

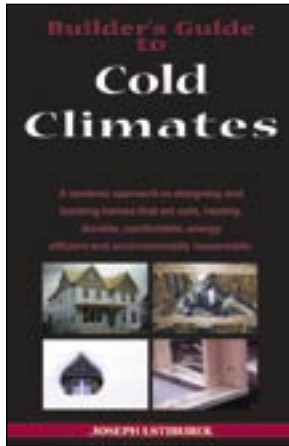


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BUILDER'S GUIDE TO COLD CLIMATES

by Joseph Lstiburek PE

Building Science Press, 2004 (revised)

Joseph Lstiburek, one of the leading building scientists today, admits that he is a builder who has gone over to the “dark side” of building science. But in this guide, he makes complicated concepts quite understandable, offering a designer’s guide as much as a “builder’s guide.”

How do you know if you’re in a “cold climate”? Lstiburek includes his well-known and much-used climate region map, somewhat different from the Department of Energy’s (DOE) eight-zone map because he overlays rain-loading and humidity in the definition of regions. Most of the Northeast falls into Lstiburek’s “cold” zone, although parts of Maine are “very cold” and much of New Jersey is “mixed-humid.” The distinctions are meaningful, and key to Lstiburek’s approach to building science. (Other books in the series include guides to hot-dry/mixed-dry climates; mixed-humid climates; and hot/humid climates.)

The guide is based on Lstiburek’s extensive experience as well as knowledge gained from building scientists in Canada, Norway, and Sweden, and DOE’s Building America program. Updated from the original 2000 edition to include the latest thinking on vapor barriers and revised sections on roof, wall, and foundation design, it is a guide to high-performance buildings that can only be achieved through an integrated-systems approach.

Following a section introducing this approach and outlining recent changes in construction technology and building science, the book is divided into two parts: Design and Construction. Design first reviews “big picture” choices, from site selection to building shape and orientation and basic systems.

This section then presents building-science concepts, including material properties, and compares the performance of different wall, roof, and basement assemblies. It includes an excellent review of the benefits of rainscreen versus barrier design, and the discussion of air-barrier systems and details is quite rich. The discussion of air-leakage rates is at the cutting edge. The presentation of issues related to control of water-vapor diffusion and drying balance is clear and includes Lstiburek’s classification of materials into vapor retarder and permeance categories — the subject of proposed code changes today.

The second section, Construction, focuses on specific building elements. Each chapter begins with an introduction of general concerns, followed by specific recommendations, details, and solutions to common problems.

Lstiburek’s guides are known for their clarity and their accessible (even humorous) language. The graphics are one of their biggest strengths: clear drawings and abundant details help the reader to quickly understand the concepts.

Although the guide’s focus is residential design, the underlying building-science principles apply to every building and include the latest thinking on high-performance buildings. This book is a “must have” for every architect’s library.

Wagdy Anis AIA, LEED AP, is a principal with Shepley Bulfinch Richardson and Abbott in Boston, and chair of the Building Enclosure Technology and Environment Council of the National Institute of Building Sciences.



THE CAPE COD COTTAGE

by William Morgan

Princeton Architectural Press, 2006

This survey of Cape Cod cottages is a sweet book; much like its subject, its restraint makes it more profound than its more elaborate peers. The story it tells is New England’s story — the story of creating a sense of place and a sense of home.

The Cape Cod cottage fits its climate: tight eaves and minimal trim close the corners; overlapping shingles shed the rain and snow; and the great central chimney radiates heat all winter. But more than just appropriate engineering, the Cape is about shelter in a deeper sense. Indeed, what could be more “house” than a Cape house? As the author points out, what child hasn’t drawn the Cape with its face of two eye-windows, one door-mouth, and a chimney-hat with smoke curling out? And what image seems more New England, more rooted in its place? The Cape’s utility and compactness belie its power.

Morgan tracks the history of the Cape from its 17th-century roots to contemporary versions in a brief and informative essay. His artful black-and-white images follow the text, forming the bulk of the book and giving the reader a fine visual survey of this enduring form.

