BY JILL POWERS

Chambers of Silk

I THINK OF THE SILKWORM as an ancient textile artist . . . and my secret collaborator. Our relationship began years ago when my husband brought home silkworm eggs from his elementary school class. We fed the emergent silkworms fresh mulberry leaves from trees in the neighborhood. I loved watching them grow, spin their cocoons, and emerge as velvety white moths. At that time I was a graduate student in fiber arts. My work with translucent sheets of handmade paper led me to experiment with plant fibers of many types, including mulberry leaves. I never imagined that the observations of the silkworms would later inspire my studio work.

Over time, my studio in Boulder, Colorado, became a laboratory of innovative work with unusual natural materials. I developed new techniques for sculptural uses of an Asian plant fiber from the mulberry family, called kozo, traditionally used for making "rice" paper. The process I developed is partly like making bark cloth (from the Pacific islands), which I then cast into shapes or stitch together. One day, while holding a new kozo piece up to the sunlight, I recalled doing the same thing with a silkworm spinning its cocoon in a cardboard tube. Perhaps I could raise silkworms again and coax them to spin their silk inside my sculptures! Crazy as it seemed, I decided to try raising silkworms in my studio.

As the silkworms grew, doubling in size each day, I kept a journal and photographed them. I felt a quiet joy in their presence and loved hearing them eat with their tiny mandibles. Sketches captured fascinating details like the row of black dots on each side of their bodies called spiricals, where they breathe. At night I dreamed of their soft bodies filled with liquid silk.

Antique silk weaving shuttles, discovered in an import store, became molds for the sculptures. The space for holding the spools seemed the perfect size for housing cocoons. I designed many test castings of

the spool chambers and shuttle forms until I found the best combination.

When the silkworms were ready to spin, I placed each one in a kozo chamber and watched as they wove their silk in figure-eight patterns. It takes three days to finish a cocoon that contains a mile of continuous thread. I held an open house for friends to come and watch this magical process. Weeks later, the silk moths emerged, crawling out of their chambers to complete the rest of their life cycle by mating, laying eggs, and dying peacefully. Each kozo chamber now held an empty cocoon. I stitched the chambers into the larger cast and shaped kozo sculptures and painted the surfaces with tiny cocoon-like shapes.

The silkworm's legacy to the world is a pure white cocoon that seems to glow with the memory of the transformation it sheltered. My finished pieces honor that natural creative process, and the long tradition of silk weaving, by combining the work of my tiny collaborator with a sculpture of my own. The strong connections I feel with the natural world have deepened immeasurably. FA

To see a listing of fiber-art workshops taught by Jill Powers and to learn more about her work, visit www.jillpowers.com. Powers will give an artist talk about the silkworm collaboration pieces on March 26 at Jane Sauer Gallery in Santa Fe, New Mexico, where the work is on display; www.jsauergallery.com.

All works are made with kozo bark fiber, silk filament, cocoon, waxed linen; cast, hand-stitched, handpainted.

OPPOSITE PAGE, TOP LEFT: Jill Powers raising silkworms in the studio. Photo: Lynn Marlow. OPPOSITE PAGE, TOP RIGHT: Single, Double, and Open Silk Chambers, *2010–2011; 21" x 2–4½" x 1½–2". Photo: Russell McDougal. OPPOSITE PAGE, BOTTOM RIGHT:* Single Silk Chamber *(detail), 2011; 21" x 4½" x 1½ ". Photo: Russell McDougal. TOP LEFT: Kozo in three stages: molded, raw kozo bark, flat casting. TOP RIGHT: Weaving shuttles with clay added, were used as molds. MIDDLE: Jill Powers in her Boulder, Colorado, fiber studio. BOTTOM LEFT: The silk moth emerging from its cocoon. BOTTOM RIGHT: The silkworm spinning its silk inside the kozo chamber. Photos by the artist unless otherwise noted.*