

## Earth Homes, an Organic Paradise.

by Len Adams

There is something primeval about living close to Mother Earth. It's a feeling Stone Age men must have experienced when they first set up home in caves, 2.5 million years ago. Protected from the wind, rain and snow, with a fire at the cave entrance, these natural shelters could be as cosy as Stone Age bugs in a rug.

Surprisingly, many people today yearn for that same sense of privacy and protection they don't get in high-rise apartments or traditional residential homes. They are disillusioned with their traditional houses placed like little boxes - as they have been for centuries - on top of the ground. The quest for these enlightened free-thinkers is for something new; ideas that reject boring square rooms and angled corners.

A number of architects have attempted to break the mold, but perhaps the most prolific designer with the largest number of completed structures, is Peter Vetsch, a Swiss citizen who runs his own architecture office in Dietikon, Switzerland. Since the late 1970's, he has attained an international reputation designing earth homes with many of his designs already part of the landscape in Thailand, Russia, Mexico and Germany. In his native Switzerland there are 47 of his earth homes fully occupied. And interest in the concept is increasing.

So what is an 'earth home'? For one thing, it is not a cave. Neither is it a space-age fantasy. The idea is not to live under or in the ground, but with it, says Vetsch. So he creates dwellings like flowing sculptures, making an alternative lifestyle possible for scores of families throughout Europe.

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The key element in earth house construction is an imaginative use of ferro-cement. The free-form organic design employed by Peter Vetsch, prefers this material because of its high performance and superior durability at low cost. It is also non-toxic.

So how is it done? A fine aggregate cement mix is applied over a wire mesh and rebar structure, either by hand, trowel or a high volume cement sprayer. Compared to slip-formed concrete construction, the ferro-cement layer is quite thin leaving little finishing save for cosmetic effect or critical waterproofing.

As for strength, one has only to look at large aircraft hangars and stadium domes, swimming pools, aquariums, pipes and tunnels, even the hulls of ships, and you have your answer.

With the shell completed, dwellings blend into the landscape through a deep layer of earth that covers the undulating roof and forms a cosy insulating blanket.

By this method, energy is preserved with a saving in a typical earth home of up to 50 per cent. And, of course, it means that the structure is protected from at all times from rain, low temperatures, wind and natural abrasion.

Other benefits ? Improved sound insulation throughout the home and a total absence of draughts, making it a natural for controlled air-conditioning. As for water, a single solar cell of only 4 sq.m. can supply a family of four with 50 to 70 per cent of their warm water demand.

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When Vetsch completed a complex of nine earth-covered family homes in Dietikon in the north of Switzerland, he defined his vision as integrating a building into its environment as much as possible. His aim was to return back to nature much of what the constructional encroachment takes away. But when the families move in it is up to them how to treat their rooftops. Some are planted as garden with flowers and shrubs. Others prefer to have their own private meadow with a sitting area to enjoy the view.

Interior finishing, too, is often left to the personal tastes of the occupant. Kitchens, bathrooms, bedrooms and house-control systems are flexible, designed in accordance with their owner's wishes.

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### Profile of Peter Vetsch.

Peter Vetsch attended public school in Sax, Switzerland from 1950 to 1956. After agricultural school in Cernier he graduated in 1962. From there he became an apprentice in structural design in Winterthur and worked for an architecture office in St. Gallen. In the following years he attended the academy of arts in Dusseldorf, Germany, where he graduated in 1970. After receiving his diploma he then worked for architecture offices in Germany and Switzerland. Today, he now runs his own architecture office in Dietikon.