

Chapter 3

DNA BARCODING STUDIES IN PLANTS

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◆ INTRODUCTION

They occur together with seed plants (Angiosperms and Gymnosperms), bryophytes (mosses, horns and liverworts) and ferns. Estimates of the total number of species vary widely between authors, but a recent estimate suggested there are about 380,000 species of land plants. There are 352,000 species of angiosperms, about 1,300 species of angiosperm, and about 13,000 species consisting of bryophytes and ferns/ferns⁽¹⁾. Very few of these plants can be identified using classical taxonomic methods^(2, 3). The classical taxonomic system used today is based on the basis ‘the more similar individuals are morphologically similar to each other, the more closely related they are.’ For this reason, the definition of ‘morphological type’ is quite relative to the researchers. When designing taxonomic systems, it is often overlooked that nature never produces species, but instead produces individuals and populations. The existence of gene flow between populations in plants, the changes applied by hybridization, ecological differences and epigenetics on individuals cause genetic drift and species to not be morphologically stable, and the concept of ‘biological species’ defined by Dobzhansky (1940) is especially suitable for complex and crowded plant groups (such as Orchidaceae) makes it difficult to apply^(4, Fig. 1.).

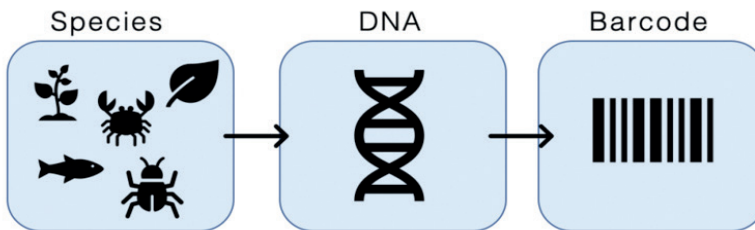


Fig. 1. Schematic Dna Barcoding

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