

# Silk Tidings

## Greetings from Salt Spring Island

Summer seemed to go far too quickly this year. We had a very late spring and our tomato plants shivered and sulked until August. With the sound of crickets and grasshoppers, much less warmth in the sunshine, the migration of the summer birds and longer nights, fall is most definitely here. It is that busy time of year on the other end of the gardening season. We are harvesting, canning, drying and

freezing the abundance from the garden. Growing one's own food gives the same sense of pride and accomplishment as making one's own cloth or yarn.

With shorter, cooler days come daydreams and plans for art projects. Check out the funky sari silk bag and other projects in the Treenway Treasures section and all the specials, many of which are 50% off. We know you will find some inspiration there

to get you settled in the studio for the cooler weather coming on.

### Clay/Straw House

As I write this, we are slowly moving in. On the weekend, we made a list of the finishing touches for each room. The masonry stove is complete and the beams have

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## Silkster's Gallery

We have a new gallery of diverse and beautiful work to inspire you to head to your studio with the impending fall weather. Enjoy your fellow artists' creativity at [www.treenwaysilks.com/gallery.html](http://www.treenwaysilks.com/gallery.html). We are always grateful to those who take the time to share their art.

**Debbie Baier** of Quadra Island, British Columbia, collaborated with her friend Bertha Pisarchuk to make a silk fusion bag.

**Janice Dowthwaite** from Ridgetown, Ontario, is involved in a heartwarming project in Australia. You will enjoy the embroidery she has done for this project.

**Karen Ely**, who works at Treenway Silks, is just learning to weave and made

a stunning shawl for her second weaving project.



**Akaleka OwlEye** of Victoria, British Columbia, fashioned a lovely, lustrous nuno felt scarf.

**Ida Marie Threadkell** from Salt Spring Island, British Columbia, designed and made a unique silk fusion necklace.

*Silk fusion necklace by Ida Marie Threadkell.*

### Call for Entries

Our next Silkster's Gallery will be in our February issue. We encourage all of you to send photos of your work using Treenway silks. It is fun and inspirational for all of us to see what unique work is being produced. We reward you for your time with silk product from Treenway.

See our web site for details of what we require from you to participate in this exciting gallery. We so look forward to your entries.

[www.treenwaysilks.com/gallery.html](http://www.treenwaysilks.com/gallery.html)

Treenway Silks is located at 501 Musgrave Road, Salt Spring Island, BC, Canada, V8K 1V5. You can reach us toll free at **1.888.383.SILK (7455)** or at 250.653.2345 or by fax at 250.653.2347. Email us at [info@treenwaysilks.com](mailto:info@treenwaysilks.com). See our website [www.treenwaysilks.com](http://www.treenwaysilks.com).

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## Greetings from Salt Spring Island

received another coat of tung oil. We scrubbed and waxed the earthen floor to a rich deep burnt umber brown. We are glad the move in is slow as it seems surreal after 10 years of living in 350 sqft space.

### Masonry Stove

The stonework on the stove is a sculptural work of art.

Terry, Mike and Silas chose each stone for shape and colour. There is a section we call the crystal garden, some petrified wood Terry's mum collected from Alberta, arrowheads Terry found as a boy, and opal embedded in stone from Cuper Peety in Australia. It is a mosaic of a lifetime of treasures and memories. In addition to all the stones collected over the years from special places in anticipation of building a stone fireplace. The bulk of the stone came from our property.



### Kitchen finished

The kitchen is finished including 12 coats of tung oil on the yew wood on the countertops and the peninsula. Yew is a rare and special wood to our area. Terry has been collecting any small pieces that he has found or that have come his way for a long time. The pieces were all sawn and laminated together to make the counter tops. The colour is deep and rich and beckons you into the kitchen.



### Treasure Shadow Box

We have collected many fascinating little treasures from close to home and from far and wide during our travels. These cherished items can get lost in a home, so I asked Silas to build a shadow box in the telephone nook off the kitchen to house these prized memorabilia. The spools of thread are real gold from India.



