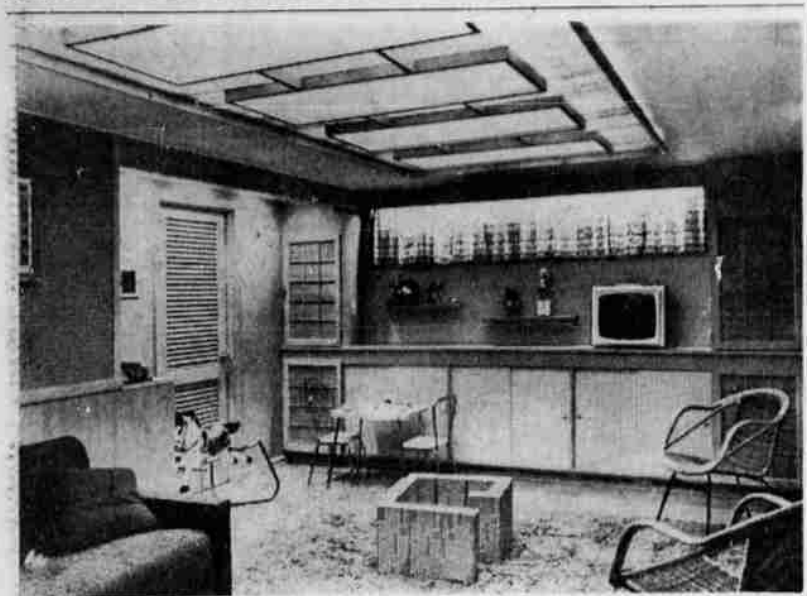




Good Lighting Adds Much

Since good lighting adds much to gracious living, a new home improvement book that simplifies installing fluorescent lighting in valances, cornices, luminous ceilings and walls helps homeowners economically solve their lighting problems. Written primarily for the homeowner who doesn't know the difference between a channel and a tube, the book covers every step in text and pictures everyone can easily understand. Over 90 illustrations simplify installing channel in every type of cornice, valance, wall bracket, cove, luminous walls and

Social Problems Create Problems For Students

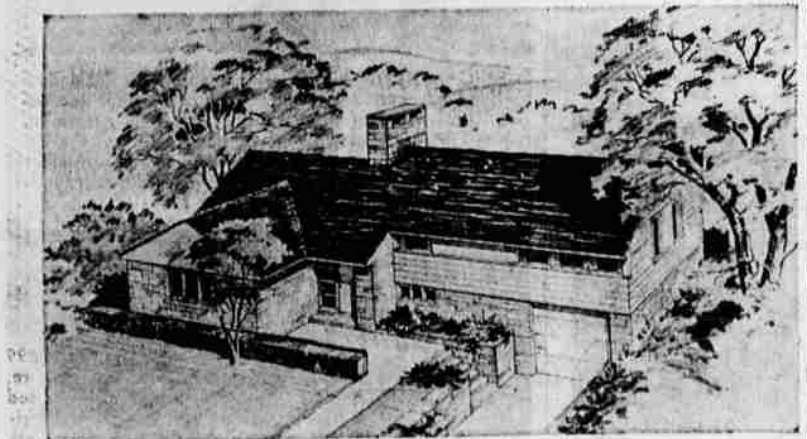
By DAVID NYDICK
UPI Education Specialist

Occasionally an outstanding student may bring home unusually low grades on his report card. The child intentionally failed a test or missed answers. Don't be surprised. This unfortunately is a problem in some schools.

The basis of the problem is social pressure. The feeling is that other children will not be friendly with a good student. They will make him an outsider. This is strong pressure for any pupil.

This type of problem usually is started by students who are not

Family Homes



DESIGN 65
House 1,271 Sq. Ft.
20,984 Cu. Ft.
Garage 362 Sq. Ft.

Two-Way Sets Theme

Each section of this tri-level, while easily accessible by a short run of stairs, is separate from maximum efficiency result from such an arrangement.

Main level contains living and dining quarters combined, but instead of facing the front of the home, living room turns its back to the street and faces the rear outdoor terrace. A large natural fireplace enhances living area and there are windows on two sides.

