Worksheet: Using a Dichotomous Key

Directions: Use the dichotomous key backwards to answer the questions below.

# Classification Key for Birch Trees

1a. bark dark, reddish-brown, yellowish-brown to black ………………………………………... Go to 2

1b. bark creamy white, pinkish, or gray …………………………………………………………. Go to 6

2a. bark and twigs with wintergreen fragrance when cut ………………………………………… Go to 3

2b. bark and twigs without a fragrance when cut ………………………………………………… Go to 5

3a. leaves with 8 – 12 pairs of veins……………………………………………………………… Go to 4

3b. leaves with 4 – 6 pairs of veins ………………………………………………….………. *Betula uber*

4a. bark dark red to almost black; scales of cones smooth, 6 – 12 mm long ……………..… *Betula lenta*

4b. bark reddish-brown, peeling in loose sheets, scales of cone hairy, 5 – 7 mm … *Betula alleghaniensis*

5a. branchlets covered near tip with many small glands …………………………...…*Betula occidentalis*

5b. branchlets smooth, shiny, no glands present …………………………………………..…*Betula nigra*

6a. leaves hairy on lower surface ………………………………………………………………… Go to 7

6b. leaves smooth, hairless underside ……………………………………………………………. Go to 8

7a. leaves 5 –13 cm long, pointed tip ………………………………………………….…*Betula papyrifer*

7b. leaves 3 – 7 cm long, pointed tip, winter buds shiny ………………………………….*Betula pendula*

8a. bark dull gray to grayish-white, smooth and not peeling…………………….……..*Betula populifolia*

8b. bark white to pinkish-white, peeling …………………………………………………………. Go to 9

9a. leaves 6 – 10 cm, round base ……………………………………………….…………*Betula caerulea*

9b. leaves 3 – 5 cm, squared base ……………………………………………….………*Betula pubescens*

1. What are the leaves of the *Betula populifolia* tree like on the underside? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. How many PAIRS of veins are on the leaves of *Betula lenta*? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. List the characteristics of *Betula alleghaniensis*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4. When a twig of *Betula nigra* is cut, does it give off a wintergreen fragrance? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. What color is the bark of *Betula pendula*? ­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. How big are the scales on the cone of the *Betula lenta*?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Does the bark of *Betula caerulea* peel? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. List the characteristics of *Betula uber*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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