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Bole tree identification method

伯乐树鉴定方法

(English Translation)

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020.

1 Scope

This document specifies the identification method of Bole Tree.

This document is applicable to the identification of Bo Le Shu.

2 Normative references

There are no normative references in this document.

3.1 Terms and definitions

The following terms and definitions apply to this document.

3.1.1

Capsule

The fruit developed from the compound pistil of the connate carpel, the ovary has one or more compartments, and each compartment has multiple seeds.

3.1.2

Axial placentation

The pistil is composed of multiple carpels. The carpels are connected to each other to form a central axis and a septum in the ovary. The number of ovary chambers is the same as the number of carpels.

The ovule is implanted on the central axis.

3.1.3

Raceme

A kind of infinite inflorescence. Its characteristic is that the flower axis is not branched, long, and there are many stalked florets from bottom to top, and the flower stalks of each floret, etc.

Long, flowering order from bottom to top.

3.1.4

Pinnate compound leaf pinnate A compound leaf with small leaves arranged in a feather shape on both sides of the leaf shaft is called a pinnate compound leaf.

3.1.5

Picolenticel

There are some crack-like protrusions visible to the naked eye on the surface of tree branches. It is a pore for the stem to exchange gas with the outside world.

3.2 Abbreviations

The following abbreviations apply to this document.

4 Basic information

The basic information of Bole Tree is as follows.

Chinese name. Bole tree, Zhong calyx wood, winter peach, Zhong Gushu

5 Principles of the method

Bole Tree may enter and exit the country in the form of fruits, seeds, plant residues, plant specimens and seedlings. Bole tree seeds, leaves and other morphological characteristics Signs and standard DNA barcodes are the main basis for the identification of this species. When the morphological characteristics such as seeds and leaves are complete, the morphological characteristics are used as a reference when the morphological characteristics of seeds or leaves are incomplete, molecular characteristics are used as the main basis for identification.

As the Bole tree family is a monotypic family, the identification of Bole tree family is the identification of Bole tree.

6.1 Equipment and appliances

Stereo microscope, electronic balance, magnifying glass, scalpel, dissecting needle, forceps, finger tube, petri dish, white porcelain plate, cotton, Sample bag, specimen holder, label, recording paper, specimen bottle, specimen box, conventional PCR instrument, micro spectrophotometer, electrophoresis instrument, gel Imaging system, high-speed refrigerated centrifuge, biological safety cabinet, oven, autoclave, mortar, shaker, water bath, ice maker, pure Water meter, vortex shaker, refrigerator, refrigerated mixing mill, micropipette (2 μ L, 10 μ L, 20 μ L, 100 μ L,.200 μ L, 1000 μ L), centrifuge tube (2 mL), PCR reaction tube (0.2 mL, 0.5 mL).

6.2 Reagents

Unless otherwise specified, all reagents are analytical reagents or biochemical reagents.

Plant genome extraction kit, ultrapure water, DNA Marker, agarose, nucleic acid gel dye, liquid nitrogen, deoxyribonucleoside triphosphate Acid (dNTP), Taq polymerase, 10xPCR buffer, insect repellent, camphor extract, desiccant, CTAB extraction reagent (see Appendix B).

7 Laboratory testing

Part of the original samples intercepted by the on-site quarantine is selected as the samples to be inspected. The number of samples (number of plants or weight) is 1/2 to 3/4 (compared to when there are few samples) as inspection samples, and the remaining samples as preservation samples. The samples submitted for inspection are less than 3

plants or 1.0 kg for full inspection.

8.1 Morphological identification method

According to the morphological characteristics of Bole tree, the identification key of Bole tree based on morphological characteristics of seeds and similar genera and species identification key (see Appendix C) and leaf Species identification of the suspected samples with the Bole tree and similar species retrieval table (see Appendix D and Appendix E) with morphological characteristics of the slice.

8.1.1.1 Leaf

Leaves alternate, odd-pinnate compound leaves; leaflets opposite or lower alternate, with small petioles, entire, pinnate veins; no stipules.

8.1.1.2 Flowers

The flowers are large, bisexual, symmetrical on both sides, forming a terminal, upright raceme; the calyx is broadly campanulate, 5-lobed; the petals are 5, separated, Arranged in a tile-like shape, unequal, the latter 2 are smaller, and are inserted on the upper part of the calyx; 8 stamens, connected at the base, are inserted on the lower part of the calyx, Slightly shorter than petals, filiform filaments, anthers backed; 1 pistil, ovary sessile, superior, 3~5 locules, axillary placenta, hanging in each ventricle There are 2 down-hanging ovules, the style is slightly longer than the stamens, and the stigma is capitate and small.

8.1.1.3 Fruits and seeds

The fruit is a capsule with 3-valved to 5-valved, thick, woody petals; large seeds.

8.1.2.1 Whole plant and stem

Trees, 10 m-20 m high, gray-brown bark; branchlets have obvious lenticels.

8.1.2.2 Leaf

Odd-pinnate compound leaves are usually 25 cm~45 cm long, with sparse pubescent or glabrous axis; petiole length 10 cm~18 cm, lobules 7~15 Sheets, paper or leather, narrowly elliptical, rhomboid oblong, oblong-lanceolate or ovoid-lanceolate, somewhat oblique, 6 cm~26 cm long, 3 cm~9 cm wide, entire, apex acuminate or abruptly acuminate, base obtuse or short-pointed, wedge-shaped, leaf surface green, glabrous, leaf back powder green or off-white with pubescent hairs, often denser on both sides of the midrib and lateral veins; leaf veins are obvious on the back of the leaf, with 8 to 15 pairs of lateral veins; petiole long 2 mm~10 mm, without hair.