Abstract

Man depends upon numerous ecological and economical services offered by countless organisms in natural ecosystem. Among these insects contribute major ecological and economic values to humans. *Tetraponera* is genus of large, bicolored, arboreal ants' subfamily Psudomymicinae, which have been reported to have various antimicrobial, anticancerous substances in their venome. The current study employs the identification and phylogeny of genus *Tetraponera* species collected from District Bhimber, Azad Kashmir, was analysed on the basis of morphological and molecular characters. Morphological analysis was done using Afrotropical *Tetraponera* identification key. Morphological characters of adult worker ant involved bicolored slender body, visible eyes, 12-segmented antennae, distinct abdominal segments and well developed post-petiole which shows maximum resemblance to *Tetraponera rufonigra*. Its developing stages includes sessile egg, larvae (1st instar- 5th instar), pupae and adult. Analysis of cytochrome c subunit 1 (COX1) gene sequence was quite variable and showed 82% homology with *Tetraponera* species. Sequence analysis of SS rDNA showed 100% homology with different species of *Tetraponera rufonigra* and it appears to be related with *Tetraponera rufonigra.* Phlogenetic analysis based on both COX1 gene and SS rDNA using maximum liklihood and neighbor joining method showed that current *Tetraponera* species is closely related to *Tetraponera rufonigra.*