

Marvels of Fungi 1

Largest Living organism of the world

The world's largest known living organism, believed by most to be the 110-foot- (33.5-meter-) long, 200-ton blue whale. But it is now known that the largest living organism on earth is a fungus named *Armillaria solidipes* Peck (previously known as *A. ostoyae* Romagnesi). The fungus has been found in the Malheur national forest in Oregon State, USA. The highly branched mycelial thallus covers 890 hectares (2,200 acres; 3.7 square miles) and weighs 660 tons—making it the largest living organism ever discovered. The fruit body of the fungus is an edible mushroom called as honey mushroom, but it is a killer of the conifer trees of the forest.



Image taken from www.ScientificAmerican.com (credit: USDA Forest Service Pacific Northwest Research Station)

Fruit bodies and mycelial fragments collected from different locations were found to be same by RAPD/DNA fingerprinting method and mycelial fusion of hyphae on Petri plates. Based on its current growth rate, the genetic data and Bayesian phylogenetic analysis, age of fungus was estimated to be 2,400 years old but, it could be as ancient as 8,650 years, which would earn it a place among the oldest living organisms as well. It is also the largest hyphal network connection.

[Henri Romagnesi had described it as *Armillaria ostoyae* in 1970. Earlier Charles Horton Peck described it as *A. solidipes*. Following the proposal of Redhead et al. in 2011 to conserve the name as *Armillaria ostoyae*; currently the fungus is named as *A. ostoyae*]

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