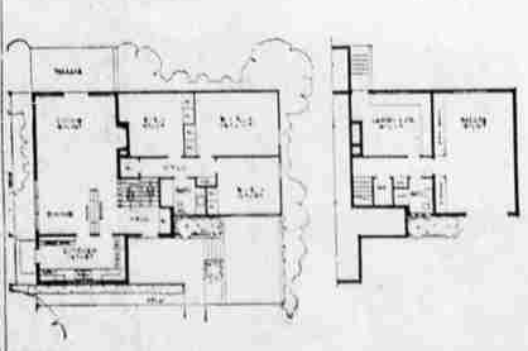
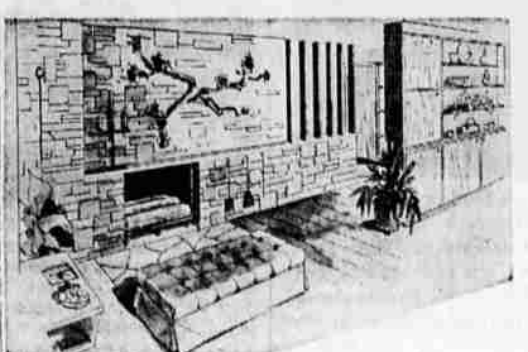
Dining is near kitchen area with an attractive built-in china cabinet and what-not shelves located almost to center of this room. Because of its location, the what-not shelf acts as a wall, making the dining room private from front entry.

Efficient kitchen with "L" cabinet arrangement allows all the walk-around space you'll ever want. It has large windows overlooking the front yard. Note the handy snack bar and excellent counterspace.

Kitchen service door is another convenience for the homemaker. Notice, too, the lower level stairs are just a few steps from the kitchen.

Upper level, truly an ideal arrangement for privacy and convenience, includes three large bedrooms each boasting double closets and cross ventilation, good sized bath, linen cabinet, and extra hall closet.

Lower level has access to rear yard from laundry and to garage from central hall. Ample room in heat and laundry room for washer, dryer, ironer, sorting counter and cabinet is featured.



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Portugal In Race With Clock

By PETER KNOX
LISBON (UPI) — Portugal's fight to hold together the last of the great European empires in Africa is developing into a race with the clock.

Defying the demands of native nationalists to quit the continent, the Portuguese are throwing all the resources they can muster into their two great southern African territories, Angola and Mozambique.

They do not underestimate the seriousness of the threat to their position, but everywhere this correspondent went on a recent visit to Portuguese Africa he heard the same refrain: "Give us the men and the money to develop these lands and we will be here forever."

As proof of their own faith in the future the Portuguese are giving development schemes top priority and digging deep into state funds to back them.

Plugging their multiracial, no-segregation policy hard, they are encouraging the 10 million Africans in the two territories to cooperate with the 500,000 Europeans and show not only that black and white can work together but profit from so doing.

The Portuguese pride themselves above all else on knowing no color bar. The races mingle freely in schools and workshops, cinemas, churches and beaches.

Africans Not Ready

They claim, however, that the average African has still not reached the stage of development where he and his fellow natives can run a country alone.

The Portuguese refuse to share the views freely expressed in the United Nations that change in Africa is inevitable and that they must sooner or later pull out.

In Angola and Mozambique there are doubters who will tell you, "If we are still here in five years' time these will be great countries. But will we be?"

The optimists are more numerous.

It is rare to find any European in the Portuguese territories who intends to give in without a fight. People are not pulling out in the face of danger, they are moving in.

In Angola in the first 11 months of last year 43,039 persons entered the territory while 29,000 left.

Yet it was in Angola that the first anti-Portuguese rebellion began in 1961 and is still troubling the authorities in the north of the country. An estimated eight per cent of Angola is in rebellion.

The Portuguese are confident they can contain the challenge to their authority. They have moved some 40,000 troops into Africa from Europe and, outside the affected area, life goes on normally.

Strife Avoided

In Mozambique there has been no strife and hopes are high that it will be avoided.

The May summit meeting of African leaders in Addis Ababa made it clear that the nationalist leaders on the continent are going to wage a war of nerves, if not a war of bullets, on Portugal.