The form of the Cape has resisted modification. Additions typically honor the primary structure and grow from the back

with wings, sheds, and ells; the Fairbanks House in Dedham, Massachusetts, is one well-known example. In the early 19th century, housewrights slightly modified the Cape to fit the Greek lines then coming into fashion. Instead of aligning the long axis of the building parallel with the street with an entrance under the eave, the Greek Revival housewrights turned their buildings 90 degrees and faced the gable to the street. This simple shift turned the cottage into a temple.

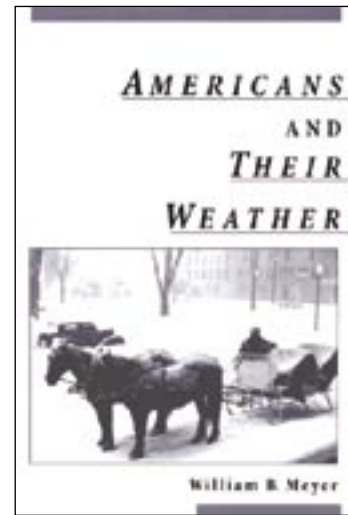
The Cape is alive and well. The book reminds us of the power of the 20th-century versions by architect Royal Barry Wills, which, curiously, seem more authentic than the 17th-century forms he was emulating. Wills' architectural skill and deep understanding of the Cape merit review.

As architectural historian Vincent Scully has shown, Robert Venturi

presented a new approach with projects like the Trubeck and Wislocki houses on the sandy dunes of Nantucket. These two houses are among the best of Postmodern buildings, with their appealingly awkward self-consciousness and love of asymmetry. Venturi understood that the essence of the Cape is its compact tightness and showed that the old form still has plenty for architects to explore.

The introduction by New England architect Dan Scully extols the virtues of the simple life embodied in the Cape type. He sees the Cape as the original anti-McMansion. The enduring presence of the Cape, however, depends not so much on its reflection of the simple life, but on its ability to accommodate our increasingly complex lives.

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AMERICANS AND THEIR WEATHER
by William B. Meyer
Oxford University Press, 2000

The history of weather tells how physical phenomena can be transformed from resource to hazard and back again. Snow-packed roads facilitated horse-drawn

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carriages and sleighs in the 19th century, while modern commuters, traveling greater distances between home and work, find snowy roads dangerous and thus anxiety-provoking. Winters are both good and bad for New England's economy. Furious coastal storms are bad for fishermen and great for ski-area operators. Weather conditions in all seasons inspire the development of tools for physical relief (umbrellas and sunglasses) as well as social and economic relief (weather forecasting, insurance, disaster assistance). With the current focus on global warming and natural disasters, weather discussions have become a simmering caldron of science, romantic interpretation, and tall tales.

In this book, William Meyer, an associate professor of geography at Colgate University, offers remarkably clear insights into the historical relationship between Americans and their weather, from the early colonists planning according to the climate they mistakenly expected (identical to that of England) to the post-World War II migration to warmer climates when, for the first time, weather as an amenity influenced decisions as to where to live. Meyer addresses head-on the issue of climatic determinism, the belief that weather shapes people's lives, whether they are aware of it or not. He is critical of Thomas Jefferson for "retailing an error" that one can tell the character of people by the latitude in which they live: Northerners as "cool, sober, laborious" and Southerners as "fiery, voluptuary, and indolent." He also undermines some of the murkier prescriptions of environmentalists who urge that activities in an area conform to what nature intended. Nature, as Meyer insists, has no intentions. It simply is!

To dispel the idea that residential design develops determinately in relation to prevailing weather conditions, Meyer deploys the Gothic Revival style as promoted by Andrew Jackson Downing in the mid-19th century, with its dark paint, steep roofs, and small windows, so badly adapted to summer breezes and winter sun. Not to mention the proliferation of Cape Cod Colonials in California, and Spanish Mission in the Northeast.

One of Meyer's most engaging presentations is his take on post-World War II "climatic boosterism" led by sloganeering entrepreneurs who recast Florida, long thought to be too swampy for year-round human habitation, as a paradise for retirees. California, offering cooler summers and lower humidity than Florida, attracted young families, their livelihoods no longer controlled by agricultural production or place-based activities. This freedom to relocate, based on weather as an amenity, disproves the moribund idea that for most people "where one was born and lives is the best place in the world, no matter how forsaken a hole it may appear to an outsider."

Phyllis Andersen is a landscape historian in Boston.