ICS 35.040
CCS B 60

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 15775-2011

Replacing GB/T 15775-1995

Classification and codes of forest pests

森林植物害虫分类与代码

Issued on: September 29, 2011 **Implemented on: December 1, 2011**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine;
Standardization Administration of the PRC

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Foreword

This standard replaces GB/T 15775-1995 Classification and codes of forestry resources - Forest insect pests.

The changes with respect to GB/T 15775-1995 are the following: 541 species of forest plant pests have been added; the insect classification system currently in international use has been adopted; the authority who named the taxon is given for every generic and specific Latin name; the pest code now consists of eleven Arabic numerals, the coding of the genus has been added, and family, genus and species (or subspecies) each take three digits; and non-consecutive coding is used between one genus and the next and between one species (or subspecies) and the next, with a gap of five digits in each case, so that additions can be made later.

This standard was proposed by and is under the jurisdiction of the State Forestry Administration.

The drafting organisations of this standard are the Research Institute of Forest Ecology, Environment and Protection of the Chinese Academy of Forestry and the General Station of Forest Pest Control of the State Forestry Administration.

The previous edition of the standard replaced by this standard is GB/T 15775-1995.

1 Scope

China's national standard that gives every insect pest of forest plants a number. Forest protection is a records business: a quarantine post, a provincial forestry bureau and a research institute all record the same outbreak, and unless they mean the same thing by the same name their records cannot be added together. Insect names are exactly where that breaks down - the same beetle carries different common names in different provinces, and the Latin binomial itself changes as taxonomy is revised. The answer adopted here is a

hierarchical numeric code: eleven digits in four layers, order, family, genus and species or subspecies, in which each name maps to one code and one code to one name. The standard specifies the classification and the codes of the insect pests of forest plants, and applies to the collection, exchange and processing of forest pest information by forestry departments and other bodies concerned. The 2011 edition added 541 species, adopted the currently accepted international insect classification system, gave the authority for every generic and specific Latin name, extended the code from the old form by adding the genus level with three digits each for family, genus and species, and left gaps of five between consecutive genera and species so that new taxa can be inserted later.

This standard specifies the classification and the codes of the insect pests of forest plants.

This standard applies to the collection, exchange and processing of forest pest information by forestry departments and other departments concerned.

2 Terms and definitions

The following terms and definitions apply to this standard.

2.1 Forest plants: the plant components that make up the forest ecosystem, together with the plant categories laid down in the Forest Law of the People's Republic of China, including trees, shrubs, herbaceous plants, ferns, mosses and lichens.

2.2 Insect pests: insects that cause harm to forest plants and to human health.

2.3 Classification: the process of grouping species and naming them according to definite principles.

2.4 Classification system: a system that reflects the evolutionary history of a biological group and that conforms as far as possible to the relationships of kinship between species.

3 Taxonomic basis

The taxonomic basis is as follows.

The division into orders follows mainly the classification system generally accepted in the 1980s: class Insecta; subclass Apterygota (orders Archaeognatha and Thysanura); subclass Pterygota; infraclass Paleoptera (orders Ephemeroptera and Odonata); infraclass Neoptera; division Exopterygota; division Endopterygota.

For the Homoptera and the Hemiptera the results of research from the 1990s are adopted, which are now accepted by most entomologists: the traditional order Homoptera is a paraphyletic group and should be placed within the Hemiptera.

The division into suborders, superfamilies and families follows the classification system used by Yuan Feng and others (2006).

The division into genera, species and subspecies is based mainly on the most recent research progress for each group, while also taking account of traditional classification practice and of practical requirements in use.

4 Principles of compilation

4.1 The most stable essential attributes of the pest are chosen as the basis of the classification, which proceeds through the four levels of order, family, genus and species (or subspecies).

4.2 The forest pests are arranged in a definite order and systematised according to definite rules, so as to form a rational and scientific classification system.

4.3 Codes and pest names correspond one to one: one code stands for one pest only, and empty positions are left between genera and between species so that new kinds can be added.

4.4 While making the classification system as good as it can be, the practical needs of the using organisations are met as far as possible: a hierarchical numeric code is used and the length of the code is kept as short as possible, so that it is easy to understand and to apply.

5 Method of coding the pests

This standard uses a hierarchical coding method. Every complete code consists of eleven Arabic numerals in four layers, whose structure is shown in Figure 1.

The first layer is the order code, of two digits. The first digit indicates the group to which the order belongs: 1 stands for the division Exopterygota of the class Insecta, 2 for the division Endopterygota of the class Insecta, and 3 for the class Arachnida. The second digit is a serial number.

The second layer is the family code, of three digits. The first digit indicates the suborder or superfamily to which the family belongs, and the second and third digits code the families in their customary order.

The third layer is the genus code, of three digits. The genera within one family are coded in Latin alphabetical order, with a gap of five digits between consecutive genera.

The fourth layer is the species code, of three digits. The species within one genus are coded in Latin alphabetical order, with a gap of five digits between consecutive species. Subspecies are coded in the same way as species.

Figure 1 shows the structure of the code as four groups of digits: two digits for the order code, three for the family code, three for the genus code and three for the species and subspecies code.

6 Table of the classification and codes of forest plant pests

The classification and codes of forest plant pests are given in Table 1.

Table 1 occupies the whole body of the standard and runs to some one hundred and seventy pages. Each row carries the eleven-digit code, the Chinese name and the Latin scientific name, indented by rank so that order, family, genus and species can be read at a glance; the authority who named the taxon is given for every genus and every species. The table opens with the order Orthoptera and works through the orders of the Exopterygota, then the Endopterygota, and closes with the class Arachnida.