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## Isolation and characterization of microsatellite loci in the big headed ant *Pheidole megacephala* (Hymenoptera; Formicidae)

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**PG-5 Isolation and characterization of microsatellite loci in the big headed ant *Pheidole megacephala* (Hymenoptera; Formicidae)**

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The big headed ant *Pheidole megacephala* which is one of the most famous tramp species ranges over the worldwide in the tropics and subtropics, and this wide-dispersion is mainly caused by human commerce. Unicoloniality is the typical characteristic of tramp species and shows the condition that the boundary of colonies is lost by lower nestmate discriminative behavior. Unicoloniality of *P. megacephala* has been independently evolved several times in each new emigrated area. However, in Okinawa main land, aggressive interactions among colonies has been observed with in irrelevant to the geographical distance (Le Breton et al unpublished data). There are two explanations for this pattern, one is high genetic diversity in Okinawa main land, second is this area is origin of this species.

To examine these hypotheses, we developed eight microsatellite loci of *P. megacephala* enough to investigate the population genetic structure and molecular phylogeny among local area. Seven of the eight loci tested were polymorphic, having 2–5 alleles in with expected heterozygosity of 0.19–0.57. Then we describe the characterization of seven variable microsatellite loci from *P. megacephala* to be used in research in the above context. In this study, we performed genetic analyses of *P. megacephala* populations collected in seven islands: Amami, Okinawa, Minamidaito, Miyako, Ishigaki, Kohama, Le Grand Brûlé (Africa). The genetic differentiation was suggesting an absence of ongoing gene flow between these populations.