PECKY-CYPRESS—
Its Nature and Uses

SOUTHERN CYPRESS MANUFACTURERS’ ASSOCIATION LOG CABIN, SITUATED IN THE HOME AND INDUSTRIAL ARTS GROUP OF "A CENTURY OF PROGRESS," CHICAGO—1933

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PECKY CYPRESS, ITS NATURE AND USES

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Numerous inquiries come from time to time as to what is meant by that grade of cypress sold as “pecky cypress.” In view of the great value of this grade of cypress, some information regarding the nature of pecky cypress, its origin, distribution and uses may prove of interest.

Pecky cypress, or as it is sometimes called in the eastern and southeastern portions of the United States, “peggy cypress,” is a grade of lumber in which the lumber appears to be more or less honey-combed, and which at first sight appears to be thoroughly decayed lumber. It is on this account that this grade frequently looks in a brake will be found affected with it, while at other times there is very little of it.

Appearance of the Wood.

The pecky wood appears full of holes, varying in width from one-fourth to three-fourths of an inch. The holes are found in the heart wood only, and then not until the trees have reached an age of 125 years or thereabouts. Young trees are generally free from the pecky appearance. The holes in the wood extend longitudinally up and down in the trunk parallel to the wood fibres. They never extend transversely. They are separated from one another by layers of perfectly sound wood. They vary in length from one-fourth

very suspicious to prospective users, who see only the holes and the decayed looking powder contained in them, and who, judging from the general appearance of the lumber, assume that it is of no value.

Pecky cypress has been known for a great many years. In 1848 Dickerson & Brown gave a description of it after a trip through Mississippi and Louisiana.

In very early days its value was recognized, and evidences of its having been used extensively throughout the southern states are numerous. The pecky manifestation is found wherever the southern cypress grows. Sometimes all the trees of an inch to six inches or longer in some cases, but most frequently they are from four to five inches in length. They end bluntly at both ends and as a rule do not communicate. The holes are filled with a yellow brown powder, which crumbles into the finest dust between the fingers. The powdery mass does not completely fill the space and sometimes stringy fibres composed of masses of wood cells fill the cavity. Frequently the walls of the holes are lined with a peculiar reddish-brown, soft substance, adhering firmly to the walls. When the brown contents are brushed out of the holes, a perfectly smooth and even surface is left on all sides. A piece from which the powder has been taken looks as if a number of grooves had been cut into it with a gouge chisel.

In the above Mr. Seward G. Dobbs, Architect of Atlantic City, N. J., has created a very pleasing and unusual effect with pecky cypress.
OCCURRENCE IN THE TREE

In the tree the peckiness starts in the upper portions of the trunk and branches. The majority of the trees are perfectly sound at the base and are affected only in the upper portion of the trunk and the larger branches. The pecky appearance may extend but a few inches up and down or through the entire length of the tree. A curious fact in connection with this phenomenon is that one rarely finds a single tree hollow because of the peckiness. Another noticeable fact associated with this is that peckiness does not seem to affect the living cypress tree. The writer has never seen a standing cypress tree broken or split in any way due to peckiness. In this respect it differs from similar defects in other trees like oaks and pines. This possibly accounts for the fact that many of the cypress trees, even though their entire heart may be pecky, keep on growing and make possible trees 1,800 years old or more, such as are found in southern Louisiana. In order to have a proper understanding of the reason why pecky cypress can be used for so many purposes, it is necessary to understand something of the microscopic changes which take place in the cypress tree, resulting in the formation of the peck holes.

CAUSE OF PECKY CYPRUS

After many years of investigation, it was found that the pecky cypress is caused by the growth in the cypress wood of a fungus (Pomatosporus cyprius). The threads of which destroy certain elements in the wood and produce changes resulting in the infiltration of a portion of the wood with chemical substances which give the pecky wood its peculiar qualities. Pomatosporus cyprius is a form which occurs in water, when large and which forms fruiting bodies at irregular intervals. This fungus apparently spreads from tree to tree by means of spores. The spores germinate on some old knot in the top of the tree, and the fungus grows down through the heart wood of the branch into the heart wood of the trunk. Here they sprout, both up and down and laterally. At certain points the fungus, produced by the fungus, deteriorate portions of the wood fibres. It appears that this solution of the wood fibres takes place at the same time at many points, situated an inch or more apart. This solution takes place more rapidly up and down than sideways, resulting in the formation of holes in the lumber, which at first are not more than the thickness of a lead pencil in diameter, but which increase in size with the progress in the growth of the fungus. The fungus invades the wood fibres, and as a result of its life process, it forms a certain peculiar and unique substance, which will be briefly called a humus compound, which passes to the walls of the holes and filters into the sound wood around the holes. After the growth has progressed, the amount of this brown humus compound becomes so large that it evidently stops any further growth on the part of the fungus. In other words, the humus compound acts as an antiseptic substance with reference to the fungus, which produced it.

