

P066*Spatial genetic structure analyses of an invasive termite in France*

Zoe Chevalier, Elfie Perdereau, Simon Dupont, Stephanie Bankhead-Dronnet, **Anne-Genevieve Bagneres**

Among social insects, termites are characterized as major pests which cause considerable economic and biological damage. This is the case of *Reticulitermes flavipes*, a subterranean species that causes significant damage to human-built structures. This termite may have been introduced into Europe from Louisiana during the 18th century and has become invasive in several areas of France. This invasive success is attributable to a particular social structure, the permanent presence of numerous active secondary reproductives and a high degree of colony fusion associated with a lack of intraspecific aggression, and to a territorial advantage. To determine the extent to which termites had spread within the Central Region of France, the population and social structure of this invasive species was studied at regional and local scale in urban areas. The genetic variability was determined using mitochondrial (COII, COI, 16S) and nuclear markers (microsatellites). At regional scales, preliminary mtDNA analyses showed that there were four main centers of infestation in this region originating from the west coast of France and north east USA. At local scale, the initial analyses of the population genetics show that all colonies contained a large number of reproductives with a high degree of colony fusion. By integrating geographical data, analyses of landscape genetics should show whether urban environment plays a significant role in shaping the genetic structure of local populations of this termite species.