

GENERAL SCIENCE

Spread Christmas Spirit

Millions of Christmas trees are transplanted to American homes at Yuletide. Spruce is favorite among evergreens but pine, cedar and firs are also used.

By WATSON DAVIS

See Front Cover

► CHRISTMAS IS a day of many traditions, customs and symbols. It is a religious festival. It is a time for giving gifts and decorating the house in green and red. It is a time for feasting and family gatherings.

To the children of our home and to the spirit of childhood within us all, the Christmas tree, with bright decorations added to its festive green, is an almost universal focus of the holiday. Whether it be a lowly pine or a stately spruce, secured at higher cost, the green tree plays its role in the celebration of an occasion that actually is of an antiquity earlier than the birth of Christ.

One Christmas tree will blossom in America for every five of our population—well over 30,000,000 trees harvested from the forests are sold on the street corners in every city and village, which means there are about two-thirds as many Christmas trees as there are automobiles in the country.

Christmas trees, like many other things which decorate homes at Yuletide, are older than Christmas itself. They were first used in lands far from Bethlehem. They belong to the North, to dark and savage lands beyond the Rhine and the Danube.

The favorite Christmas tree in America is the spruce. There are several types of spruce, but they all can be spotted by their short, sharp, prickly needles, each one standing on a miniature pedestal by itself. Their small cones hang downward.

Shown on the cover of this week's SCIENCE NEWS LETTER is a Christmas-decorated spruce tree. The ornaments on this spruce and on the red cedar and pine on these pages are identical, to give some idea of the relative length of needles.

Then there is the fir, close cousin of the spruce. Firs have softer needles, usually curved, and their cones stand straight up.

Pine trees, often used at Christmas, can be told from spruce or fir by the fact that their needles come in bunches or pairs instead of singly. White pines always have five needles in a bunch. The various yellow pines have less than five—usually two.

Red cedar has very fine, feathery branches of small pointed leaves. Arborvitae, a relative of the red cedar, has leaves flattened into tiny scales which completely cover the twigs on which they grow.

Gigantic is the merchandising machine which brings millions of these trees from

mountain forests to city street corners, all within the brief month between Thanksgiving and Christmas Eve.

Yet only in rare instances does this mighty splurge of woodland cutting hurt the forest. If the Christmas tree marketer cuts selectively, his thinning helps the remaining trees to grow, trees which might otherwise have died from crowding.

Many families do not buy a cut tree at all, but instead a small spruce or fir planted in a tub. They use this as a perennial Christmas tree, bringing it indoors each December, sinking the tub in the garden during the remainder of the year. Children and tree grow together, until one day the parlor ceiling is suddenly too low.

At this holiday season when families are together there is a note of tragedy that often enters into the Christmas scene. The hustle of the festivities around the tree inevitably introduces the hazard of fire. To keep disaster from your hearth and home, remember that you can have a safe as well as a Merry Christmas and actually a fresh moist Christmas tree is hard to burn.

So buy a fresh tree and keep it moist. Give the tree a shake before you buy it. See if any needles fall. If there is a shower of needles the tree is dry. When you get the tree home throw water over it, the ex-

perts advise. Then cut off the butt end about an inch slantwise to open the pores for drawing up water. Set the freshly cut end promptly in water, and keep the tree in a cool shady place until it comes indoors for trimming. Replenish water daily, because a 5- or 6-foot tree may take up as much as a cup a day. Be sure it does not block doorways. Secure it against falling.

Check the wiring on the Christmas tree lights, especially the ones left from previous years. A short circuit in worn wiring might set the tree ablaze. If you have many lights don't connect them all in the same circuit. An overloaded circuit may start a fire within the walls of the building.

Choose non-flammable decorations for the tree and consider flame-proof material for Santa's costume and beard.

Avoid confusion, disorder and fire danger by emptying trash promptly as gifts are unwrapped. But don't load so much in the fireplace that it results in a dangerous bonfire.

Buy English Holly

Christmas greens, in addition to the tree, come from the great outdoors to make the home festive and gay. Evergreen boughs can be used for decorations without fear of contributing to the wasteful depredations that are visited upon our woodlands by ruthless holly hunters and unauthorized harvesters of other greens.

