For the first time, sites testifying the existence of a dominant interaction between the people of the east coast of Madagascar and those of the central highlands, over a period of about 500 years, were discovered. The discovery of numerous archaeological sites covering a period from the twelfth to the nineteenth centuries creates a new vision of the history of this coastal zone. New archaeological knowledge, used as theoretical tools, has been well highlighted to shed more light on the strong historical past of the intermediate zones between the central highlands and the eastern coast.

beginning under the International Finance Corporation’s (“IFC”) Performance Standard 8. Ambatovy’s commitment leads to respect for all cultural heritage sites, artefacts, or archaeological remains of sites surveyed in the districts of Moramanga, Brickaville, and Toamasina, in accordance with local customs as well as scientific procedures. The route of Ambatovy’s pipeline was repeatedly diverted from sensitive areas that could host monuments and sacred sites. Ambatovy has collaborated with the University of Toamasina and the Centre for Ethnological and Language Studies and Research (“CEREL”), the University of Antananarivo, through the Centre for Art and Archaeology (“CAA”), and the Institute of Civilization / Museum of Art and Archaeology (“ICMAA”) for the treatment, study, and conservation of the archaeological items. The book, “*A Focus on Cultural Heritage*”, can be downloaded at www.ambatovy.com.

Historical Past

4,800 artifacts and more than 260 sites (burial sites, standing stones, sacred posts, as well as holy and forbidden

Performance Standards

More than just a scientific paper, this book focuses on the respect for values, Malagasy traditions and culture, to which Ambatovy has been committed from the



Interview of Professor Jean Aimé Rakotoarisoa

What will we done with all these archaeological objects now?

They will be kept at the CEREL, University of Toamasina, because as you know, these artifacts are not Ambatovy’s property: they belong to the Malagasy state. They will be returned to the Malagasy state as soon as their cataloguing is completed. Of course, they will be given to experienced specialists who will study them. These objects are not intended to be stored in cabinets but to be used for research, for students preparing their master’s degree, for example.

After all these years of research on Ambatovy’s sites, in your opinion, what has emerged from the work you have done?

We now have formal evidence, through the 260 archaeological sites discovered, that the people of the Highlands and the Coast have always been connected, whether in terms of trade or just travel, from the twelfth century up to now. Nothing was invented; there is definite evidence of how people from the East Coast moved to Moramanga, or how the populations of Moramanga skirted Mangoro to get to Ivondro. That being said, I would like to emphasize that all these artifacts were discovered only along the route of Ambatovy’s pipeline. But carrying out excavations from Alaotra - Mangoro to Analanjirofo would also be interesting if financial and material resources were available.

PRIVATE SECTOR

Over 3,000 Companies in Ambatovy's Databases

In line with its commitment to the Malagasy Government, Ambatovy has implemented a program called the "Ambatovy Local Business Initiative ("ALBI")", through its Environmental Management and Social Development Plan ("PGEDS") in order to materialize its "buy locally, hire locally" policy.

As of August 31, 2013, 3,400 companies were registered in Ambatovy's database, 78% of which are nationals. About 570 of them have been awarded contracts with the company. The regions are well represented in order to contribute to the development of the local and regional economy by maximizing the economic benefits in the company's intervention areas.

As a sustainable development driving force, ALBI's mission is to support businesses in the local private sector and to create jobs. The ALBI program's strengths lie in the fact that it is not only limited to company registration, but also provides quality technical support to local businesses (audits, mentorship, and training at the Business Training Center) so that they can meet the national and international required standards with which Ambatovy itself is complying, and also gain access to larger markets. Such standards are a brand of excellence in international markets.

In terms of company audits, Ambatovy has exceeded its objectives. Approximately 320 audits against the 306 originally planned



Business operators from Moramanga in a training session.

for July 2013 have been completed. As for training, 627 training courses were conducted during the same period. The results are convincing and conducted mentorship monitoring confirms that 35% of

the companies reached the high bar of 80 to 100% whereas 39% of them were in the 20-79% range during the 21 types of training that they received.

PORTRAIT : Hasina, Chemical Engineer at Ambatovy

Andriamandimisoa Raeliasinoro, called Hasina, loves this motto: "Together, we are better." Being a chemist, with a *Diplôme d'Etudes Approfondies* ("DEA") diploma in hand, Hasina has been working for Ambatovy since 2011. This dynamic woman works in the den of Ambatovy's plant. Her mission is to provide technical assistance to the production processes. As the Company uses a chemical process called hydrometallurgical process, this post-graduate in Chemistry and Environmental Studies finds her job very fulfilling. "Ambatovy is one of the largest mining operations in Madagascar. The company has several units that are engaged in various activities that bring diverse knowledge. This is what I love most, because with my work, I can build relationships with different groups of people who share new experiences in production, maintenance, purchasing, and shipping," she said. At the time we wrote this portrait, Hasina was off duty because of a happy event. She has just given birth to a delightful 3.6kg baby boy and was on maternity leave. What about being a woman in a male-dominated large factory? Hasina smiled. "Being a self-confident woman, I've never been afraid of working with men. At the university, I used to be the only girl in my class." Her wish is to gain more experience within the next five years and to hold a more senior position. On this, Hasina said that in Ambatovy, especially within her group, "the transfer of knowledge and experience truly exists, since expatriates help us a lot." As far as music is concerned, Hasina is neither keen on jazz nor fond of rap. Deep inside her heart, she loves gospel songs, and even used to be part of a choir. Because Hasina is a believer. "God helps me have faith so that I can improve my life," she said. What does she like most at Ambatovy? The emphasis on the importance of workers' health and safety. Is she proud? Yes, she sure is. Especially for a woman who is able to give new ideas to her colleagues.



In terms of compliance, an average of 73% of large and medium enterprises is currently meeting the standards. The objective is to reach 80% over three rounds of audits by the end of 2016. The efforts are positive and measurable on either side you look at it.

Banjina

Edited by



Editor-in-Chief:
Val Andriamahaitsimiaovona

Editorial Committee:
CSR - ENVIRONMENT - HR - SCM
COMMUNICATIONS

Address:
6th floor, Tranofitaratra Building
Ravoninahitriariavo Street Ankorondrano
Antananarivo 101
Republic of Madagascar

Tel.: +261 20 22 397 37

E-mail: banjina@ambatovy.mg