From left, clockwise:  
Kitchen, masonry stove including a oven stove, Shadow box

### Recycle Room

I am so thrilled; I have a recycle room. I started hauling my newspapers, glass and cans to the recycling depot in 1967 before it was a household word. The recycling "stuff" has always been a dilemma: where to put it, how to store it, how to keep it dry. There is nothing worse than having to deal with soggy recycling. We designed drawers with built in containers for all the categories of recycling as well as the dog food and cat food.

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## Greetings from Salt Spring Island

We also put in a sink and counter space in this room so it could be my first stop from the garden: a place to arrange my flowers and wash off the beets, carrots and other earthy veggies.

### Unique Doors

We have a few, very special, hand made doors in our house. Two are very old and made of capis shell from the Philippines. On the door leading into our bedroom, each little pane is a shell placed in a mahogany frame and on the door leading into my studio has shells placed in a teak frame.

Many hours were spent scrubbing with a dental pick and toothbrush to get the shells and doors clean. After the applications of mineral oil to bring up the shiny quality of the shells and tung oil on the old dry wood the doors can be appreciated for the true works



of art they are.

Mike designed and built very elegant closet doors made of fir and bamboo blinds. The blinds let the closet breathe and give an Asian appearance.

There is still some work to complete including outside stonework and stairs plus the downstairs bedroom and bath. Then Terry's woodworking shop needs to be cleaned and organized with lots of shelving after using it hard these past two years. All of this can be done while we are living snug as a bug in a rug cooking good food in that beautiful kitchen and enjoying the warmth of the masonry stove as the weather turns to winter.

In January (when we should be nearly finished) it will



*From left, clockwise:  
Closet doors made from  
bamboo blinds and fir; capis  
shell and teak frame door in  
the stuido*

have been a four year journey. But as one friend said recently, "Now I totally get it; this is truly a handcrafted house." That statement is, oh, so true. The house also holds the love and energy of gifts of building materials, ideas and labour from so many family and friends that vibrate through the walls to add another kind of warmth to accompany the masonry stove.

# The Pulse of Treenway

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*We are a busy little operation with many people doing a variety of things to enable us to offer the best products in a friendly, caring efficient manner. In this issue we would like to introduce you to another of our talented dyers.*

## Linda Frost

Linda is one of our awesome, skilled dyers who helps to dye the variegated Montano Series, and silk by-products: throwsters silk, hankies and cocoon strippings. All of these products take the dye differently from one to the other. Creating a reproducible colour on many different items is a skill and talent we admire and feel proud about all of our dyers. Dyeing can be a fickle process with many changing variables, so requires perseverance and patience.



Linda came to us as most of the Treenies have, through word of mouth. Espresso whom you met in the Sept 09 newsletter, introduced us to Linda who lives across the street from her. It is a wonderfully serendipitous thing to find someone who dyes and loves colour and wants to work with reproducible products. Linda's dye studio is downstairs in her house, it has a lovely view to the back garden. Her studio is very organized with hanging pots, drying racks and all the other accoutrements in their places.

She started dyeing as a child when she wanted her clothes or shoes to be a different colour. She told me the story of how her mother was empathetic and encouraging of Linda's love of textiles, even after she dropped navy dye on her mother's gold wool rug.

She acquired her huge interest and passion for textiles sitting with her milliner/tailoress grandmother as she worked at the sewing machine. Grandma had her sewing buttons at the age of three and the rest, as they say, is history.

Linda is also a master gardener with training in permaculture and she has some gardening clients. She works part time at the small spinning mill here on Salt Spring Island, processing fleece for batts, roving, felt, duvets and spinning. She works at everything including washing, picking, carding, drafting, felting and spinning. She has been an astrologer for 38 years, contributing to Vancouver radio and TV shows as well as doing readings at women's camps and by word of mouth.

Like everyone else here, Linda is extremely resourceful, juggling her many talents to make a living on a small island. We are very fortunate Linda was led to our path. She colours us brightly.

