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The last speakers were, most appropriately, from the New Alchemy Institute. Kalhi Ryan talked of "Life Within the Bio-shelter", and Earle Barnhart of "Bioshelters". They gave an inspiring and educational presentation dealing with the total ecosystem greenhouses which the New Alchemy Institute has been experimenting with. Much of what they said is best explained in the recently published New Alchemist's Journal #4, (which I encourage you to obtain). The New Alchemists are scientists with a rare wholistic outlook, dedicated "to restore the lands, protect the seas, and inform the Earth's stewards". Their greenhouses combine terrestrial plants, aquaculture systems, animal controls and pests, and man. They are striving to achieve the stability and durability of a mature ecosystem with the productivity of a young ecosystem. The New Alchemists look at every aspect of their greenhouses, and try to match and create conditions for the myriad of plants and animals which inhabit their "arks". In the words of the New Alchemists: "We seek solutions that can be adopted by individuals or small groups who are trying to create a greener, kinder world. Our major task is the development of ecologically derived forms of energy, agriculture, aquaculture, housing and landscapes that will encourage a repopulation and revitalization of the countryside."

"WE SEEK SOLUTIONS THAT CAN BE ADOPTED BY INDIVIDUALS OR SMALL GROUPS THAT ARE TRYING TO CREATE A GREENER, KINDER WORLD"

For me, the conference ended on an uplifting and positive note. All agreed that there should be more meetings like this in the future, and there is talk of a western solar-heated greenhouse conference before long.

One purpose of this article is to inform; the other is for me to reach out to those with common interests. If you have any questions about this conference, or just feel like talking about solar greenhouses and related fields, please write to the address below:

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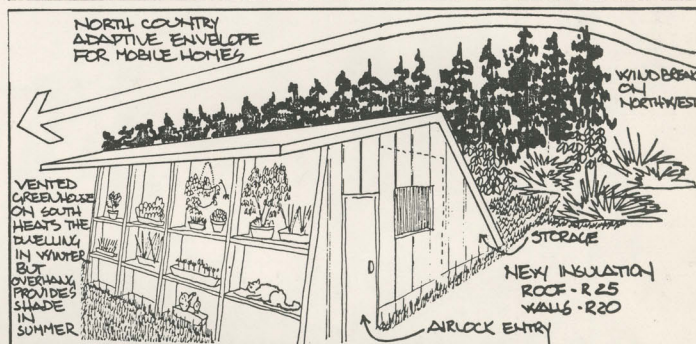
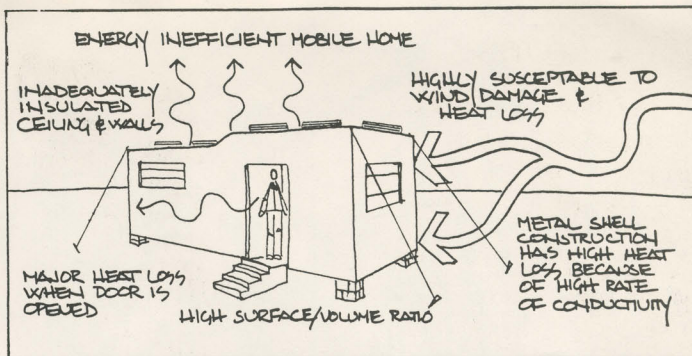
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### ADAPTIVE ARCHITECTURE and MOBILE HOMES • Terry Krinsky

One measure of a good home is the degree to which it adapts to its regional location and specific site conditions. Early European settlers in the North Country built simple log structures or post and beam dwellings with steep gable roofs. These structures, built with local materials and the help of neighbors, are highly adapted to our snowloads and windloads. Simple and functional dwellings such as these create a local character that reflects our own particular combination of forest types, stone quarries, sawmills, forges, climate and personalities that may exist nowhere else.

Current and projected energy shortages emphasize the need for an adaptive North Country architecture. New insulation materials and wood heating systems are easily accommodated into these traditional houses with a resultant gain in energy efficiencies and comfort. The need and opportunity for adaptation between house and site has never been higher.

However, the Comprehensive Land Use Plan for St. Lawrence County indicates a significant trend away from highly adapted dwellings. Specifically, mobile homes accounted for 52% of all new housing in the county between 1960-1970. This popularity is, of course, due to the initial low investment and short term costs of ownership as well as the immediacy of occupancy. Today, St. Lawrence County has one of the highest proportions of mobile home dwellers in the nation. The fact is mobile homes are not particularly designed or outfitted for North Country conditions. The same basic mobile home unit may be sold in both St. Lawrence County and Florida. As part of the Comprehensive Land Use Plan, the staff of the County Planning Board has suggested that it may be possible for owners of existing mobile homes to increase the adaptation of their dwellings to both regional and on-site conditions. This is suggested only as a remedial program for existing mobile homes - it is not to be an endorsement for future mobile home proliferation.

#### ORIENTATION

Most mobile homes have been sited parallel to the road frontages regardless of the relation to sun and wind. Mobile homes are mobile!

The units can be rotated to face south.

#### FUNCTIONAL PLANTINGS

Windbreaks of native evergreens planted on sculpted earthmounds are a simple yet effective way to reduce the windload on mobile homes. These should be located in the path of winter winds, in most cases northwest of the dwelling.

#### ADAPTIVE 'ENVELOPE'

A functional envelope can be owner-built around an existing mobile home. Additional insulation here will increase the energy efficiency of the dwelling. The heat loss associated with the high surface/volume ratio of the typical mobile home will also be tempered. Less of a burden is placed upon the heating system, thereby decreasing the high fire hazard risk usually associated with mobile homes. An integral vented greenhouse on the south side will help heat the dwelling on cold clear days and expand the available living space during warmer seasons. A foyer entry will eliminate heat losses when entering or leaving the house. More storage space is available. Sloped roofs will shed snow and ice; windloads can be accommodated. The mobile home itself will be protected from direct exposure to weathering so the life span of the unit will be increased.

Visually the envelope can take on the elevations of a typical gable house or be designed to maximize solar collection and minimize windloads as the unit in sketch does. In any case, local materials, rough-sawn lumber, and recycled windows will keep costs down and reinforce community character.

Many mobile home owners have already made alterations or additions to their dwellings. Typically these have been shed-roof rooms added to gain extra living space. The money spent on these additions, if used to finance an adaptation program would probably be returned over the years in lower heating costs, lower depreciation rates, and lessened fire hazards. Also, the visual and functional benefits to the lifestyle of the occupants are additional incentives to adapt to the realities of the North Country landscape.