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## **A Green World Deep in Winter: The Bedside Terrarium**

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I knew nothing about Dr. Nathaniel Bagshaw Ward when my life was halted by a devastating pathogen from which I never fully recovered. During one of my worst relapses, a terrarium became a welcome oasis for my mind, offering a respite from the intolerable symptoms and the worries that come when illness devastates a life—that little green ecosystem at my bedside kept me from giving up.

A 19th century London physician, Dr. Ward understood the importance of a patient's environment. He also had a passion for botany and entomology and was known worldwide for his accidental invention of the terrarium. What is less well known is how his invention, along with his interdisciplinary interests, led to a further innovation involving the medical field. Recently, I read about Dr. Ward's discovery of how a glass bottle could create a healthy green world in his 1852 book *On the Growth of Plants in Closely Glazed Cases*:

I had buried the chrysalis of a sphinx [moth] in some moist mould contained in a wide-mouthed glass bottle, covered with a lid. In watching the bottle from day to day, I observed that the moisture which, during the heat of the day arose from the mould, condensed on the surface of the glass, and returned whence it came; thus keeping the earth always in some degree of humidity. About a week prior to the final change of the insect, a seedling fern and a grass made their appearance on the surface of the mould.

Dr. Ward was delighted to have grown a fern. In the 1800s, London suffered from such severe coal smoke pollution that gardening outside was impossible. His invention of "Closed" or "Wardian" Cases, as he called them, offered the only viable method of keeping a plant alive in the city. They soon became a Victorian fad with simple and inexpensive designs gracing the homes of the working class and elaborate palace-like constructions for the wealthy.

Safe in a Wardian Case, plants from the New World could make transatlantic crossings above deck and thrive along the way. As a result, the field of botany flourished and tea and rubber plantations sprang up in new regions of the world. However, Dr. Ward's favorite use for his Closed Cases was to cheer his bedridden patients. At the time it was thought that indoor potted plants stole oxygen from the air and could make a patient worse so they were always banned from the room of an invalid. But with Dr. Ward's invention, bedbound patients could once again enjoy having plants at their side.

Autonomic and mitochondrial dysfunction and severe Chronic Fatigue Syndrome have made my life a roller coaster. During the worst relapses I can do almost nothing. This bedridden situation was one that Dr. Ward understood well and in a section of his book titled "Use of Closed Cases in Illness," he writes, "As a means of administering comfort to the afflicted and distressed . . . in body or mind [Closed Cases,] are invaluable . . . [patients] have thus been enabled to beguile many a weary hour . . ."

My own terrarium held a particularly interesting inhabitant that year. A woodland snail took up residence, and I spent hours observing my companion and getting to know its habits and preferences. At the time, I knew nothing of the natural history of the gastropod, but eventually I would read about my snail's thousands of teeth and the complex biochemistry of its slime. In the 1800s, the intimate details of the life of a snail were common knowledge, as they were farmed. The lyrical writings of the Victorian naturalists filled me in on the passionate love life of the gastropod. The terrarium was a fitting home for my bedside snail and its world became my own world, the rich greens of the varied mosses a welcome contrast to the stark white room that surrounded me. How could I not feel simpatico when I read in the appendix of Dr. Ward's book, an editorial from an 1842 London *Quarterly Review*:

Who is there that has not some friend or other confined by chronic disease, or lingering decline, to a single chamber, one . . . who, a short while ago, was among the gayest and most admired of a large and happy circle,

now, through sickness, dependent . . . for her minor comforts and amusements on the angel visits of a few kind friends . . . In the evening a largish box arrives directed to the fair patient . . . [inside there is] a large oval bell-glass fixed down to a stand of ebony, some moist sand at the bottom, and here and there, over the whole surface, some tiny ferns are just pushing their curious little fronds into life . . . Every day witnessing some change, keeps the mind continually interested in their progress . . . We need scarcely add, that the doctor, the next morning finds the wonted cheerful smile restored, and though recovery may be beyond the skill, as it is beyond the ken, of man, he at least has the satisfaction of knowing that he has lightened a heart in affliction, and gained the gratitude of a humble spirit . . .

Refreshing my terraria is a task I save for the shortest, darkest days of late fall, just before snow comes to whiten the world. Terraria have gotten me through the coldest of winters and times much rougher; they hold the promise of spring.

Forming a constellation of green shapes along my kitchen window shelf, the terraria are kaleidoscopes of textures and green hues. Spherical, rectangular, cylindrical—any glass container will do, and an auto glass shop can cut a top to fit. Each is a mini ecosystem, a habitat for the unexpected, both living and imaginary. Since I can't mow inside the terraria or introduce herds of miniature goats to keep the growth down, by the summer's end the plants have become lanky and are ready to be composted. The glass containers are washed out; empty and sparkling, they await a new wilderness.

Were I a city dweller, I would purchase propagated plants, but I have the luxury of the Maine woods around me with their rich array of offerings; mosses are gathered carefully, not too much from any one location, along with various low growing ferns, partridgeberry, winterberry, woodland violets, and goldthread.

A rug of sphagnum is laid upside down on the glass floor of a terrarium, then covered with good woods loam. Mosses, ferns, and leafy plants are nudged into place creating a green kingdom. For a few days, the plants look uncertain, then they find the sun as it angles through the window and work out elbow room with new neighbors. Settling in, everything begins to grow, and soon the small world looks as if it has always been there.

The woods loam in my terraria always contain seeds and eggs—a fertile mix—and where there is life, there is plot. As I go about my daily routine, the lives of minuscule creatures unfold nearby. There's an occasional reminder of what's happening. I'll wake in the middle of the night, turn on a light, and find a juvenile slug making its way high above the plants along the glass wall, its nocturnal life dovetailing with my diurnal one. A minute spider weaves its web strategically at the edge of a fern stem and a dip in the moss, like a clever, if deadly, newsstand proprietor at a subway entrance. A mosquito hawk will hatch and fly around; when temperatures warm I'll take the terrarium outside, lift the lid, and let it free.

My terraria are evidence of life on a tiny scale, of the inhabitants the spider knows well that I don't even see. As the snow piles up and the human world tucks in for the winter, I watch the ferns unfurl new fronds and the mosses grow deep and lush. The terraria are green microcosms holding all of life's beauty and intricacies.

### *About the Author*



Elisabeth Tova Bailey's book *The Sound of a Wild Snail Eating*, as [reviewed earlier in these pages](#), recounts a year of observations of a forest snail that lived at her bedside in a terrarium. Her book has won a National Outdoor Book Award in Natural History Literature for 2010 and a John Burroughs Medal Award for 2011. Algonquin Books.

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