

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 2471-2019

Replacing SN/T 2471-2010

**Quarantine and identification method of larch seed wasp and
Pistacia chinensis seed bee**

落叶松种子小蜂与黄连木种子小蜂检疫鉴定方法

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces SN/T 2471-2010.

The main differences between this standard and SN/T 2471-2010.

- Adjusted the standard structure and content;
- Revised the biological information, geographical distribution and host plants of the two bees;
- Added the search form for common domestic similar types;
- Added the identification feature map of two small bees.

This standard is proposed and managed by the General Administration of Customs of the People's Republic of China.

This standard was drafted. China Academy of Inspection and Quarantine.

1 Scope

This standard applies to the quarantine and identification of Larch seed bee and Pistacia seed bee.

2 Terms and definitions

The following terms and definitions apply to this document.

There are two grooves on both sides of the front edge of the mid-thoracic shield. marginalvein).

3 Basic information

There are 61 species of 11 genera in China, and 38 species of broad-shouldered genus in China. See Appendix A for the biology, geographic distribution, and host information of the two bees.

Common species in China are the broad-shouldered bee, the slime beetle, the astragalus seed bee and the Chinese locust seed bee.

Record B.

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4 Method principle

The classification and identification of small bees are mainly based on the external morphological characteristics of female adults. Larvae need to be reared to adulthood for identification.

5.1 Equipment

Stereo microscope, forceps, dissecting scissors, dissecting needle, petri dish, absorbent paper, small writing brush, finger tube.

5.2 Reagents

Anhydrous ethanol.

6.1.1 Grain inspection

The extracted seed samples were dissected one by one (100 seeds). The specific operation method is as follows. first use a surgical shear to cut a small Mouth, then use an insect

needle to gradually peel off the seeds, put the larva or pupae in a petri dish, and place it under a dissecting mirror, according to the morphological characteristics of the larva or pupae Preliminary identification.

6.1.2 Specific gravity test

This method is usually used when the seed-containing rate is low. The specific operation method is as follows.

250g) put in clean water, the volume ratio of seeds to clean water is 1. 5, stir for 1min ~ 2min, leave it for 8h ~ 12h, and remove the upper floating seeds the seeds are dissected one by one, which can improve the efficiency of slicing examination.

6.2.1 Visual inspection

Place the extracted fruit samples on white paper or white porcelain plate for careful observation. The healthy and plump fruits are blue-green, and the injured fruits are red-brown.

Color, easy to distinguish. Victim fruit is easily confused with immature or damp moldy fruit. immature fruit is smaller in size and has a thin peel, Yellow; and moist and moldy fruits are gray-black or gray-brown.

6.2.2 Grain inspection

This method can be performed on the basis of visual inspection. The specific operation method is as follows. Put the sampled fruit in a white porcelain plate and change the color the fruit is picked out, crushed piece by piece with pliers, and gradually peeled off with a dissecting needle. To avoid crushing the fruit and larva Gauze is wrapped around the axis to ensure that the fruit shell is cracked without damaging the integrity of the insect body.

6.2.3 Specific gravity test

This method is usually used when the fruit has a low insect content rate. The specific operation method is as follows. Put the extracted fruit sample into clear water, and the fruit the volume ratio of solid and clean water is 1. 5. After fully stirring, let stand for 30 minutes, and take out the upper floating fruit to slice and inspect, which can improve the inspection efficiency.

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7.1 Identification Characteristics of Adults

The body is medium in size, with a body length of 4mm-5mm, androgynous or heterotypic. The body is mostly black, sometimes yellow or yellowish, without metallic luster.

Phytophagous (feeds on seeds, grasses stems) or parasitic. The head and chest often have

deep umbilical nicks or are wrinkled. Frontal view of head wide and wide the jaw is strong, with 3 teeth, and the cheek is long. The tentacles are born in the middle of the face, 11 to 13 verses. The pronotum is rectangular, and the mid-thoracic shield sulcus is deep and complete; and the thoracoabdominal section is often wrinkled and obvious. The hind belly is smooth or smooth. The female's stalk has an obovate, oblate, laterally flattened end, with a plow-like or pillar-shaped upturn.

Like, ovipositor slightly protruding. The male stalk has an abdomen with a long abdomen. Hind tibia with 2 pitches.

7.2 Identification Characteristics of Adults

The anterior wing margin vein is obviously longer than the mole vein, and the male antennae cords are usually 5 knots. Carnivorous or herbivorous. Female. The frontal width of the head is slightly larger than the length, and the lower end is slightly narrow. The cheeks are equal to the compound eyes in length, and the face is often sunken. The tentacles are born in the middle of the face.

The knots are linear, mostly 5 knots, and 3 knots. The chest is quite long, the back is bulging, and the anterior thoracic shield is 2-3 times wider than the long, slightly shorter than the mid-thoracic shield;

Swelling, oval. And the thoracoabdominal section is significantly inclined, with large reticular wrinkles, and the middle and longitudinal grooves are narrow and deep. The front wings are transparent and the marginal veins are longer than the mole veins. Stalk abdomen Oval-shaped, several as long as the middle body, slightly flattened and pointed at the tip, the dorsal plate of the ventral end of the abdomen is shaped like a plow, and the ovipositor is slightly protruding.

Male. Rounded posterior belly, with long belly. There are 5 tentacle cord sections, which are banana-shaped with stalks, and are connected to each other. Each section has hair growth, and 2 stick sections.

The head and chest surface have large umbilical marks.

7.3.1 Female adult

Body length 1.8mm ~ 2.5mm. Body black without metallic luster. Compound eyes are brown. In addition to the foot and the body of the same color, the leg and tibia more or less black-brown to yellow-brown, tarsal joint yellow-brown, dark brown at the end. The wings are transparent and the veins are brown. Hind belly slightly reddish-brown, ends (including Ovipositor sheath) red dark brown. See Appendix C.

The frontal view of the head is broad, and the face is slightly bulged except for the open antennae depressions, which are slightly swollen, and have silver-gray feathery setae.