Algeria has threatened to send 15,000 volunteers to fight Portugal and other countries of the continent have joined in making threatening noises.

The Portuguese take this calmly. They believe the newly independent African countries have too many problems of their own to be able to mount any sort of successful campaign against Angola and Mozambique. They point out the Angolan elements directing the present campaign against Portugal are themselves deeply divided and almost at war with one another.

The Portuguese believe the new nations of Africa will gradually slip back into chaos. They fear such a development will only aid the Communists.

"Within 15 years the whole of Africa could be lost to the West if the present trend is not halted. We must build our brand of multiracial barrier to halt the landslide," one official told this reporter.

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'Forest Island' Puzzling But Interesting Study

(Continued from Page 1)

work, supplies included games and books and tools for digging for Mary and Dickie, good at entertaining themselves. Opal would more likely be occupied with weighing and tabulating information about each soil sample. An auger would help with sampling, with each hole refilled promptly. Soil moisture samples were placed in moisture proof paper bags and weighed immediately. Later they would be air-dried at 70 degrees at approximately 40 per cent humidity. Lunch time furnished a special break, often eaten in the shade of the automobile.

Family Summer School

The day's agenda, we learned, would include collecting soil samples from an old lake bed around Mound Springs, approximately a mile from the western end of the forest. Although a large inland lake once covered the basin, except perhaps the highest point at the east end of the forest, Berry's study records evidence that the present climate is very similar to that of the past 700 years. Mound and Sand Springs provide the only surface water for miles around.

When the family loaded up in the station wagon for the day's

present stand and ascertain whether it is increasing or decreasing, to determine the means by which ponderosa pine trees exist under the present conditions of low precipitation; to determine the origin of the stand if possible and to determine the impact of past and present land use on the forest and immediate vicinity.

To determine plant communities and various relationships encompassed in an ecological study, data gathering was methodical. In June, 1959, the work was begun by making compass and pacing traverses of roads, boundaries, section lines. Notes were made of vegetation, topography, tree growth, soil surface characteristics and other conditions. The data supplied details for a map of traversable roads.

Even the inexperienced eye could tell that the ponderosa pine stands are very sparse when evaluated by commercial forest standards. And what of the encroaching sand dunes which border the forest and cover much of it in the form of low dunes or sand sheets?

What scientific scheme would provide statistics to answer those questions about the past and future of the Lost Forest as well as tell the present story?

When it came to sampling vegetation, Berry used a system already developed. This involved use of plots which are adapted in dimension to the size and area of influence of individual plants. For example, a smaller plot is used for sampling grass than for shrubs and trees.

Rectangular macroplots 50 by 100 feet were established by means of a compass, steel corner stakes and previously measured wire boundaries. "Within the 50 by 100 foot macroplot four individual transects each 25 feet in length are located by random assignment. Ten plots (4 by 5 feet) are located systematically along each of the random transects for shrub evaluation. For grass and forb evaluation, 10 plots of one foot by two feet are located on five-foot stations along the same transects," Berry describes, all part of the pre-designed system.

The underlying assumption is that accuracy of sampling is more efficiently achieved with a larger number of smaller plots than with plots of greater size," Berry said.

Opal Berry was on hand day by day to assist with this detailed work. Their son, Larry, also proved a good assistant that first summer, either helping or helping Dad stake out plots. Now enrolled in college, Larry helped in his grandfather's lumber yard in Burns the second summer of forest life.

But Opal had every skill needed to be a good assistant. Besides being a homemaker, she—a versatile, vivacious individual—has enjoyed her career in the education field. We could easily imagine her in any of the roles she mentioned—teaching art in senior high, fourth grade classroom instructor, supervisor of student teachers in Oregon State University's education department, or dean of girls in a Salem junior high school. And once she was a summer forest lookout.

Tabulating plant numbers and types for Dick was a contribution willingly made. Besides, a beautiful

fan "just happens" as you work, she pointed out.

Ponderosa pine and western juniper were the trees recorded, with only the latter existing outside the forest boundaries. At the same time records taken in their own weather station, compared with available data from long-term study in the general area, indicated there was little local variation in precipitation. The study of growth rings of trees indicated that the climate had been very similar for the past 700 years.

