

# Indonesia's Progress in the Development of Wild Silkmoths

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## Abstract:

Indonesia's wild silkmoths development project has proved to be very helpful in supporting low-income farmers and thus becoming a good model of a "people-friendly" local industry.

This new attempt was especially appreciated given for economic downturn, which hit hard Indonesia in 1997. Amid economic difficulties, this project offered great potential as a new undertaking, and has attracted thousands of people to create a new local industry which will benefit those in many regions. Although the project started as a small-scale local industry, it has gradually gained support from various sectors and has become very successful.

Another unique aspect of this project is that many organizations are involved as equal partners for a common goal to contribute to the well being of individuals in region while maintaining an ecological balance.

We believe that wild silk development is also a suitable model project for other developing countries, as well.

**Keyword:** economic downturn, new attempt, great potent, people-friendly local industry.

## Report of the Conference

The 4<sup>th</sup> International Conference on Wild Silkmoths organized by The Indonesia organizing committee and The International Society for Wild Silkmoths, from April 23 – 26, 2002 was a great success.

It attracted more than 200 scientist / subject experts from 9 countries, including Indonesia the host country. Participants from Japan numbered 96, Indonesia 65, India 24, China 12, Thailand 3, Taiwan 2, Laos 1, Namibia 1, and the Czech republic 1.

The 4 day long conference split in to 5 plenary lectures (57 scientific papers), 2 Workshops (31 presenters), and 2 Poster-sessions (14 posters). During the conference the Organizing Committee also held a Jogja International Silk Exhibition 2002, with 150 participating exhibitors all over Indonesia and 5 International booths.

The Conference provided a great opportunity for scientist and subject experts, all Indonesian participants were very active in interacting with the delegates of member countries, where they exchanges information and discussed how to improve technologies in rearing and post cocoon processing.

## Impact of the Conference

Since the conference, Bombyx silk experts and silk association-leaders from all over Indonesia including; East java, West java, Central Java, Bandung, Garut, Sulawesi, Manado, Maumere, North-Sumatra (Tarutung), Bengkulu, and Lampung,

have contacted Yogyakarta Royal Silk as the pioneer on this effort to discuss follow up activities and collaborate in the research and development with universities and also to popularize the wild silk.

We do hope in the near future we will be able to cooperate with the Indonesian silk Association and establish a Wild Silk Society of Indonesia.

We are confident that the success of the Conference will benefit Indonesia wild silkmoth development and all those who are concerned about the future of wild silkmoths, especially sericulture scientists, researchers and students.

In this occasion, the Indonesia Organizing Committee would like to express sincerest appreciation to prof. Dr. Hiromu Akai president of (ISWSM), who has provided tremendous support, for the development of the Indonesia wild silk project.

We also would like to take this opportunity to thank Dr. Akai for having invited us to attend the 2nd International conference in Hotaka, Japan in 1994. We are now fully convinced that 2<sup>nd</sup> Int. conference, really marked the starting point of this project.

And we are very proud that Yogyakarta, Indonesia, was appointed to be the host of the 4<sup>th</sup> Int. Conference On Wild Silkmoths.



Fig.1 Opening speech by Princess GRAj.Nurmalitasari Chairman of Indonesia Organizing Committee



Fig.2 Inaugural ceremony by Ministry of cooperation on the Republic of Indonesia (Mr.Ali Marwan Hanan SH.)



Fig.3 Keynote speaker from the Hon'ble Ministry of Tourism, Art & Culture, said "wild silk would be promoted as an alternative ecotourism project."



Fig.4 Hon'ble keynote speaker Prof.DR.Soejarwo (Former Ministry of Forestry/Chairman of Yayasan Wana Jaya the one who received Louis Pasteur award in Indonesia.



Fig.5 Ministry of Cooperation, and His Royal Highness Sri Sultan HB X visits Yarsilk Booth (pioneer of Indonesia wild silk) to see the Attacus spinning process.



Fig.6 Mrs.Fitriani show the Attacus & cricula cocoon to His Royal Highness Sri Sultan HB X and Hon'ble Ministry of Cooperation .



Fig.7 Her Royal Highness visits the Japanese booth escorted by Mr.Kuroda ( from Int.Society for wild silkmoths)



Fig.8 "Laos booth " attracted many visitors and Yogyakarta designers.

## Background of Indonesian Wild Silkmoths Development project

The wild silkmoths development project in the republic of Indonesia "was initiated by the Yogyakarta royal family in 1994.

The aim of the royal family in initiating this project was firstly to uplift the income level of low-income farmers in the region, by creating a new wild silkmoths industry. Another aim was to revitalize and further promote the traditional crafts of Batik and Ikat by making the best use of products of the wild silk.

Although the project started as a small-scale local industry, as its people-centered concepts disseminated, individuals and related local industries saw great potential in this new undertaking, the project gradually gained support from various sectors and has become a very successful local industry.

Yogyakarta has its own traditional culture of coloring-dyeing and weaving, BATIK and IKAT, which has been quite well. However, almost 50 % of Batik silk material has been imported from abroad.

