

Fish Collections in China and Digitization of Fish Collection at Institute of Zoology, Chinese Academy of Sciences

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As a part of modern biosciences, Chinese ichthyological research made by Chinese ichthyologists might start in late 1920s. The fish collections have been built from the same period. The earliest and important collections were mainly in two top institutions: Institute of Zoology, Academia Sinica in Nanjing and Fan Memorial Institute of Biology in Peiping (Beijing), respectively. Unfortunately, almost all fish specimens deposited in the Institute of Zoology, Academia Sinica were lost or destroyed during the Second World War and the Chinese Civil War. After 1949, with several national field surveys of inland and marine fishes, the number of specimens has been increased rapidly. Many new species have been described during the field surveys. Those specimens are mainly preserved in a few top institutions of Chinese Academy of Sciences, including Institute of Zoology in Beijing, Institute of Hydrobiology in Wuhan, Kunming Institute of Zoology, Institute of Oceanology in Qingdao and South China Sea Institute of Oceanology in Guangzhou. Besides, Shanghai Ocean University also has an important fish collection. There are also a few collections preserved in some other public units belonging to local universities, provincial fisheries institutes, etc. or even in some private fish collection rooms.

Based on the statistics in 1987, China has 2831 fish species including about 2,000 marine fish and over 800 freshwater fish. The newest number on Chinese freshwater fish species is over 1200 (unpublished). Most of type specimens of the species described after 1949 are preserved in those important institutions mentioned above.

Nowadays, the specimens (not just fish) of the Fan Memorial Institute of Biology are mainly preserved in the Institute of Zoology, Chinese Academy of Sciences. Fish collection of this institute may be the biggest one in China in terms of the number of both species and specimens. Among them, over 200,000 specimens including marine and freshwater fishes have been identified, and another 50,000-100,000 specimens are still being identified. The collection are added by the speed of about 5, 000 specimens every year.

A unified database framework for the collection of Chinese Academy of Sciences has been built few years before. It includes two parts, species database and specimen database. The information of fish collection of the Institute of Zoology, Chinese Academy of Sciences is still being input to the database. There is over 2,500 species information belonging to 249 families with over 3000 photos in this database. And fish specimen database has collected the information of 180, 000 identified specimens. Both databases are connected and can be cross-searched. The database will open to public in the future.