## Thank You & Farewell to Jill Bailly

Jill has been with us since the spring of 2003 and retired in May of this year. She has done immersion dyeing for the many conferences we have attended as well as for your orders. Most recently she was our "waste management" dyer. Jill has a fabulous sense of humour and coined this phrase for the dyeing of all the silk funky fibres.



In the past few years Jill has concentrated her artistic efforts on pictorial felting and her work is stunning. We are proud that she exhibited in her second show this summer and sold both pieces she entered. What a great introduction to retirement along with a new grand baby.



We feel very privileged for the talent, dedication and time that Jill shared with us and we wish her all the best in her future endeavours.

# Treenway Treasures

## Recycled Sari Bag

The combination of recycled silk yarn in the warp and recycled sari yarn in the weft make this a very colourful, textural and funky bag and extremely fast to weave at 4 epi. There is a kaleidoscope of colours within each skein. Blues, greens, purples, yellows, reds and oranges are gaily mixed together. (The yarns do not come in specific colourways.)

This is a perfect rigid heddle loom project. (Ashford's Knitter's Loom is ideal.) The bright colours will delight any child that shows an interest in weaving.

The recycled silks are made by a women's cooperative in eastern India. The yarns are made from scrap silk produced as a by-product of sari manufacturing. Spinning on a drop spindle, charka or wheel is often an outdoor village occupation so there may be the odd bit of leaf or straw caught up in the yarn which is easily removed while you are working. Making these products enables the women to earn much needed income from this cottage industry.

### Warp

Recycled silk yarn, approx. 80 yd/skein  
There are some knots in the yarn, but I just let them be; they blended into the fabric after washing and drying.

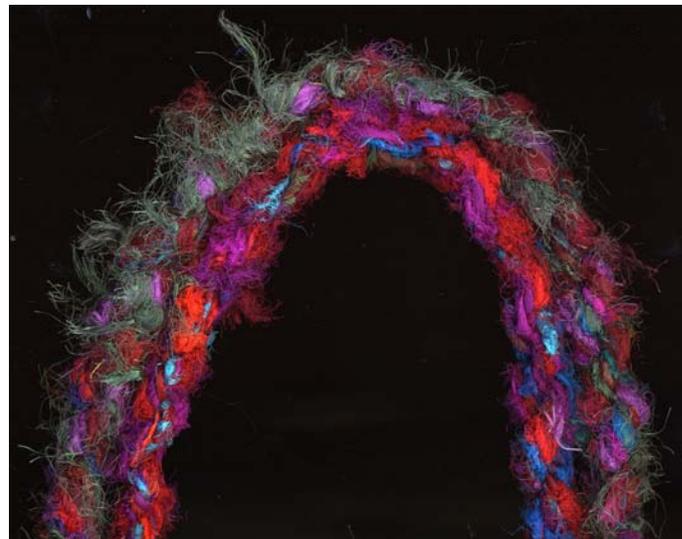
### Width

18 inches on the loom, 16" finished.

### Sett

4 epi

Use the largest dent reed you have so the threads and their knots will be able to slide through the dents easily.



### Weave Structure

Plain weave or tabby.

This is the best weave to accommodate all the inconsistencies in the yarns.

### Length

36" per bag.

I put on enough warp for five bags as I thought they would be very welcome gifts for my young and mature friends alike.

### Weft

Sari yarn, approx. 60 yd/skein – beat in at 6 ppi (picks per inch). This yarn is made by spinning strips of saris together. There are some knots in the yarn but they seem to disappear in the fuzz of the fabric.

### Washing

Wash in warm soapy water; the yarns still smell like India. The colours did run a bit, but not as much as I expected. I put the cloth in the dryer until totally dry. The cut ends of the sari yarn fluffed out and hid some of the inconsistencies in the yarn as well as the knots.

### Finishing

I made an open shopping bag with a twisted cord shoulder handle. (see May 2010 Silk Tidings newsletter) A drill was used to twist the cord which I sewed on the inside of the bag. I turned the fringe to the outside of the bag to add to the crazy funk and I lined it to help take some of the weight of the veggies and cheese I will be putting into my bag.