There must be another answer to a pine forest's existence where rainfall average 9.5 inches per year when these trees normally require 16-20 inches.

Forest Keys Found

What about soils? Berry's studies showed them to be characterized by two major factors. One is the nature of the ancient lake bed which provides the parent materials for many of the modern soils. The other, the disposition of the drifting sands from the dried up lake bed and lake shores. The sand had a profound effect simply by covering the soil to considerable depth.

The species of plants and their relationship to each other are also profoundly influenced by the sand, Berry tells. In fact, the sands are responsible for allowing the forest to maintain itself by compensating for the low precipitation through its high permeability and its efficient retention of moisture against evaporation.

Holding another key to survival is the gray rabbit brush which grows as a low shrub, sometimes reaching 30 years in age.

"The reconnaissance and establishing of 30 macroplots during the summer of 1959 revealed," Berry records, "that the establishing of pine seedlings nearly always occurred under or very close to gray rabbit brush plants. In some areas, particularly open sand, pine seedlings were found to be relatively abundant but never occurred except in conjunction with one of these shrubs."

In the sands this shrub protects seedlings from winds, high soil temperatures, low humidities, and excessive soil surface desiccation while leaving moisture adequate for seedling development.

Family Recreation

It was early to bed and early to rise to take advantage of the cool morning hours for work. Family reading and singing, plus plenty of imaginative games, gave variety to the schedule. Dick's technical library—in an apple box atop a tree limb—was most important to him. But the children had their own kind of books, and Opal's collection of paperbacks was just right for sandy conditions. There was time to reread some of the classics and browse through the moderns, too.

Visitors were frequent and nearly every weekend there were friends from Corvallis or Portland, bringing fresh fruits and vegetables and replenishing the water supply. City people enjoy getting into quiet, primitive areas, it was proven.

A trip to the big sand dunes would provide hours of entertainment. Jumping, rolling and digging were always fun. The sand was moist and inviting under a foot or so of warm, dry layer.

Then there was the big day every three weeks when the fam-

ily made the 121-mile journey to Burns. This meant a visit with Larry, as well as Opal's parents, clothes were washed and dried (but rarely was there time for ironing) and, of course, they brought back a fresh food supply. The first meal back in the forest was always charcoal broiled chicken, the most perishable of the fresh meats they selected. An earthen cellar assured cool water and juices, always providing refreshment.

Homeward Bound

Data collected, there was time for a few days of fishing before the homeward trek. Along with the facts and figures, soil samples, pine tree cores, and insects for the school terrarium went some pine cones collected from four trees in widely separated portions of the Lost Forest. For comparative germination studies, cones were also collected from three other sites of similar elevation.

A year of study remained in laboratory testing and the writing of the document. Here Berry analyzed soils, carried out seed germination and drought resistance tests, studied tree cores to show annual growth, and assembled weather information. Several brief visits to the forest provided additional data.

In setting down the results of the research, Berry recalled evidence of land use—grazing, skid trails around mill sites from light logging operations. But these had only a minor impact when compared to the sand's effects. Added to the lake sand were the upper layers of soil blown off land cleared early in the century by homesteaders lured by glamorous advertising. By 1929 nearly all had left.

When came the forest? Berry says it "appears to be a survivor of a more extensive ponderosa pine forest which was isolated by the late post glacial lakes rather than by encroaching desert. Ponderosa pine pollen found in Mt. Mazama ash near the center of the forest."

The presence of the pine pollen in Mt. Mazama pumice sediments indicates, he feels, that the forest existed near its present locality, at least as a few trees, approximately 6,400 years ago.

Some "barring the introduction of some exotic enemy or disastrous fire, the forest will probably continue to exist and reproduce itself," the thesis testifies.

And so families may continue to enjoy this oddity called the "Lost Forest," finding contentment in isolation. If initial consideration matures the forest, Fossil Lake and the adjacent sand dunes may be designated as a recreational area.

Improved access roads will mean wider use. The search for fossils will continue. Shoots of laughter will come from tumbling, rolling figures on the sand hills. And, perhaps, someone will think to look for a small pine seedling "neath a seemingly worthless brush plant. Then, like the Berries, they'll really "find" the Lost Forest.

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