

Review

A Review of Termite Species and Their Distribution in Thailand

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Simple Summary: There is little information available on termite species in Thailand. We reviewed termite species and information on their distribution in Thailand via the Google Scholar search platform and online databases with the QGIS program to create a map of termite species. In total, 44 coordinates were obtained from 19 reviewed sources, with approximately 75 species of termites identified at the species level and 83 unknown species of termites being reported across all regions.

Abstract: Although 3,105 termite species have been documented worldwide, little information is available on those in Thailand. In this review, the Google Scholar search platform and the Scopus and Science Direct databases were used to obtain information on termite species and for georeferencing. The QGIS software was used to create point localities that were overlaid on the Thailand administrative level 1 (province) to map the distribution of termite species in the country based on the World Geodetic System 1984. From the 19 reviewed sources, 44 defined coordinates were identified in 14 provinces across Thailand. Among these 44 coordinates, we found 75 termite species and 83 unknown species of termites; in total, 36 termite species were from the North (6 locations), 33 species were from the Northeast (10 locations), 34 species were from the West (4 locations), 29 species were from the Central region (3 locations), 44 species were from the East (8 locations), and 54 species were from the South (13 locations). The most predominant species in all regions were *Globitermes sulphureus*, *Macrotermes gilvus*, *Microcerotermes crassus*, and *Microtermes obesi*.

Keywords: termite species; survey; Blattodea; geographic information system; Thailand

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1. Introduction

Termites are an important group of eusocial insects and are among the most prevalent structural insect pests. As an important ecosystem insect, termites make up to 10% of animal biomass [1,2]. The activities of mound and gallery building by termites influence soil profile development, including the translocation of sub-surface soil to the surface and microbial structure. Termite activities have a significant impact on the porosity and water holding of soils and infiltration rates [3,4]. The decomposition of organic matter has been reported which results from the mutualistic interaction between fungi, bacteria, and termites to digest food [5–8]. This relationship is expected to have a positive effect on the decomposition of organic matter and nutrient cycling [4,9,10]. Termites' success regarding organic matter decomposition and the effects of their activity on soil profile development, soil properties, and plant growth nutrient recycling rates have been well described [4]. Although termites are important beneficial insects, they cause major economic losses exceeding USD 40 billion annually [2,11,12]. They feed on ligno-cellulosic materials such as wood, wooden products, the structural wood of buildings, and furniture. In addition,