Recycled Silk Yarn Regular: \$20.00/80 yard skein  
**Sale: \$10.55/skein**

Sari Yarn Regular: \$30.00/60 yard skein  
**Sale: \$8.35/skein**



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## Coastal Waters Fishes on the Line

I set myself a challenge to use the items in each of our Creative Silk Packs available in six colourways in six different projects: Coastal Waters, Eat Your Greens, Freshly Plowed Fields, Summer Sunrise, Wild Berries, Winter Night Sky.

Each pack contains 20g of fun with cocoons, silk rods, throwsters silk and silk hankies. The September 2009 issue of Silk Tidings newsletter has the projects made with Wild Berries and Winter Night Sky.

[www.treenwaysilks.com/newsletter\\_sep09.pdf](http://www.treenwaysilks.com/newsletter_sep09.pdf)

The Coastal Waters Fishes on the Line are cut out of a fused silk hankie. The rods were cut and appliquéd and the throwsters silk was needle felted on for design elements. The double sided fish are stuffed with noil silk fibre. The cocoons were cut and embellished with beads and charms to represent jelly fish.

The fishes will twist and turn, bringing joy to my grandson's room. A similar project could be used to brighten a dark corner in a bathroom or anywhere in the house.

Price of the Creative Silk Packs are \$19.95 each.



## Sari Strips – Spun into Yarn

Cheryl Wiebe, one of our very skilled and talented dyers, is also a very fine spinner. I could see the wheels of her mind spinning (pun intended) when she first saw the sari strips. She thought it could make a very interesting yarn. Being an avid recycler, Cheryl incorporated her thrums into the yarn. Here is what she says about making the yarn:

*Several thrums of 8/2 were tied together leaving the tails as a design feature. After creating several lengths of this, the first one was spun Z on an Indian Head spinner adding more twist. Each sari strip was folded in half so that the unwoven sections could flare out, and the woven end was tied to an 8/2 length. Spinning continued so that the sari strip twisted just enough to make a yarn, then another length of 8/2 was tied to the second end. This alternation between sari strip and 8/2 thrums continued until the yarn was complete. A second ply of continuous 8/2 thrums was created, twisted Z, then plied S with the sari strip ply to balance the yarn. Each end of the 2 ply yarn was tied to hold the twist.*

Sari Strips - \$4.95/2-3 yds -or- \$21.50/100g



# News

## New Brochure

Susanna has designed a stunning new brochure. It folds out into six panels (11"x17") with gorgeous colour photos of all our products. Please ask for as many as you need for an upcoming event you might be hosting.



## Rise in Silk Prices

Over the past three years we have had a price increase with every yarn or fibre we ordered from China. We have hung on until the last minute before having to pass the price increases on to you.

All of the silk product prices will increase by 8% as of October 15, 2010.

# New Products

## 30/2 Tussah Spun Silk



We have a new shipment of tussah yarn in a yummy light tussah beige colour. Tussah silk is produced by a wild caterpillar that lives mainly in China, India and Korea. There is a variety that lives in temperate climates and another that lives in tropical climates. However, there is a common factor in all of their food sources: the leaves they eat contain tannin. This is also the substance

in tea that stains your teacup beige. The tannin in the leaves gives the silk its natural honey colour. These feisty caterpillars have thwarted all human's efforts to domesticate them. To read more about their fascinating life cycle and their attentive caretakers see Treenway Silk Tiding newsletter issues Jan 2009 – May 2010.

[www.treenwaysilks.com/newsletter.html](http://www.treenwaysilks.com/newsletter.html).

The twist of the yarn is just right, not too tight and not too loose. It will wear well yet make a soft cloth. It will perform well as warp or weft with many of our other yarns that are similar in weight: 30/2 silk, silk/angora, silk/bamboo, silk/camel, silk/cashmere, silk/cotton, silk/ramie, silk/wool and silk/yak. The sett varies from 28-36 epi depending on whether it is woven in tabby or twill. The skeins weight approx. 100g (3.5 oz) and have approx 6,600 yd/lb or approx 1,300 yd/skein.

The price is \$231.00/kg or \$23.10/100g skein.



