DEVELOPMENT OF A NON-LETHAL WILDLIFE DETERRENT SYSTEM: ADDRESSING HUMAN-WILDLIFE CONFLICT WITH ASIAN PALM CIVETS IN AGRICULTURAL AND RESIDENTIAL AREAS

M.H.M. Hadhil and S.V.R. Gamage

Department of Electromechanical Technology, University of Vocational Technology, Sri Lanka
hadhilhaniefa@gmail.com

Abstract: A nocturnal animal, the Asian Palm Civet (*Pardoxurus hermaphroditus*) is widespread throughout South and Southeast Asia, including Sri Lanka. Because of their flexibility, they frequently invade suburban and urban areas, causing disruptions, fruit theft, and property damage. Furthermore, there are health risks because civets can carry zoonotic infections. Conventional deterrent techniques, such sound repellents and electric fences, are sometimes inefficient, expensive, and unsuitable for broad application. This study describes the development of a non-lethal wild-life deterrent system intended to keep Asian palm civets out of residential and agricultural regions. By using a laser light as a visual deterrent, the system seeks to over-come the drawbacks of current techniques in a way that is both ethical and practical. The efficiency of the deterrence system was assessed during a nine-day period. According to preliminary observations, the civets were successfully scared and repulsed by the laser light, which caused them to run away. The civets avoided the region more and more as the testing went on, suggesting a successful long-term deter-rent impact. In summary, the approach that was designed turned out to be a humane and efficient way to reduce conflicts between Asian palm civets and people. The technology demonstrates potential as a long-term solution for preventing wildlife in-filtration into agricultural areas and human settlements, despite several shortcomings, such as false activations brought on by non-target motions.

Keywords: Non-Lethal Wildlife Deterrent, Human-Wildlife Conflict, Asian Palm Civet Management, Agricultural Protection.