

Backfill

The Music of the Spheres

Spherical buildings present some obvious practical challenges. But because a sphere provides the largest possible interior volume per unit of surface area, the form has long fascinated designers and architects, and quite a few reasonably successful spherical structures have actually been built. Most — like the geodesic domes pioneered by Buckminster Fuller in the mid-20th century — simply approximate a spherical shape with a network of flat triangles. But Canadian builder Tom Chundleigh has chosen to take the high road: The guest cabins at his Vancouver Island, British Columbia, eco-resort are true, geometrically perfect spheres.

A circular plywood floor prevents the interior's contents from slumping into a heap in the sphere's rounded bottom, while a corresponding ceiling creates a shallow, bowl-shaped "attic." The two circular side windows are formed from acrylic to match the curvature of the exterior shell and are hung on custom hardware — though not until the sphere has reached its final destination. Leaving the structure windowless shaves 6 inches from its eventual 10-foot 6-inch diameter, making it transportable by truck on most public roads.

Each spherical cabin is suspended from three large trees with $\frac{3}{4}$ -inch ropes spliced to custom-made tension fittings. Curved outdoor stairways provide access. While Chundleigh claims that his airborne retreats are enormously strong — similarly constructed boats, he says, are routinely subjected to much more extreme loads — liability concerns have so far prevented him from selling any spheres to individual purchasers. He does, however, supply them to others — mostly resort owners — under a licensing agreement that allows him to supervise their initial rigging and ongoing maintenance. — *Jon Vara*



Chundleigh's first spherical cottage was cold-molded from wood veneer and penetrating epoxy using a technique developed for boatbuilding. For later versions he switched to conventional fiberglass-and-resin construction, saving "about a man-year" of labor per sphere, he says.



Though the spheres are primarily designed for two guests, a loft bed over the kitchen cabinets can accommodate a third — provided he or she weighs 165 pounds or less.



Longitudinal sitka-spruce stringers — the sphere builder's equivalent of wall studs — are fastened to the interior skin with epoxy (left). Custom-made hinges pivot simultaneously on two axes when the compound-curved windows and doors are opened or closed (above).