*120/8 Tussah Silk warp with 28/2 Silk/Cashmere (80%/20%) weft in 4 Shaft Plain Weave and Twill, sett 32epi*



*120/8 Tussah Silk warp with 60/4 Silk/Wool (30%/70%) weft in 4 Shaft Plain Weave and Twill, sett 32epi*

### NOTE on SPECIALS

1. Prices do not include shipping.
2. Specials end December 31th, 2010.
3. Regular 10% Discount: Our normal Bulk Discount for orders of silk yarns and fibres over \$150.00 CDN does not apply to Specials items.

### Remember

All prices are in Canadian funds.  
Approximate exchange rate: \$1.00 Cdn = \$0.98 US

### Web Specials

In addition to our newsletter specials, we have specials posted on our website. We notify everyone on our email list each time we post new specials. You can also check our website periodically. See the Specials button in the drop-down menu or go to [www.treenwaysilks.com/sale.html](http://www.treenwaysilks.com/sale.html).

If you would like to be added to this list, please send us your full name and email address to [info@treenwaysilks.com](mailto:info@treenwaysilks.com). Please add us to your address book to ensure you receive our emails.

# Specials

Still Spring Cleaning! 25% – 50% off

## 30/2 Bleached Camel / Silk Yarn

45% Camel / 55% Silk



The majority of camel hair comes from the two-humped Bactrian variety, which survives in extremely cold climates. Camel hair is comprised of two qualities: relatively coarse outer hair and inner down fibre. Shearing, combing or collecting the hair shed during molting season are the various ways of obtaining the fibre. Fibre length is approximately 1" to 1½" with the best coming from Mongolia and Inner Mongolia. An expensive process of separating the long coarse hair from the down, called dehairing, is necessary before spinning yarn. The longer hair is used in making felt for Mongolian yurts. The camel down keeps the camel warm and yields a lightweight and warm fibre with a nice lustre for our use.

The short fibre acquires length, shape retention, sheen and durability when blended with silk. The yarn is strong, yet cuddly and scrumptious to weave. The cloth has a nice drape and a soft and warm hand that makes delicious unisex scarves and sweater/jacket weight fabric.

Some bleached white silk/camel yarn was sent to us by mistake. It feels as lovely as the traditional camel colour and we have used it as a scarf warp and crossed it with a number of our other yarns. The sett varies 30-36 epi depending of whether it is woven in a tabby or twill.

The skeins range between 95-100 g (approx 3.5oz) with about 1470 yd/skein.

Regular Price: \$25/100g skein.

Discounted 50% off

**Sale Price: \$12.50/skein** (approx 100g)



*Clockwise from top left: with 120/8 Tussah Silk; 30/2 Bombyx Silk; 30/2 Rabbit Angora/Silk; 30/2 Tan Camel/Silk; 32/2 Yak/Silk; 28/2 Cashmere/Silk*

## 6 Strand Floss



We had this yarn produced specifically for our stitchers. It is 6 strands of 60/2 yarn plied firmly together. As usual, when we make our orders, we must order a minimum of 100kg. You can imagine that will last a long time if it is used only for stitching.

It is also a beautiful yarn to use for weaving or knitting. The twist is firm, but not tight, making it a good choice for any project because it will have less chance of pilling. It will also hold its shape very well. It would make a very nice blanket or "sweater" weight fabric. The set varies from 14–20 epi depending on whether it is woven in tabby or twill.

The skeins weigh approx 100g–120g (3.5–4.2 oz) and has approx 2,450 yd/lb or approx 490–580 yd/skein.

Regular Price: \$238/kg.

Discounted 50%!

**Sale Price: \$119/kg** or approx \$11.90–\$14.30/skein

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## Gulf Island Series

We are selling out the Gulf Island Series at 50% off. These little cards of luscious colour and texture are great for all types of embroidery, needle arts, stitching, quilting, embellishing, gift wrapping, tassels, paper arts and much more.