The proposal presented by our Team was to promote this new material of "wildsilk" as an "alternative" to the traditional dyeing and weaving of *Attacus* and *Cricula*. We stressed that this project would attract many people and promote the local industry. Her Highness agreed to this idea of creating a new local industry, which would benefit people in the region.

This new attempt was especially appreciated given an economic downturn, which hit hard Indonesia in 1997. with the economic difficulties, this project proved to be very helpful in supporting for low-income farmers and thus becoming a good model as a "People-friendly" industry.

Another unique aspect of this project is that many organizations are involved as equal partners for a common goal; which is to contribute to the well being of people in the region while maintaining ecological balance. Each organization has a role to play in advancing the wild silkworm development plan smoothly.

The wild silkworms, which this project focused on, in Indonesia, are *Attacus-atlas* and *Cricula Trifenestrata*.



Fig.9 *Attacus Atlas* (The world biggest moth) , cocoon, caterpillar ,and eggs.  
The *Attacus* cocoon produces a good quality of spun yarn and textiles, for its glossiness, softness, its smooth, cool-feel and fine appearance.



Fig 10. *Cricula Trifenestrata* or the “Golden cocoon”

Surprisingly, this beautiful cocoon had no value until this project started. Now we can see this cocoon everywhere. In the past what we knew about the worm was that it is very itchy, and no one wanted to touch it. From the past to the present, *cracula* had long regarded as a useless insect in Indonesia. However, this project totally changed peoples perception of this worm and now many people enjoy the beauty and advantages of its silk. For many silk creators, the unique gloss and gold color tone of these cocoon make an extremely attractive material. New types of cracula textiles are eagerly anticipated if production can be increased in the near future.



Soursoup : *Annona muricata L.*



Mahogany : *Swietenia mahogany Jacq.*



Indoor reared cocoon



Dadap : *Erythrina lithosperma Miq.*



Kedondong



Avocado : *Persea Americana Mill.*

Fig 11. *Attacus Atlas* Cocoon Color is different each host plants.

The color of each depend on the host plants consumed. Color is silver in soursoup, deep brown in Mahogany, Goldish in kedondong, chocolate in avocado , black in Teak wood, and light brown in erythrina. These color tones are very interesting when we produce spun yarns and textiles, they have a beautiful natural color .



Fig 12. In 1995, Mrs. Fitriani Kuroda demonstrated the first spinning machine in front of Her Royal Highness and explained the method of spinning Attacus Yarn. Her Highness was very impressed by the glossy and softness of the Yarn.



Attacus yarn



Cricula yarn

Fig 13. We are very careful in controlling the yarn quality; each spinner has her own character and customers request different types of Yarn so we can maintain the detail record of every spinner such as: name of spinner, Date of yarn was spun, length, weight, and denier are recorded. This record is very helpful for the spinner and customer, can acquire product knowledge with a "personal touch".



Fig14. Obi (for a traditional Japanese Kimonos) produced by Japanese artist, Mr. Masukura, is a pioneer using Attacus Yarn for Obi and Kimonos.



Fig 15. These are agricultural by-products: banana plant-fibers, pineapple, bamboo, and mulberry silk, created by Mr. Masukura. Many Japanese designers have said that Attacus is very easily combined with any other kind of natural fiber.



Fig 16. This picture is Prambanan temple (logo mark of Royal Silk) a beautiful combination of Attacus and cricula's spun Yarn.



Fig 17. Sheet of the golden cocoon are used for handicraft, such as lamp shade, hand bag, wallet, etc.



Fig 18. We held a very successful exhibition in Kitakyushu last September 2001 attracting about 5.500 visitors to our booth during the 5 day event in the EXPO. We were pleased to see many textile designers from Japan showing keen interest in Indonesian wild silk textiles. Due to the Indonesia Friendship association Kitakyushu and Kitakyushu Cultural Exchange Association, the exhibition ended in great success.



Fig 19. A spectacular Fashion show of Cricula and Attacus Textiles which designed by member of Kitakyushu Culture exchanges association, was held at the Royal Palace Gala dinner on April 26,2002 performed by Indonesian models.

All members of Kitakyushu Culture Exchange was attend the 4th International Conference in Yogyakarta, and it was such a great pleasure.



Fig 20.Cricula golden cocoon for the interior and wall papers.



Fig 21.Cricula textile was specially designed for Kyoto - Scoop Annual Textile Exhibition



Fig 22.A Japanese traditional obi which combine a traditional batik design and wildsilk fabric.



Fig 23. These are Attacus and Cricula Batik. one of our goal to connect a traditional method of Batik with wild silk , was turned out well .



In 1995, when we were escorting Dr. Akai on a visit to Prambanan Temple, we saw many Attacus-cocoons in the trees surrounding the Ttemple. That is why this temple is so meaningful to us in our efforts and inspires us in this project.

The Indonesia Committee also uses Prambanan Temple in its logo mark to introduce the image of Yogyakarta and the local Temple, because it has a historical meaning for the Indonesian wildsilk project.

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