Aliens Invade Hong Kong: First Record of the New Guinea Flatworm (Platydemus manokwari) as an Invasive Species in Hong Kong, China

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New Guinea flatworm (Platydemus manokwari), native to New Guinea, is extremely invasive. It has caused the extinction of native land snails on several Pacific islands, including Hawaii. Therefore, it has been listed among 100 of the world's worst invasive alien species. Here, the invasive flatworms were for the first time found and identified in two of nine locations, the central and southern districts of Hong Kong. New Guinea flatworms were flat, and both ends were pointed. They were 60–75 mm long, 3–5mm wide, and 1–2mm thick. The dorsal side of the flatworm was dark brown with a yellow slender central line, and its ventral side appeared pale grey. The three COXI gene (COX1) sequences each obtained from an individual P. manokwari were approximately 900 bp in length and completely identical. While blasting with these sequences, they shared 100% identity with those of P. manokwari world genotype, and 95.02–96.27% identity with those of Australian genotype. On the basis of field observation and feeding experiment, the native tree snail, Criptosoma imperator was the most favorite prey to this predator compared with other alien snails. Therefore, the invasive species certainly will bring serious threats to the local biodiversity and ecosystems, and potentially cause economic problems in Hong Kong. It is time to take actions to control its negative impact and prevent it from spreading to other regions of China. This is the first record of New Guinea flatworm in Hong Kong, even in China.

Awards Won:
Third Award of $1,000
Sigma Xi, The Scientific Research Honor Society: Honorable Mention Physical Science Award