Pelargonium capitatum (rose pelargonium) is a plant indigenous to southern Africa, originally brought to Western Australia for its ornamental qualities. It has since become naturalized in the Southwest Australian Floristic Region, recognized for its high level of species endemism, where it is a serious invasive weed in bushlands and coastal dunes. Since *P. capitatum* outcompetes native species it is listed among the top 10 most important coastal weeds of the region (3). In 2008, large patches of stunted, dying, and dead *P. capitatum* plants were observed within a population covering coastal dunes at Woodman Point, Western Australia (GPS coordinates 32°07'40.51"S, 115°45'28.39"E). Diseased plants had small misshapen leaves in clumps that were often chlorotic or pink, shortened internodes, and exhibited phylloidy typical of infection by a phytoplasma. From August 2009 to January 2010, samples from symptomatic and asymptomatic plants were collected from the site and from plants of an asymptomatic population at another site located on the Murdoch University campus nearby. DNA was extracted from 15 samples collected from symptomatic and asymptomatic plants at the dune site and from five at the campus site. Briefly, 2 to 5 g of leaf and stem tissue was cut into 5-mm pieces and shaken overnight in 30 ml of phosphate-buffered saline buffer. Supernatant was filtered and a pellet was collected by centrifugation. After resuspension in 500 µl of extraction buffer (200 mM Tris-HCl [pH 7.5] 250mM NaCl, 25mM ethylenediaminetetraacetic acid, 0.5% sodium dodecyl sulfate, and 2% polyvinylpyrrolidone), DNA was precipitated in 500 µl of cold isopropanol. Samples were tested for the presence of phytoplasma ribosomal 16S DNA by nested PCR using phytoplasma universal primers P1/P7 followed by amplification with primers Tint, R16mF2, and R16mR1 (1,2,4). Phytoplasma-specific DNA sequences were synthesized directly from amplicons using the above primers. Phytoplasma was detected from both symptomatic and asymptomatic plant samples collected from the dune site but not from the campus site. Analysis of the nine sequences obtained (GenBank Accession Nos. HM583339, HM583340, HM583341, HM583342, HM583343, HM583344, HM583345, HM583346, and HM583347) revealed high sequence identity between isolates (~99%) and with the '*Candidatus* Phytoplasma aurantifolia' (16SrII) group of phytoplasmas (1,4). Presence of phytoplasma in symptomatic plants was confirmed by histological examination of stem sections stained with Dienes' stain. This finding is significant because there is potential for utilizing this phytoplasma to control *P. capitatum* where it has invaded ecologically significant sites, although its effect on indigenous plants must be determined first. Although phytoplasmas within the 16SrII group have been identified in Australia previously (1,4), to our knowledge, this is the first report of it infecting *P. capitatum.*