

Identification of hybrids of painted and milky storks using FTA card-collected blood, molecular markers, and morphologies

Abstract

Suspicious hybrids of painted storks and milky storks were found in a Malaysian zoo. Blood of these birds was sampled on FTA cards for DNA fingerprinting. Of 44 optimized primers, 6 produced diagnostic markers that could identify hybrids. The markers were based on simple, direct PCR-generated multilocus banding patterns that provided two sets of genetic data, one for each of the two stork species and another for the hybrids. It also revealed that large DNA fragments (3,000 bp) could be amplified from blood collected on FTA cards. When the results of each individual bird's DNA fingerprint were compared with plumage characters, the hybrids were found to express a range of intermediate phenotypic traits of the pure breeds with no dominant plumage characteristic from either parental species.

Keyword: Diagnostic marker-plumage comparison; FTA cards; *Mycteria cinerea*; *Mycteria leucocephala*; Stork hybrids.