The colour ways bring you hidden treasures from the Gulf Island of British Columbia:

Blackberry Point, Breezy Bay, Captains Passage, Kingfisher Point, Poet's Cove, Rendezvous Island, Retreat Cove, Rose Islet, Rum Island, Savary Island, Secret Island, Spotlight Cove, Telegraph Harbour, Tugboat Island, Tumbo Reef, Village Bay, Winter Cove

Each colourway consists of 10 yards of each colour in four different types of silk threads for a total of 40 yards:

- 20/2 Spun Silk Thread (equivalent to #8 perle cotton)
- 6 Strand Floss
- Fine Cord Reeled Silk (equivalent to buttonhole twist)
- 8/2 Reeled Silk Thread (equivalent to #3 perle cotton)

The 20/2, Fine Cord and 8/2 come in our hand-dyed solid colours and the 6 Strand Floss in one of our variegated Montano Series colours.

Regular Price: \$12.95

Discounted 50%!

**Sale Price: \$6.50/card**



Winter Cove



Secret Island Village Bay Rendezvous Island Tumbo Reef



Rum Island Spotlight Cove Telegraph Harbour Tugboat Island



Rose Islets Poet's Cove Savary Island Captain's Passage



Blackberry Point Breezy Bay Kingfisher Point Retreat Cove

## Tussah Noil Fibre

Noil fibre consists of the remains from spun silk (the second quality of silk after reeled silk). To prepare silk to be spun, the longest and shiniest fibres are carded and combed leaving the short fibres containing crushed pupa behind. The short fibres and little neps give the noil fibre a nice texture for spinning or silk fusion. Our tussah noil is light in colour with a hint of sheen.



Celia Quinn, our spinning consultant, has given us her suggestions for the best spinning methods using tussah noil fibre. Read her insights on our website [www.treenwaysilks.com/inout\\_spinning.html](http://www.treenwaysilks.com/inout_spinning.html). You will see one of Celia's favourite things is to take advantage of the short fibres to make knickerbocker yarn with little 'spots'.

Noil has the strongest silk aroma of all the silks due to the impurities in it. The majority of the scent dissipates after washing but can return again when wet.

Regular Price: \$2.75/25g (0.9oz)

Discounted 25%!

**Sale Price: \$2.05/25g**

# Asian Journal

## Muga, *Antheraea Assam* – God's Gift to Assam Assam, India

Our January 2009 newsletter gave a brief introduction to the three types of wild silk we visited in India. The last four newsletters since then have delved into the caterpillars, moths, caregivers and cloth of tussah. Now, we will begin the saga of the muga caterpillar, a cousin of tussah.

All silk worms pass through the same four phases: egg, larva or caterpillar, pupa (cocoon forming stage when silk is produced) and moth. The Asian Journal section of the May 2009 newsletter gives more information on each phase.

### Journey to Assam

We left the comfortable home, food and company of our dear friends in Delhi for the chaos that is Guwahati, the capital city of Assam. The smiling face of our friend, Sarat, awaited us at the airport. He arranged a car and driver for our journey to Kaziranga, a national park brimming with wildlife. We call the usual method of driving in India "the swerve technique". The roads in many places are really only wide enough for one car so traffic travels down the middle of the road in both

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Top: Wild Grass Resort  
Above: Dining room  
Right: Manju, Wild Grass Resort owner





Above and right: Deer and mother and baby rhino in Kaziranga National Park  
Right: Terry and Karen returning from a morning in the park

directions until the very last minute when they both swerve to avoid a collision. Our five hour journey became even more harrowing and scary as the light faded and the road work got progressively worse. We continue to make this trip because of Wild Grass resort run by our friend, Manju, and being able to get so close to the wild animals while riding atop an elephant.

### Kaziranga

After warm greetings, Manju led us to his study for beer and some of the most delicious food in India. Soon enough our long journey faded into a fog. We awoke at 5am to tea and toast outside our door. By 5:30 we were in a jeep traveling into the park. As the day was slowly unveiling, we climbed many stairs to a platform where we could mount the elephants, either 2 or 4 of us per saddle. As the sun rose, we slowly ambled through the



eight foot tall grass, squinting at shadows which clearly became a variety of deer, numerous birds and the rare Asian one-horned rhinoceros. We were thrilled by the many rhino moms and babies we saw. We tracked tiger foot prints later in the day but never even heard a roar.