It may seem a very innocent thing to do when you buy a holly wreath or a few yards of ground pine for room decoration. But when you do you are usually buying stolen goods and contributing directly to the waste of our forests and our soil.

The American native holly is in most danger of being hunted almost out of existence. The female trees with their red berries particularly fall before the trespasser's axe. In many places in the eastern part of the country, only the male trees without berries are left and their days seem to be numbered.

English holly, with glossy leaves and more plentiful berries than the dull-leaved wild native holly, is being raised commercially for the market. By purchasing it you will help legitimate business and save our wild holly.

Ground pine, the evergreen that grows as a vine, should not be purchased as it is usually stolen and its gathering exposes the soil to erosion.

There are artificial substitutes for holly and ground pine that are bright and attractive and their use does not hurt our forests and wood lots.

The waxy-berried mistletoe that is hung in doorways as a license to kiss the unwary or willing maid caught beneath it is, most appropriately, a parasite. From the stand-



CHRISTMAS PINE—Long needles growing in bunches or pairs help identify this easily-obtained tree.



RED CEDAR—Less well known than the more popular pine and spruce, the red cedar is frequently used for a Christmas tree where it is abundant.

point of conservation, no one worries about the use of mistletoe as a Christmas green. It grows not in the soil but high on the limbs of trees and harvesting it frees the timber tree from the harm that it does. One reason that it is likely to be expensive is that harvesting it is difficult. In the South, where most of the American supply comes from, men knock clumps of it out of trees with charges of buckshot.

The use of trees and greens in connection with the celebration of the midwinter festival that we call Christmas seems to have originated in connection with religious rites and customs which antedated Christianity. Customs similar to these used at our modern Christmas were in existence more than 5,000 years before the birth of Christ. Green boughs were used to decorate houses in the ancient world because trees were worshipped by early peoples. The ancients worshipped the sun and held festivals to honor the sun gods at the time of the winter solstice, the shortest day of the year. The Goths and the Saxons called this midwinter occasion Yule.

At the same time of the year early Egyptians bedecked their homes with sprays of palm trees. Germanic tribes decorated fir trees. The Romans during their feasts to Saturn used boughs of evergreen and laurel. The evergreen fir was revered by both the Greeks and the Scandinavians at their winter rites. Life eternal was symbolized by mistletoe and green boughs in Druid lore. In Norse mythology, the evergreens represented the revival of Balder, their sun god.

Because these usages were linked with religions that the Christians considered pagan, in early England the church opposed the decoration of homes with greens and the hanging of mistletoe in churches. But the origins of these customs were gradually forgotten and the decoration of churches at Christmas became usual.

Some of the Christmas plants are more modern than evergreens. Poinsettia with its bright red bracts, or modified colorful leaves, is a common Christmas flower, which is caused to flower by the short days and long nights of the Christmas season.

Gas, oil and coal central heating has outmoded the open fireplaces of earlier days and with this modernization the custom of the Yule log has almost disappeared. The Druids of old made the burning of the Yule log a ceremony. They appropriated it from the old Vikings who celebrated the Yule festival at winter solstice and dedicated the burning of an oak log to mighty Thor of the hammer, son of Odin. The Norse and Druid rite was adapted to the Christmas holidays in medieval England and once was widely practiced in America.

Toys, gift giving and card sending have assumed increased importance in the modern Christmas and the origins of what we do have been lost in the rush of our present busy life. The tradition of Christmas cards is said to date back only a little over a hundred years.

Science News Letter, December 15, 1951

SURGERY

Keep Patients Alive by Pinching Heart's Aorta

► AN EXTRA aid for keeping alive a patient whose heart stops on the operating table is reported by Dr. Max G. Carter of New Haven, Conn., in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (Dec. 1).

It consists in pinching closed the aorta, big artery that carries blood from the heart. The pinching is done at a level that keeps blood from going to the lower part of the body, so that as much as possible will go to the brain and the heart muscle itself.

This maneuver, in addition to heart massage and other restorative measures, is credited with saving the life and mentality of a patient whose heart stopped beating for 25 minutes.

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