

# Forensic Science in Support of Conservation Efforts — Developments in Morphological and Chemical Approaches in Taiwan —

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**REFERENCE:** Chang H-C, Chen T-H, Lin D-L: Forensic science in support of conservation efforts — Developments in morphological and chemical approaches in Taiwan; *Forensic Sci Rev* 23:37; 2011.

**ABSTRACT:** Parts from animals that are now endangered species (such as bear bile, rhino horn, and tiger bone) have long been important ingredients of traditional Chinese medicine (TCM). Deeply believing in the potency of these ingredients and coupled with substantial gains in wealth of the population in Taiwan in the 1980s, ugly scenarios came to light. Taiwan quickly became the target of investigation pursued by international wildlife conservationists. To provide scientific bases for the government's investigation efforts, morphological, chemical/physical, and genetic methods were developed to characterize TCM products. This review focuses on Taiwanese scientists' efforts on the following topic matters: (a) morphological approach to identify CITES-listed species from the turtle shells traded in the TCM market; (b) chromatographic and spectrophotometric methods for the identification and differentiation of bile products of different animal origins; and (c) gas chromatography-mass spectrometry method for the analysis of deer musk components and alleged musk products.

**KEY WORDS:** Bear bile, deer musk, turtle shell.

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