One more day in the peace and comfort of Wild Grass and trips into the park, fortified us for the drive

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*Below left: Traffic in Guwahati*

*Below right: Terry getting ready to enjoy a beer on the roof top of our oasis in Guwahati*





*Brahmaputra River*

back to Guwahati. Our guest house on the hill above the city became our oasis from the noise and pollution for the next five days.

### November 23, Friday - Journal Entry

*Every morning here is a gift, waking to the sounds of birds, sweeping, chickens, cows, goats, kids and life (chopping, dishes clanging, and people chatting). The balcony has clay pots of bougainvillea and other plants. We look out over the Bhramaputra River. Our road down the hill is long and gravel past many goats and people. One small shop has a telephone outside for people to pay for a call. Finally we reach the main road into Guwahati – what a mess. It is extremely polluted with the smell of diesel and other???. It is organized chaos. Cars, trucks, 3 wheelers, bicycles, scooters, cows and people all share the road with apparently no rules. Two lanes become 4, goats lay in the middle of the road and cows wander in and out. Somehow it works, most of the time.*

The Brahmaputra River comes out of the Himalayan Mountains, flows through Assam, Bangladesh and empties into the Bay of Bengal. This river creates an eco-system like no other in the world. It is home to the largest diversity of orchids, as well as the muga caterpillar. Attempts have been made to raise muga in other parts of the world, but the necessary weather, humidity and attentive caretakers only exist in a small pocket of Northeastern India.

We have always been graciously assisted by the government agency, the Central Silk Board when doing our research. The CSB consists of a team of scientists and humanitarians who are dedicated to promoting silk



*Muga caterpillar just beginning to spin its cocoon in a leaf jail*

and improving the lives of the caretakers and producers of silk. They are directly involved with the silkworm rearers and accompany us to the villages.

### Diversity of Crops per Year

Muga silkworms produce four generations during the year. These continuous crops are mandatory for their survival. The cocoons from two of the crops, Nov/Jan and May/June, are especially good for making silk yarn. The Sept/Oct and Mar/Apr crops are better for producing sturdy cocoons to be used as “seed” that will ensure the regeneration of the species. The commercial silk crops are raised in Upper Assam on the tender leaves of the som trees which are easily digested. Lower Assam produces the crops for seed cocoons on the leaves of the soalu tree. These leaves are harder to digest which produces a more sturdy stock of caterpillar.

### Muga Eggs (seed)

With the help of the CSB things have changed considerably for the muga farmer since my first travels to Assam nearly 15 years ago. Today 30% of farmers buy DFLs (disease free layings) eggs provided by the CSB. The DFLs provided by the CSB are good quality basic seed which do not carry disease. Disease usually plagues a crop just a day or two before the silkworms are ready to spin their cocoons after the farmer has invested 28-30 days of intense care. Beginning the rearing process with DFL eggs, allows the rearers to see more profit for their labour.

The other 70% buy seed cocoons. They are much

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attuned to the quality of caterpillars and feel they get the very best seed by observing the silkworms for their stock. Most of these commercial cocoon producers live in upper Assam and travel a long distance to lower Assam for the seed crop. They arrive at a seed producers home and stay for about ten days. They examine the larvae for colour, form and absence of disease. While visiting the seed farmer, the upper Assam rearers make special bamboo baskets. Each basket holds only one layer of cocoons and they are made to stack one on top of the other with lots of air space between layers. After the caterpillar spins the cocoon they let it rest 5-6 days before making the journey back to their farm in upper Assam. They travel at night, to avoid direct sunlight and to minimize fluctuations in temperature and humidity.

### Government Grants for DFL Farmers

The CSB has a plan for DFL eggs versus seed cocoons. They give farmers enough money to plant food trees, build a grainage (mating house) and kits to examine the mother moth for disease. Their goal is a 1:10 ratio. This means they give one set of eggs and want to receive ten sets of eggs in return. We visited one of these farms which had a very well organized and spotless grainage and a healthy "orchard". This has become very lucrative as a part time endeavour in addition to raising other crops.