HUMUS COMPOUND

The brown substance which has just been called a "humus compound" is found along the walls of the holes where it frequently looks, when magnified, like mud that is dried in the sun. It appears immediately whenever the fungus starts to grow. It is first seen in the pith rays, and gradually in increasing quantities it appears around the holes produced by the fungus. Humus compounds appear in many parts of the world, but they are found more particularly in peat. In drying, their substance contracts, becomes hard, black and shiny like glass and breaks with conchoidal fracture. The substances found around the peck holes in cypress are similar to the substances found in peat and bog. Bog-like has the same qualities, chief among these being their antiseptic character. The preserving powers of the peat preservatives are well known. Peat, itself, is largely composed of humus compounds of one kind or another. In his investigation of cholera bacteria, Stutzer found that deacon of peat killed cholera germs in one-quarter of an hour. Sir Charles Lyell speaks of the remains of animals and human beings which have been perfectly preserved for many years in peat bogs. Bog peats are usually perfectly sterile, and it is well known that water, as a rule can be drunk from peat bogs without danger. Bog trunks dug out of peat bogs and white cedar logs from New England bogs have been used for many years, although they had probably been buried in these peat bogs for centuries. It is with a substance like the material found in the peat bogs that the cypress wood becomes impregnated, as the result of the growth of the fungus in the heart wood. This in quality is the same as the formation of antitoxin used so extensively nowadays in human medicine. If one takes diphtheria bacteria and grows them in a bouillon culture, they will flourish for a while, but gradually the diphtheria will die out. The formation in the liquid of certain antiseptic substances due to the growth of the bacteria. The gist of the foregoing is that the fungus grows in the cypress tree, a substance is formed between the centers of growth, which protects the wood not yet affected to the extent that after fungus has made the holes, above described, it does and is unable to penetrate the entire trunk.

MICROSCOPIC EXAMINATION OF PECKY CYPRUS

If one takes sections of the pecky cypress and examines the wood between the holes it will be found that this wood just looks like ordinary cypress wood except that it is a little darker. In all of the cells one can find the dark humus compound, just described. This compound appears to be very stable, because one can find it in boards cut from trees cut the week before or in old planks, which have been serving as sidewalks or fencing for 30 years or more. The writer has examined pecky cypress trunks dug from the Mississippi delta which are probably 10,000 years old or more, and in all cases the brown humus compound was ever present.

CARVED PICKY CYPRUS DOORS AND WALLS

By William G. Marianne

Chalcedony and Chalk in Garden Walkways and Driveways Made of Pecky Cypress Richly Inlaid in 20 Other Materials

RESISTANCE OF PECKY WOOD TO DECAY

The inability of the fungus to destroy the whole heart wood may be accounted for by the fact that so much of the wood is impregnated with antiseptic substances. Not only does this material appear to protect the living tree, but it also protects the timber after it is cut. The lasting power of pecky cypress wood has never been questioned. Dickerson & Brown, in their treatise published almost 100 years ago, state: "There is this peculiarity of this trouble, that the cutting down of the timber arrests its further progress, and timber thus affected, although not as strong, is bound to last as long as that which is very sound." Instances where pecky cypress has shown its resistance to decay and influence are so numerous that they are bound to last as long as that which is very sound. Instances where pecky cypress material for more than 15 years under every...
conceivable condition, no instance has yet come to hand where decay as ordinarily found in other timbers has been found in pecky cypress boards or timbers. A pecky board which had served in a fence for some 40 years on a Louisiana sugar plantation, and which, so far as one can tell, may have been cut from a pecky tree last week, on planting off the weathered surface the wood is just as bright and sound as the day on which it was cut. Microscopic examination of this particular board shows the gumus compound already referred to present in large quantities. The holes were washed out clean by the rains, but the wood is as sound as ever. This is perhaps a unique case, where wood which looks rotten can be used for every conceivable purpose, and where the timbers retain its value as entirely unquestioned.

