Kerala’s captive jumbos get genetic IDs

Move could help solve wildlife crime cases involving poaching and illegal trade

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DNA profiling may be a contentious issue among humans, but for Kerala’s captive elephants, it’s a done deal. In a first for India, every one of Kerala’s captive elephants now has a unique DNA-based genetic ID. M. Radhakrishna Pillai, Director, Rajiv Gandhi Centre for Biotechnology (RGCB), which was given the task of DNA fingerprinting the elephants, handed over the DNA database, prototypes of Unique Identification Cards, and a study report to the Forest Department’s Chief Wildlife Warden P.C. Kesavan on Tuesday.

Captive elephants are those that have been captured from the wild and used by humans. The Forest Department provided blood samples of captive elephants from across the State to the RGCB for DNA fingerprinting. The method is a forensic technique that makes it possible to identify individuals – people or animals – based on unique DNA characteristics called micro-satellites (DNA portions that occur repeatedly), much like fingerprints.

To conduct DNA fingerprinting, the RGCB’s teams at the Regional Facility for DNA Fingerprinting (RFDF) in Thiruvananthapuram first removed duplicate samples after cross-verification and then isolated DNA from the samples. After tests, 11 micro-satellite markers (which help isolate specific micro-satellites) and one sex marker (for gender ID) were selected, said E.V. Soniya, head of the DNA Fingerprinting Unit at the RGCB. The database covers all 519 captive elephants. “This database is now accessible to the Forest Department,” she said. The RGCB also developed a protocol to DNA fingerprint elephants using dung and tusk samples, which could help solve wildlife crimes, including poaching and illegal trade.

Unlike the microchip-based ID used so far, DNA fingerprinting provides a unique identity and is more fool-proof, said Additional Principal Chief Conservator of Forests Padma Mahanti.