

Current status and perspective of digital archives of Taiwan fishes

Kwang-Tsao Shao*, Hsin-Hua Lin, Yung-Chang Lin, and Pai-Lei Lin

Biodiversity Research Center, Academia Sinica

E-mail: zoskt@gate.sinica.edu.tw

The Fish Database of Taiwan (fishdb.sinica.edu.tw) was established in the early 1990s and has collected and integrated information such as classification, distribution, specimens, and references on 3,121 fishes of Taiwan. The contents include species descriptions (2,791 species), images (3,857 ecological photos and 988 videos), skeletal X-rays (1,866 species), otoliths (1,394 species), COI gene sequences (1,607 pieces), and field collecting data; all are made accessible online and constantly updated. Besides providing academic services to promote academic exchanges and raise research quality, the database also has popular science materials, underwater real-time videos, and marine conservation information so that it can contribute to the research, education, and management of marine resources.

In 1994, we started a long-term partnership with the global FishBase and continue to actively collaborate with other international biodiversity databases and projects, including GBIF, COL, and EOL. We conduct cross-strait collaboration with China to exchange fish specimen data and establish a parallel list of traditional and simplified Chinese fish names. The repatriation of 228 type specimens of Taiwan fishes from more than ten institutions abroad is another achievement. Currently, the database has more than 500 thousands visits per month (including search engines), and is the only member of WDS that comes from Taiwan.

As to the value-added creations and applications, many educational materials, e.g. Taiwan Fish Multimedia Dictionary, Taiwan Fish Culture and Nature Knowledge Base, Intellectual Restaurant, Augmented Reality Knowledge Cards, e-books and e-magazines, Taiwan Seafood Guide, fish terms and definitions, governmental fisheries statistics, and allowed/prohibited aquatic checklists had also been compiled. Also, a cell phone version of *The Fish Database of Taiwan* had been developed to conform to the trend of querying real-time data.

The next steps will be providing some fish-related cultural information as well as integrating the molecular identification data of fish eggs and juveniles in Taiwan waters, so that the early life history of Taiwan fishes could be understood more and further used for limiting fisheries, MPA, and resources administration.