**STRENGTH OF PECKY CYPRESS.**

So far as one can tell, the only manner in which pecky cypress differs from ordinary cypress is in its strength and yet it is surprising how strong pecky cypress is. Some tests were made not many years ago of the crushing strength or endwise of sound and pecky cypress. The sound cypress showed a breaking load per square inch of about 7,500 pounds. The pecky cypress, about three inches square, with 14 holes visible on the upper surface, withstand a breaking load of 5,300 pounds, and three extremely pecky pieces ranged from 5,200 to 5,100 pounds. This will show how comparatively strong the pecky wood is. It is, of course, difficult to state how pecky a certain piece is, because in some cases the holes are closer together than they are in others. These two tests show at any rate that there is a great deal of strength in pecky cypress, and while it probably will not serve where it will be called on to withstand excessive strain, it nevertheless is strong enough to withstand many strains where its other qualities fit it for practical use.

**CONCLUSIONS AS TO QUALITY.**

Summing up the foregoing, one may state that pecky cypress wood, which looks decayed because of numerous holes filled with a brown powders far back in geologic history. This is borne out to a certain extent by the fact that a similar appearance is found in the incense cedar of California, which is the nearest relative of the red cypress and which flourished in the greater part of North America in geologic times together with the cypress.

**USES OF PECKY CYPRESS.**

As a supplement to Dr. von Schneck's remarks, we present a few of the many uses for which Pecky Cypress is eminently suited.

At one time the uses for Pecky Cypress were limited, being confined principally to plankning, cross ties, fencing, foundation timbers, etc. Today, there is no end of the wood that has more diversified uses than Pecky Cypress. It is equally attractive in the most costly mansions, churches or reproductions of ancient buildings, or in the shack or cabin on the river bank or down by the lakeside.

Pecky Cypress for years has been extensively and satisfactorily used in greenhouse construction. It has a most enviable service record in connection with its uses for benches, partitions, flower boxes, large planter boxes. It is particularly adaptable to the making of cold frames because when once constructed no renewal expenses are involved.

The durability of Pecky Cypress, which has already been discussed makes it very desirable for sewer boxes, irrigation boxes, docks, (where strength is not of prime importance) and bulkheads around homes and farms. The same feature, as well as its rustic appearance, accounts for its extensive use in gates and fences. In recent years it has been successfully used for paving blocks in yards and gardens. These blocks are used in driveways and walkways. They are usually cut from 3x4 inch, 3x6 inch, and 4 x 6 inch material. For use in driveways a depth of at least 4 inches is recommended and a 6-inch depth is even more desirable. For walkways a depth of 3 inches or 4 inches is satisfactory. These blocks are laid end up either on a wood, concrete or cinder foundation. The blocks are placed about half inch apart and soil securely packed around each block. In a little time soil will work into the peck pockets or holes thereby making possible a sod or growth of grass, not only around or between each individual block but also scattered grass all over the surface of the walkway or driveway, which is more attractive. These blocks are being used for flooring in barns and especially in dairy barns. There is a certain elasticity in floors of this type not found in solid floors and especially concrete floors. Indications are that this will prove to be a most satisfactory use for Pecky Cypress.

There is no end to the number of designs and effects that can be worked out with Pecky Cypress for interior paneling and decorative work. It is most suitable for half timber work, paneling, beams, interior trim and for every type of use where an aged or antique effect is desired. The natural irregularities appearing in the wood lends to it an artistic effect of a very unique character. This wood is also used extensively in the manufacture of unusual furniture such as chairs, tables, desks, coffee tables, chests, etc.

One of the most popular uses for Pecky Cypress is in the manufacture of Log Cabin Siding. Log Cabin Siding is usually made from 2 x 6 inch, 2 x 8 inch, and 2 x 10 inch material, rounded on one side and with a lap. This gives an appearance of the old time log cabin built of round logs, yet is more attractive, economical and satisfactory in every way. The peck pockets present a rustic and weathered effect not obtainable in other woods.

The foregoing present to you briefly some of the more important uses of Pecky Cypress. When one considers the vast quantity of this lumber which is yearly used for ties, plankning, fencing, greenhouses, interior trim and many other uses it will be seen that the use of a non-decaying, easily worked wood like Pecky Cypress is desirable. A proper understanding of the natural characteristics of this wood will increase its utilization value in the hands of the consumer.
PECKY CYPRESS LOG CABIN, DESIGNED AND BUILT BY
SAM STOLTZ, WINTER PARK, FLORIDA