Ectomycorrhizal fungal communities associated with *Quercus acutissima* in Satoyama.

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Ectomycorrhizal fungi (EMF) are known to form a symbiotic relationship with the fine roots of host trees. *Quercus acutissima* is a symbiotic EMF tree species in broad-leaved secondary forest, Satoyama that in a warm-temperate zone. EMF communities associated with *Q.acutissima* have not been previously surveyed using molecular identification techniques. We investigated this in the Satoyama at Minamiashigara City, Kanagawa Prefecture, Japan. In total, 43 EMF species were detected in this site. The diversity of EMF communities was analyzed using parameters such as species richness and Simpson's diversity (1/D). It was revealed that ECM fungal species richness was highly diverse. In addition, *Cenococcum geophilum*, *Sebacina incrustans*, *Sebacina* sp., *Tomentella* sp., and *Xerocomus* sp. were the most dominant lineages associated with *Q.acutissima* at this site. The high diversity of ECM fungal species richness implied that the regeneration of vegetation and rooting of various species could possibly be promoted. We suggest that this is an important factor in the maintenance of various species in the Satoyama ecosystem.

Keywords: Satoyama (broad-leaved secondary forest), Quercus acutissima, Ectomycorrhizal fungi

