

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

HJ 710.13-2016

**Technical guidelines for biodiversity monitoring. bees
(English Translation)**

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Foreword

To implement the "Environmental Protection Law of the People's Republic of China", "The Wildlife Protection Law of the People's Republic of China" and National Biodiversity Conservation Strategy and Action Plan (2011-2030), regulating China's biodiversity observation work, Develop this standard.

This standard specifies the main content, technical requirements and methods of bee diversity observation.

Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F, and Appendix G of this standard are informative annexes.

This standard is the first release.

This standard belongs to the same series of technical guidelines for biodiversity observation series as the following standards.

Guidelines for Biodiversity Observations, Terrestrial Vascular Plants (HJ 710.1);

Biodiversity Observations Technical Guidelines Lichens and Moss (HJ 710.2);

Biodiversity observation technology guidelines for terrestrial mammals (HJ 710.3);

Guidelines for Biodiversity Observation Techniques (HJ 710.4);

Guidelines for Biodiversity Observation Techniques Reptiles (HJ 710.5);

Biodiversity observation technology guidelines for amphibians (HJ 710.6);

Guidelines for Biodiversity Observations in Inland Waters (HJ 710.7);

Guidelines for Biodiversity Observation Techniques Freshwater benthic macroinvertebrates (HJ 710.8);

Guidelines for Biodiversity Observation Technology Butterfly (HJ 710.9);

Guidelines for Biodiversity Observation Techniques for large and medium-sized soil animals (HJ 710.10);

Guidelines for Biodiversity Observation Techniques for Large Fungi (HJ 710.11);

Guidelines for Biodiversity Observation Techniques Aquatic Vascular Plants (HJ 710.--).

This standard was formulated by the Science and Technology Standards Department of the Ministry of Environmental Protection.

This standard was drafted. Nanjing Institute of Environmental Sciences, Ministry of Environmental Protection.

This standard was approved by the Ministry of Environmental Protection on May 4, 2016.

This standard has been implemented since August 1, 2016.

This standard is explained by the Ministry of Environmental Protection.

Biodiversity Observation Technology Guide Bees

1 Scope of application

This standard specifies the main content, technical requirements and methods of bee diversity observation within the People's Republic of China.

This standard applies to the observation of the diversity of bees within the People's Republic of China.

The bees referred to in this standard cover all species in the apodea bee.

2 Normative references

The contents of this standard refer to the following documents or their terms. For undated references, the latest edition applies.

In this standard.

GB/T 7714 post-reference reference description rules HJ 623 Regional Biodiversity Assessment Standard HJ 628 Biological Genetic Resources Collection Technical Specification (Trial)

3 Terms and definitions

The following terms and definitions apply to this standard.

Line line transect

Refers to a route selected by the observer within the observation plot. The observer records what appears in a certain space along the route Related information.

Sample section

In the ideal case, the lengths of the segments are equal, and the habitat types are the same in each segment.

Quadrat sampling method Refers to the method by which the observer counts the animal entities or activity traces seen in the set sample.

Bee fabe bee fauna

Refers to the formation of historical development and under modern ecological conditions, a specific geographical area or a specific time the total number of bee species present.

Dominant species

Refers to species that have a significant control over the formation of community structures and community environments. They are usually the number of individuals, for species with high biomass and strong living ability, the number of individuals with dominant species usually accounts for more than 10% of the total number of individuals in the community.

4.1 Scientific principles

The observation plots and observation objects should be representative and fully reflect the overall condition of the bee communities in the observation area;

Uniform, standardized observation methods can observe trends in the dynamics of bee species and their populations.

4.2 Principle of operability

The observation plan should consider the conditions of manpower, capital and logistical support, and the observation site should have certain traffic and Working conditions.

4.3 Principle of sustainability

Observations should meet the needs of biodiversity conservation and management, and can guide biodiversity conservation and management.

The role of early warning. The observation plots, sample lines, observation time and frequency should not be arbitrarily changed once determined.

4.4 Protective principles

The observation process should minimize interference with organisms and their habitats, and conduct non-invasive sampling in accordance with HJ 628.

Avoid frequent observations beyond objective needs.

4.5 Security Principles

Observations have certain characteristics of field work, and observers should receive relevant professional training and take safety protection measures.

5.1.1 Determining the target of observation

The target of bee observation mainly includes. mastering the species composition and population dynamics of bees in the observation area; analyzing habitat changes and ring Impacts of environmental factors such as environmental pollution and climate change on the diversity of bees; or assessment of bee protection measures and policies Effectiveness, and propose adaptive management measures.

5.1.2 Selecting an Observing Object

The observation object is determined based on the observation target. The observed object may be an adult, egg, or larva of all bee species in a certain area.

Harmony, etc., can also be used for a certain group or certain specific species (rare and endangered species, protected species, invasive alien species, Widespread species, indicator species, etc.) for observation.