

Supporting Information

Ryabov et al. 10.1073/pnas.0901389106

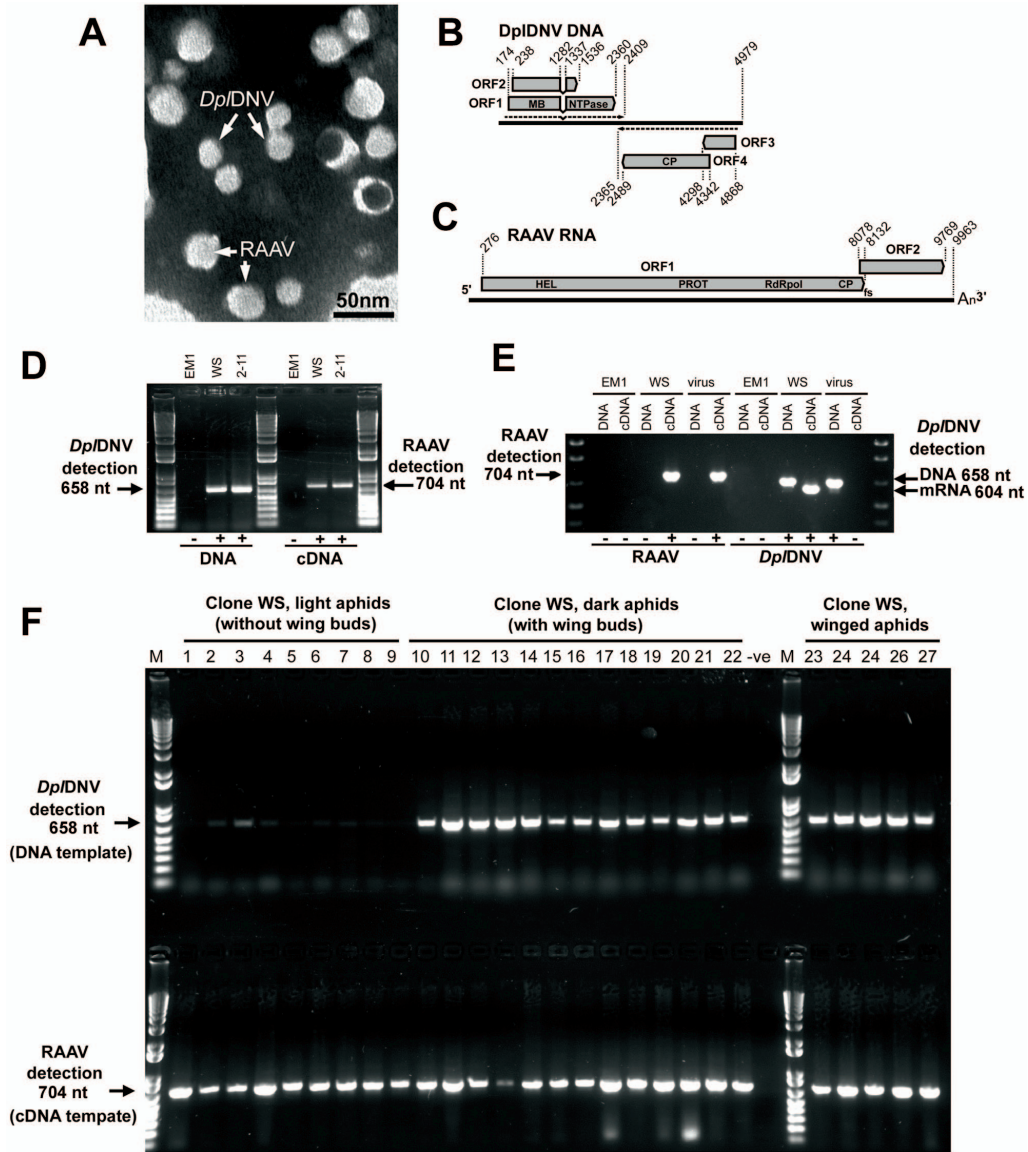


Fig. S1. Viruses of the rosy apple aphid. (A) Transmission electron microscopy of purified virus from clone WS. Two types of virus particles: 32 nm (RAAV) and 22 nm (DpIDNV). (B) Organization of the genomic DNA of DpIDNV (GenBank accession no. EU851411). MB, histidine-rich divalent metal cofactor binding; NTPase, nucleotide-binding and helicase domains. (C) Organization of the genomic RNA of RAAV. HEL, picorna-like RNA helicase; PROT, chymotrypsin-like protease; RdRpol, RNA-dependent RNA polymerase. ORFs are represented as shaded arrows; numbers indicate nt positions; CP, coat protein; fs, site of translational frameshift; A_n, poly(A) sequence. (D–F) Detection of DpIDNV and RAAV infections in the rosy apple aphid by RT-PCR, gel electrophoresis of the products. (D) Detection of DpIDNV and RAAV in the aphids from the clones WS and 2–11; no viruses detected in aphids from the clone EM-1. (E) Detection of RAAV and DpIDNV in the aphids and virus preparation from clone WS. The lower mobility of the DpIDNV fragment amplified in RT-PCR was due to excision of the intron in the DpIDNV mRNA for expression of the nonstructural genes. (F) Detection of RAAV and DpIDNV in individual aphids from clone WS; light fifth instars without wing buds, dark fourth instars with wing buds, winged fifth instars.

