

# NANO HOUSE

INNOVATIONS FOR SMALL DWELLINGS



**Thames & Hudson**

PHYLLIS RICHARDSON



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藏书章

INNOVATIONS  
FOR  
SMALL  
DWELLINGS

WITH 358 ILLUSTRATIONS,  
335 IN COLOUR



Thames & Hudson

To Hannah Flinders, with large-scale gratitude

Phyllis Richardson is the author of numerous books on interiors, design and architecture, including the XS series, three titles in the StyleCity series (Barcelona, London and Paris), Contemporary Natural, House Plus and Living Modern, all published by Thames & Hudson. She lives in London.

On the cover: (front) One+ Minihouse, Add-A-Room (Matti Marttinen); (back, top to bottom) Blob, dmvA Architekten (Frederik Vercruysse); Roll-It, Institut für Entwerfen und Bautechnik, University of Karlsruhe (Sebastian Salopiata); Villa Hermina, HŠH Architekti (Ester Havlová); Sunset Cabin, Taylor Smyth Architects (Ben Rahn/A-Frame Inc).  
On pages 2–3: Villa Hermina, HŠH Architekti (Ester Havlová)

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The background of the book cover is a photograph of a landscape. In the foreground, there is a field of tall green grass with some golden-brown seed heads. In the middle ground, there is a dense line of green trees and bushes. The sky is blue with large, white, fluffy clouds. The title and author information are presented in white rectangular boxes with black borders in the upper right corner.

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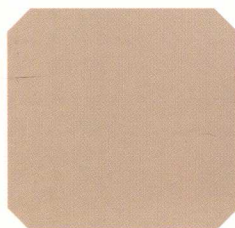
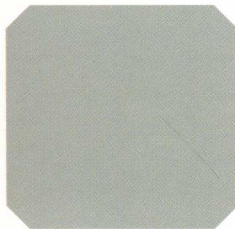
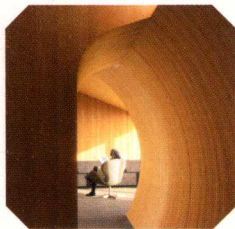
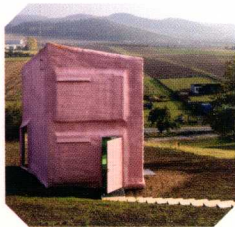
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INTRODUCTION

SPACE-  
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Now that energy-efficiency is something most people are learning to get their minds around, the idea that we might be able to live with both less consumption and less built space is striking some as a reasonable corollary to the conversation about using and creating energy wisely. If we can send a man to the moon, an argument might go, we should be able to heat our houses without endangering the planet. But thinking about that trip to the moon could inspire other ideas, such as the concept of the amount of enclosed space a person actually needs to cater to the everyday functions, and some luxuries, of life.

Nobody is suggesting that we should all take up collapsible and fully recyclable housing, or indeed try to live in something similar in size to a space craft. While there are certainly examples of earthbound populations who live with minimal structural shelter – the yurt, for example, has been happily used for millennia – most of us in the developed world have become accustomed to a less rugged daily existence. Further, it is not often a successful tack to suggest that humans eschew advances in technology (and comfort) to address a future impact that may be hard to imagine. Make the efficient use of space also more attractive, more useful, more satisfying, and you are more likely to appeal to the better instincts even of those who still prefer cathedral ceilings or whose definition of luxury is turning on the central heating on cool summer mornings.

The aim of this book is not just to showcase a collection of well-designed small houses, tiny houses, or what we happily call 'nano houses'. We want to draw attention to structures that demonstrate a resounding appreciation for space, resources and materials through their effective use on a small scale. Some of the houses might be described as quirky or experimental, while others offer a more traditional approach. But all should provoke a discussion about design, efficiency, sustainability, proportion, harmony, function and necessity. Here is a survey of more than forty projects from around the world that rethink the feasibility of minimal living space in terms of all of those elements, and ask if perhaps we can do things better, even as we do them smaller.

For these reasons we have not chosen the standard building types, such as a tiny log cabin or a boat interior. These are both typologies that make good use of minimal space, and that cater to the needs of daily life with a sense of economy that is well worth examining in any discussion of more efficient housing. And some examples of each type do appear in these pages. But in the spirit of innovation and experimentation, in asking worthwhile questions about where we are and what we hope to achieve in terms of better building, the houses in this selection all have something new to suggest, or at least to contribute to the debate, on improving both the quality of housing and the use we make of our resources.

Perhaps no-one has written more precisely, or more famously, on the minimal requirements of habitation than Le Corbusier. In his view, the function of a house was to provide: '1. A shelter against heat, cold, rain, thieves and the inquisitive. 2. A receptacle for light and sun. 3. A certain number of cells appropriated to cooking, work, personal life.' It's a stark recipe, indeed, but of course all recipes have room for new ingredients. Le Corbusier also claimed that all we really need 'is a monk's cell, well lit and heated, with a corner from which [we] can look at the stars'. Here he may have been talking about his own meticulously designed, and surprisingly romantic, little 'cabanon' that he had built on the French Riviera as a retreat for himself and his wife. The furnishings are all tidily built in and can be folded away. It is a cosy, even homey, little habitation, handily sited next to the master's favourite restaurant, which could provide meals in case the diminutive kitchen proved too fussy to work in.

It is easy to laugh at Le Corbusier's extreme vision, but as with any popular or much-copied concept, it is often a good idea to go back to the original, to forget the poor imitations, and find the kernel of truth that appealed to people in the first place. Most of us in the developed world could live with less than we have and still have a greater degree of comfort, pleasure, even luxury, than is strictly necessary. In this way of thinking, stripping down to essentials is a starting point, not an end in itself, and it

is in the building back up again that we can find some exciting alternatives to our current demands. When you start from scratch, you can end up with amazing variety. Who needs to begin with four walls, or even a rectilinear form? If you're trying to maximize interior space, your external form might have to be a bit more adventurous. At least it's worth exploring the options.

The five chapters here each focus on different typologies of housing that could apply to much larger models. But in these pages all of the buildings have an internal area of under 75m<sup>2</sup> (807 sq ft), with many under 50m<sup>2</sup> (538 sq ft). The first chapter shows actual built houses that are used for family living. Chapter 2 contains structures that can be moved, whether they stand on wheels, float on water, are liftable by crane or, in one example, can be rolled on its side to a new site. Chapter 3 shows 'micro-retreats' that are perhaps the easiest to accept as small spaces, as they were all built for weekend or holiday use. Chapter 4 focuses on dwellings that take energy efficiency as their primary goal, and Chapter 5 is about housing that can be applied in multiples, whether for leisure or addressing the more serious challenges of affordable housing for the poor or emergency shelter for the dispossessed.

As ever in such a collection of projects, there will be some overlap, with houses appearing in one chapter that could easily fit in other categories. The purpose, however, is not to limit the scope of any of these designs, because even when talking about living with less, the idea is to open up the debate and expand our knowledge of, and interest in, what might be possible in the future and what has already been made possible by the creative minds at work here and now.



