

名勝としての海岸マツ林を構成するクロマツ個体の分布, サイズ構造および被陰状況

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Distribution, size-structure and suppressed condition of Japanese black pine (*Pinus thunbergii* Sieb. et. Zucc.) trees constituting in a coastal forest preserved as a place of scenic natural beauty

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Abstract: Distribution, size structure and suppressed condition of pine trees constituting of a coastal forest preserved as a place of natural beauty were investigated in order to obtain information for maintenance of the forest. Study site is located on the southwest part of Awaji Island, Hyogo prefecture, Japan. Location, diameter at breast height and height of tree, height of lowest branch and height of lowest leaves of large-sized and middle-sized pine trees were recorded. The number and density of large-sized pine trees were 120 and 4.0/ha. The number and density of middle-sized pine trees were 189 in 9.3 ha and 20.3/ha. The mean dbh and mean height of trees of large-sized trees were 2.6 times and 1.2 times of middle-sized pine trees. The ratio of height to diameter of pine trees decreases as height of trees increase. The size-structure of trees in the present study was quite different from other coastal pine forests which constitute even aged trees. The 68.3 % of large-sized and 69.3 % of middle-sized pine trees were suppressed by small pine trees which prevent sunlight from penetrating to leaves of large-sized and middle-sized pine trees. It is necessary to remove these trees in order to recover light condition. Many of these small pine trees were considered to be planted after the outbreak of pine wilt disease by the voluntary local people. The information that those planted trees might be cut down should be give to the people.

Key Words: pine wilt disease, planting, long term forest management, height of lowest branch, thinning