The CSB have given 500 grants thus far. It is frustrating for them because it can take so long to get from the federal through the state government channels before it can go to the farmer.

### Mating

Moths emerge at dusk two to four weeks after their cocoons have been completed. The female moths are tied to bundles of ulu-grass straw called kharikas, where they will deposit their delicate eggs in a safe place. The threads secure the females' bodies under their wings. The kharikas are hung in trees, where the male moths find the females.

After mating, the females lay eggs covered with a brown substance that helps them stick to the straw. Cloths are laid on the dirt floor under the kharikas to facilitate recovery of eggs that don't stick. Special small baskets with handles, called cradles, are made to collect the fallen eggs. Each moth lays between 200 and 250 eggs over three or four days, and dies within seven or eight days.

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*Above: Muga female moth tied to kharika to lay her eggs*

*Below: Newly emerged muga moth*

*Below left: Farmer's seed grainage provided with a grant from the CSB*





Far left: Cradles hanging in a tree with baby caterpillars venturing up into the leaves.  
Left: Muga egg cradle with baby caterpillar  
Below: Egg cradles



Baby muga caterpillars munching on a leaf

### Feeding the Muga Caterpillars

Muga caterpillars do not have their meals catered, they eat outside in their food trees. They thrive on various indigenous plants. Their primary food sources are som trees (*Machilus bombycina*) and soalu trees (*Litsea monopetala*).

Som trees prevail in upper Assam, where the commercial cocoon crop is raised. These trees produce excellent cocoons, as determined by shell weight, silk ratio and reelability. Soalu trees are more common in lower Assam, where seed cocoons are produced. They produce healthy moths which lay many eggs.

Finding food for muga larvae presents problems for some growers. A rearer who does not own trees must rent them, often at a cost of 50 percent of the crop.

To help with this problem, the CSB has established orchards which are rented out at a cost of 10 percent of the crop. The CSB also makes som and soalu seedlings available for nominal prices and provides instruction on growing trees to keep them healthy, short and bushy, which facilitates care of the larvae.

We visited Naren, his wife and grown son, of the Rava tribe on their 4 acre jungle/hillside farm when their muga silkworms were only days away from spinning their cocoons. It was a good crop of about 60,000 caterpillars. Their 25-30 foot soalu trees were tied with banana leaves making a band about three feet from the ground. The larvae do most of their eating in the morning and evening when it is cooler. During the heat of the day, they travel down the tall trees, but the banana leaf bands keep them from moving any further so they turn and crawl back up the tree.

The banana leaf band is helpful during two phases of the rearing: when the trees are getting defoliated and when the silkworms are ready to spin their cocoon. Naren's son was gently collecting the large caterpillars at the banana leaf bands and placing them on a triangular bamboo sieve, called a chalani. The chalani is placed on a long bamboo pole and lifted into a new tree when the previous tree becomes defoliated.

Naren and his family also raise rice, oranges, beetle nut and banana as well as the silk. However, the muga

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is the most lucrative with the recent price setting for cocoons by the CSB. Sometimes income from the silk is not assured. The crop before this one only had 2,500 cocoons because there were too many foggy days and the silkworms caught a fungal disease.

There are more farmers today, due to initiatives introduced by the CSB, including a better price for cocoons.



### After a day in the Field

On the way back to Guwahati after a long day's journey to visit two farmers, we stopped with our guide at a night market. The delicacy of the day was fish. Women vendors squatted behind their aluminum bowls with water and a wooden board on top. There was a small kerosene lamp on the top of each board. The lamp was lifted off and the board shifted to show the flopping fish inside, measuring from one inch size to larger bull head fish and our driver and guide treated themselves to fresh fish to take home to their families.

*Below left: Mature muga silkworm  
Left: Full grown silkworms just a few days away from spinning their cocoon  
Below: Naren and his family collecting silkworms at the banana leaf, ready to transfer to another tree*

