

عنوان مقاله:

A review of the past 16 years of DNA barcoding

محل انتشار:

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خلاصه مقاله:

In the post-genomic era, molecular biologists proposed a concept of DNA Barcoding which relies on the use of a standardized DNA region, cytochrome c oxidase I (COI), as a tag for rapid and accurate identification of species [2]. It provided a better taxonomic resolution than that which could be achieved through morphological studies and also efficient solution to establish species delimitation and boundaries [5]. However, DNA barcoding in plants only allows for the identification of specimens to a family, but does not suitable for genera or species [7]. Plant working group of Consortium for the Barcode of Life (CBOL), suggested rbcL and matK as the core DNA barcode for land plants [1]. Similarly in amphibian and reptile species, ribosomal sequences such as 12S, 16S have been proposed as universal barcode because of its relatively high rate of molecular evolution [9]. DNA barcoding gives information on cryptic, sibling species and complex species which this identification technique fully supports the improvement of animal classification to sort out any ambiguity at the species level [3, 4, 6, 8]. Consequently, COI was found to serve as the base of a global bio identification system for animals and plants beside chloroplast and ribosomal sequences

کلمات کلیدی:

DNA, Barcoding, Identification, Mitochondrial gene

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