

Table 1. *Pheidole* faunas in lowland N. Borneo, lower montane N. Borneo, lowland S. Malay Peninsula and lowland W. Java.

	LNB	MNB	LSMP	LWJ		LNB	MNB	LSMP	LWJ
<i>acantha</i>		○			<i>parvicorpus</i>	○			
<i>aglae</i>	○	○	○	○	<i>plagiaria</i>	○		○	○
<i>angulicollis</i>	○	○			<i>plinii</i>	○			
<i>annexus</i>	○		○		<i>poringensis</i>	○			
<i>aristotelis</i>	○	○	○	○	<i>quadransis</i>	○	○		
<i>bluntschlii</i>			○		<i>quadricuspis</i>	○		○	
<i>butteli</i>	○	○	○	○	<i>quinata</i>		○		
<i>cariniceps</i>	○	○	○		<i>rabo</i>	○		○	
<i>clypeocornis</i>	○	○	○		<i>retivertex</i>	○		○	
<i>comata</i>	○	○			<i>rugifera</i>	○		○	
<i>deltea</i>	○	○			<i>sabalina</i>	○	○		
<i>elisae</i>	○		○	○	<i>sarawakana</i>	○	○	○	○
<i>fantasia</i>	○	○			<i>sauberi</i>	○	○	○	○
<i>ghigii</i>	○				<i>sayapensis</i>		○		
<i>gombakensis</i>	○		○		<i>spinicornis</i>	○	○		
<i>havilandi</i>		○	○		<i>submonticola</i>		○		
<i>hortensis</i>	○	○	○	○	<i>tandjongensis</i>				○
<i>huberi</i>	○		○		<i>tawauensis</i>	○			○
<i>inornata</i>		○			<i>tenebricosa</i>		○		
<i>kikutai</i>		○			<i>tjibodana</i>	○	○		
<i>lokita</i>		○			<i>upeneci</i>		○		
<i>longipes</i>	○	○	○		<i>sp. eg-57</i>				○
<i>lucioccipitalis</i>	○	○	○		<i>sp. eg-75</i>				○
<i>merimbun</i>	○				<i>sp. eg-77</i>				○
<i>modiglianii</i>	○		○		<i>sp. eg-92</i>				○
<i>montana</i>		○			<i>sp. eg-96</i>				○
<i>nodgii</i>				○	<i>sp. eg-97</i>			○	
<i>orophila</i>		○			total	34	30	23	16

P. bugi, *P. fervens* and *P. megacephala* are omitted, because all of them have become widespread at least partly in association with human activities.

P. megacephala, all of which have become widespread at least partly in association with human activities, and commonly occur around buildings of the headquarters of national parks). Nomura-Simpson indices ($NS = \text{number of species common to both areas} / \text{number of species at the least species-rich of the two areas}$) indicate that in *Pheidole* the faunal similarity between LNB and MNB ($NS=0.60$) is much lower than that between LNB and LSMP ($NS=0.87$) (Fig. 54). A low similarity in ground-dwelling forest ants between lowlands and mountain areas has also been observed in W. Java (Ito *et al.*, 2001). The great majority of *Pheidole* species are associated with the forest floor, reflecting both nesting and foraging habits (this study; Brown, 2000, Table 5.1; *Pheidole*, *Strumigenys* and *Hypoponera* were found to be the most speciose genera in the litter of dipterocarp hill forest in Poring Hot Spring area, while in other observed strata, *i.e.*, lower vegetation and canopy, these were not among the speciose genera (Brühl *et al.*, 1998)). Thus the species composition of *Pheidole* and other ground-dwelling ants appears to be influenced by environmental factors (both physical and biotic) at ground level associated with altitude as well as geology, as discussed below. Subsequent faunal divergence between lowland and premontane / lower montane zones might help explain "mid-