

PLATE 8.—Twig details of (1) butternut, (2) elm.

SOURCE: TREES OF THE EASTERN & CENTRAL UNITED STATES & CANADA. WILLIAM HARLOW JONES PUBLICATIONS. NEW YORK 1951  
 PG. 18

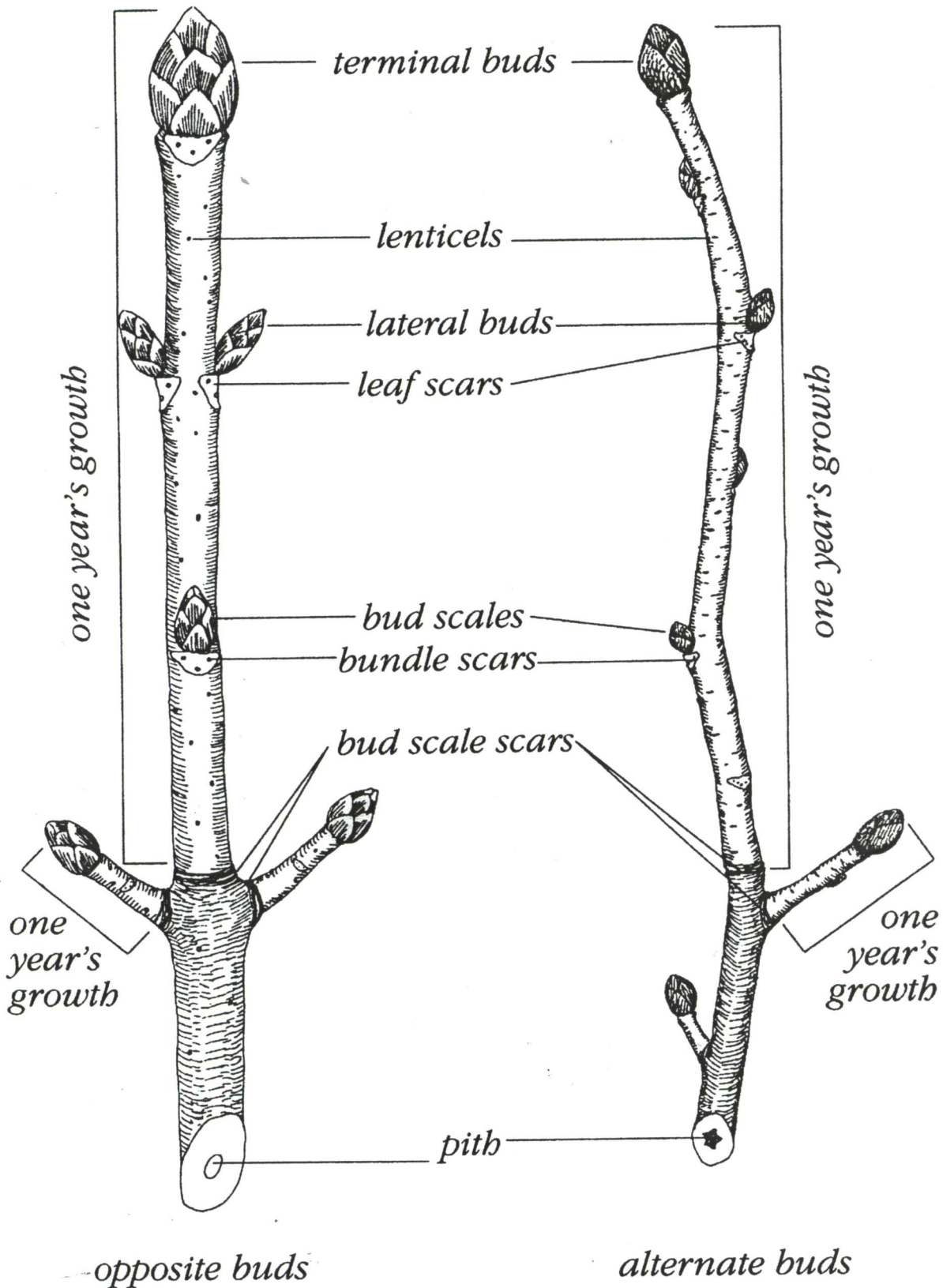
## Definition of Lenticels

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LENTICELS - Rather than indicating a disease or insect problem, the holes are part of the natural anatomy of the twig. All trees have small pores called lenticels scattered over their bark, although they are more noticeable on some trees than on others. Lenticels serve as "breathing holes", allowing oxygen to enter the living cells of the bark tissue. Lenticels can also be seen on fruits such as apples and pears, appearing as small brown specks on the skin surface.

Since they are holes in the outer protective layer of the branch, lenticels can sometimes be invaded by disease-causing organisms, although this is rather rare. For example, the bacterium that causes fire blight, a common bacterial disease of apples and pears, sometimes enters its host through lenticels on young shoots. Some fungal and bacterial canker-causing organisms may begin the disease process by entering the plant through lenticels. Most of the time, however, lenticels simply allow the bark of a tree to "breathe".

# PARTS OF A TWIG





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### Key to Some Winter Twigs

- |   |                          |
|---|--------------------------|
| 1 Buds and twigs opposite or mostly opposite  | go to 2                  |
| 1 Buds and twigs alternate  | go to 5                  |
| 2 Leaf scars large half-moons with u-shaped "smile" of bundle scars; twig stout, gray-brown | <b>White Ash</b>         |
| 2 Leaf scar v-shaped, with three separate bundle scars; slender twigs                       | go to 3                  |
| 3 Twigs gray or brown, buds brown and pointed   | <b>Sugar Maple</b>       |
| 3 Twigs and buds reddish  | go to 4                  |
| 4 End buds rounded, with many overlapping scales like shingles                              | <b>Red Maple</b>         |
| 4 End buds long, with 2 scales that meet like a duckbill                                    | <b>Striped Maple</b>     |
| 5 Buds without bud scales, velvety  | go to 6                  |
| 5 Buds covered with one or several scales   | go to 7                  |
| 6 Buds bright yellow; smell like lemon oil when crushed                                     | <b>Bitternut Hickory</b> |
| 6 Buds gray or tan, leaf scars look like monkey faces                                       | <b>Butternut</b>         |
| 7 End buds clustered in group at tip of twig; pith like 5-pointed star                      | <b>Red Oak</b>           |
| 7 End buds not clustered as above   | go to 8                  |
| 8 Buds red, rounded and humpbacked; twig appears to zig-zag                                 | <b>Basswood</b>          |
| 8 Buds tapered, not red or rounded  | go to 9                  |
| 9 Buds ½ " long, golden-brown, slender, cigar-shaped (more than 4 times longer than wide)   | <b>American Beech</b>    |
| 9 Buds brown, not as long and slender as above  | go to 10                 |
| 10 Twig has a sweet wintergreen smell when scraped with fingernail                          | <b>Yellow Birch</b>      |
| 10 Twig has no smell when scraped with fingernail   | <b>White Birch</b>       |
| 10 Twig smells strong, like bitter almond, when scraped with fingernail                     | <b>Black Cherry</b>      |

