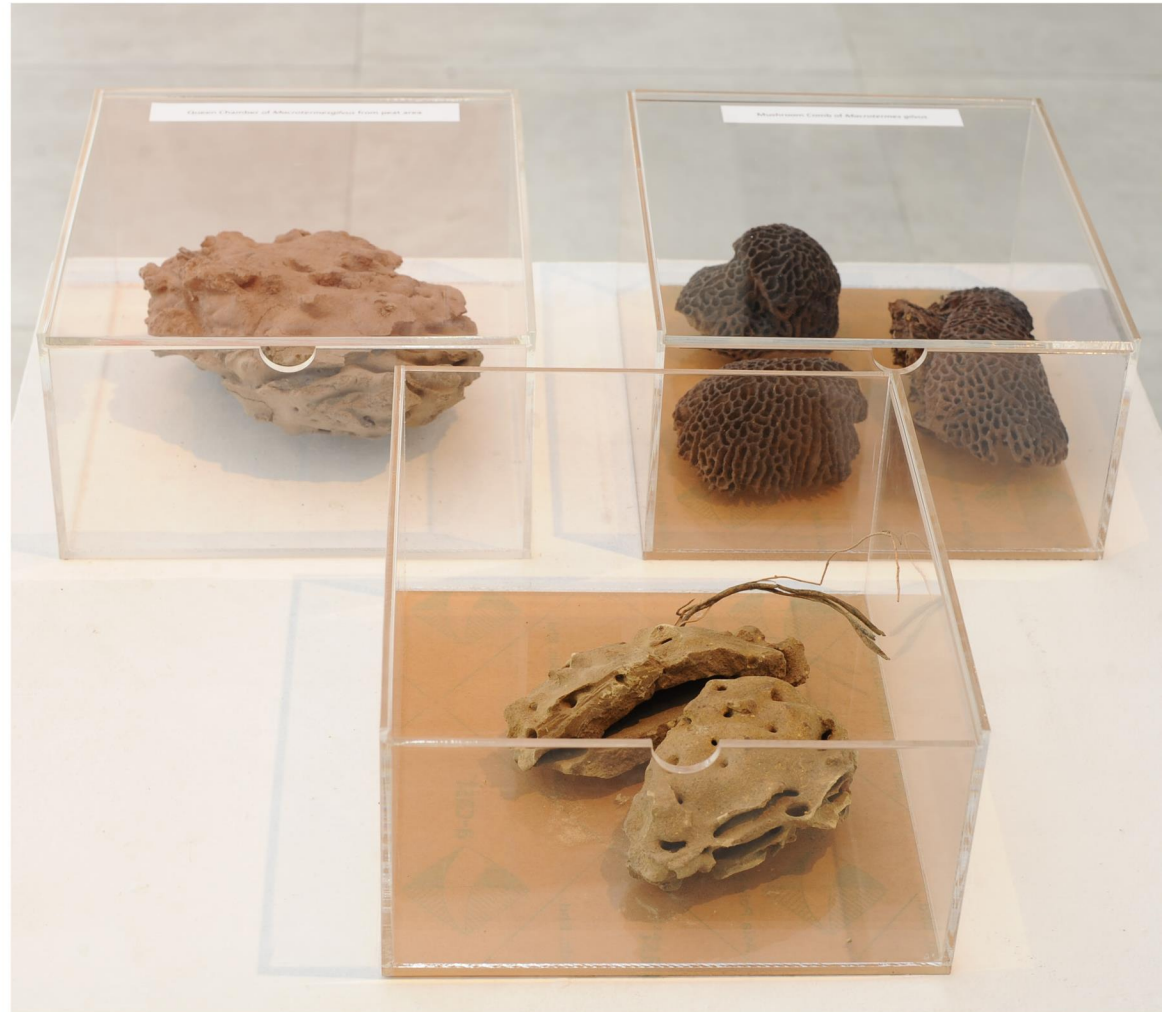


# Nature's Architect

Joseph Bong Choon Fah, Patricia Jie-Hung King



In the forest or in an oil palm plantation, we sometimes see soil mounds that could be up to 1 meter tall. These are termite mounds. The common termite species that is a mound builder is the *Macrotermes gilvus* Hagen. The mound is actually a sort of 'house' that contains numerous living 'quarters' or lamellae which are interconnected by an intricate network of tunnels for instant and efficient communication and accessibility, or escape. Amazingly, the interior of the mound is perfectly temperature- and humidity-regulated for comfort and growth. In the lower centre of the mound slightly below the soil surface, the termites construct the queen's chamber using similar materials as the mound wall. The queen's chamber is connected by several larger tunnels which allow access to only designated workers and soldiers.



# NYAWA 2013

Construction of the mound entails concerted and coordinated efforts of thousands of worker termites which tunnel deep into the soil to reach the clayey subsoil, excavate and actually 'eat' the clay before bringing it back up to the surface. At the construction site, the termites regurgitate the wet sticky clay to glue onto existing layer to increase the height or thickness of the wall which dries in less than two hours, resulting in a concrete-hard wall. In the construction of the mound the termite does not have an 'architectural plan' but relies solely on its innate unique ability. This natural instinct that enables the termites to build mounds of similar shape, sturdiness and intricacy has made them nature's architect.



