



Investigating urban ant community (Hymenoptera: Formicidae) in port cities and in major towns along the border in Côte d'Ivoire: a rapid assessment to detect potential introduced invasive ant species

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1 ABSTRACT

Objective: This study aimed at examining ant communities of port and border cities in order to identify introduced and potential invasive ant species and microhabitats likely to contribute to the spread of these ant species. Therefore, the sampling design are linear transects of 200 metres on which ants were collected using tuna baits at 15, 30, 45 and 60 minutes in the two port cities of Abidjan and San Pedro, and seven cities that are Man, Toubou, Odienné, Ferkessedougou, Bouna, Bondoukou and Abengourou located near the borders of Côte d'Ivoire. The results showed 83 ant species including 9 potential introduced or invasive ant species. These invasive ants contributed importantly to the ant assemblage in port cities (23.95 ± 2.7 % of total richness and 37 ± 6.1 % of total abundance) and border cities (20.17 ± 4.7 % / 30.6 ± 7 %). In addition two notorious invaders, *Solenopsis geminata* (Fabricius, 1804) (Tropical fire ant) and *Pheidole megacephala* (Fabricius, 1793) (Big-headed ant) were detected during this study. The results also indicated that potential introduced or invasive ant species were mostly detected in microhabitats where human activities are uninterrupted such port zones, markets, domestic streets and residential. **Conclusion:** In the end, this study has shown that ant communities in port and border cities harbor invasive potential ant species, particularly microhabitats characterized by high human activities such as port areas, markets, domestic streets and residential areas.
