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Program and Abstracts

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Topic 2: Diversity, Taxonomy and Population studies

Poster 2.4

Six new *Phytophthora* Clade 9 species from South-East Asian forests

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Species from the genus *Phytophthora* represent a severe threat to the environment and biodiversity worldwide, causing significant economic damage to agriculture, forestry, and nursery activities. *Phytophthora* is an evolving genus with a nearly constant discovery and description of new taxa. Here we report six new species of *Phytophthora* isolated from forest streams and swamps in South-East and East Asia, precisely from Japan, Taiwan and the Indonesian islands of Kalimantan, Sumatra and Sulawesi. These new species were sexually sterile and did not form oogonia in pure culture. Non-caducous, non-papillate sporangia, broad-ovoid, ovoid to pyriform in shape, with short or long pedicels, were produced after incubation for 24-48 h in distilled water with non-sterile soil extract. Chlamydospores were highly variable in dimension, with thin walls. The growth-temperature test confirmed these tropical and subtropical species to be thermophilic, with optimum and maximum growth temperatures being 27.5 °C and 35 °C, respectively. Most isolates ceased growth at 10 °C but resumed growth when brought back to room temperature. Based on preliminary ITS, Btub, HSP90, cox1 and nadh1 phylogenies, these six taxa constitute the *Phytophthora palustris* species complex within *Phytophthora* phylogenetic Clade 9.