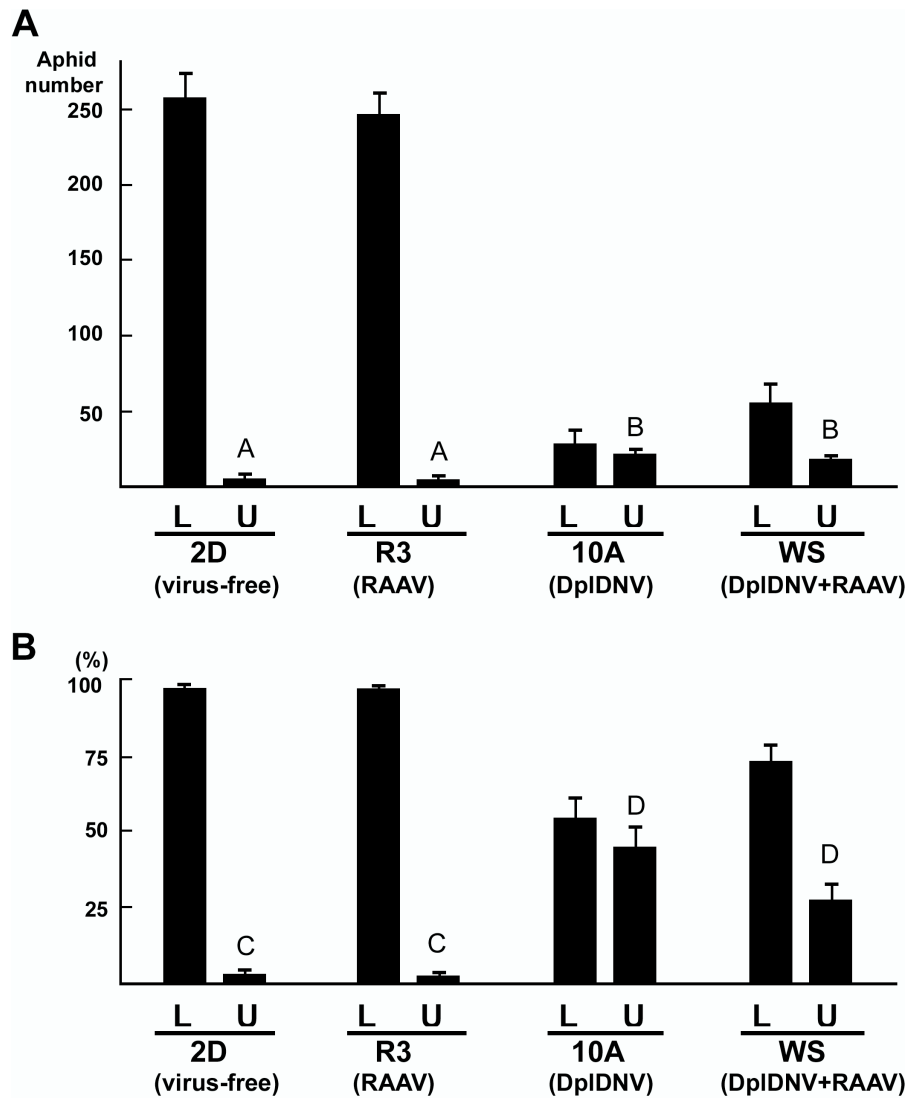


Fig. S3. Distribution of the aphids from the virus-free and virus-infected clones on plantain plants. The colonies were established by placing 10 adult aphids on 15-cm-high plantain plants and propagated for 12 days at 20 °C ± 1 °C on a 16/8-h light/dark cycle. Three plants were used for each of 4 aphid clones. Bars depict mean ± standard error of (A) aphid number and (B) percentage of aphids to the total number on the plant on lower parts of the plants, L (from the base of the leaves to 5 cm above the leaf base); and on the upper parts of the leaves, U (from the 5 cm above the leaf base to the top of the leaf). The same letters above the bars indicate the aphid numbers or the percentages of the aphids in the upper parts of the leaves (U) without significant difference (ANOVA, LSD test, $P < 0.05$).

