Synopsis of Original Research Paper

Development of microcombs learning from insect grooming

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The objective of this study is to develop a cosmetic tool, designated 'microcomb', that can efficiently remove pollen from Japanese cedar (*Cryptomeria japonica*), Japanese cypress (*Chamaecyparis obtuse*), and other plants that adhere to skin and hair and are difficult to remove. This tool is intended as a measure against hay fever, for which there is a high social demand. Pollen from plants such as Japanese cedar (*Cryptomeria japonica*), Tall goldenrod (*Solidago altissima*), and Japanese hop (*Humulus japonicus*), which are associated with the causation of hay fever, have been measured to have an approximate size of 20 to 30 μm. Observations were made of the attachment of pollen of similar size, as well as the grooming behaviour and characteristics of the hairs (combs) used for grooming in bees (*Bombus diversus diversus, Apis cerana japonica, Apis mellifera*) and flower chafers (*Eucetonia pilifera*), and the attachment patterns and grooming methods of these were clarified. On the basis of these observations, an artificial microcomb was designed and successfully produced.