

Table 3.1 Ant Functional Groups in Relation to Stress and Disturbance, with Major Representatives in Australia and the New World^a

Functional Group	Australia	New World
1. Dominant Dolichoderinae	<i>Anonychomyrma</i> , <i>Froggattella</i> , <i>Iridomyrmex</i> , <i>Papyrius</i> , <i>Philidris</i>	<i>Azteca</i> , <i>Forelius</i> , <i>Linepithema</i> , <i>Liometopum</i>
2. Subordinate Camponotini	<i>Calomyrmex</i> , <i>Camponotus</i> , <i>Opisthopsis</i> , <i>Polyrhachis</i>	<i>Camponotus</i>
3. Climate specialists		
a. Hot	<i>Melophorus</i> , <i>Meranoplus</i> , <i>Monomorium</i> (part)	<i>Pogonomyrmex</i> , <i>Solenopsis s.s.</i> , <i>Myrmecocystus</i>
b. Cold	<i>Monomorium</i> (part), <i>Notoncus</i> , <i>Prolasius</i> , <i>Stigmacros</i>	<i>Formica</i> (part), <i>Lasius</i> , <i>Leptothorax</i> , <i>Stenammas</i> , <i>Lasiophanes</i>
c. Tropical	Many taxa	Many taxa
4. Cryptic species	Very many small myrmicines and ponerines, including <i>Hypoponera</i> , most Dacetoniini, and <i>Solenopsis</i> (<i>Diplorhoptrum</i>)	Very many small myrmicines and ponerines, including <i>Hypoponera</i> , most Dacetoniini, and <i>Solenopsis</i> (<i>Diplorhoptrum</i>)
5. Opportunists	<i>Paratrechina</i> , <i>Rhytidoponera</i> , <i>Tetramorium</i>	<i>Dorymyrmex</i> , <i>Formica</i> (<i>fusca</i> gp.), <i>Myrmica</i> , <i>Paratrechina</i>
6. Generalized Myrmicinae	<i>Crematogaster</i> , <i>Monomorium</i> , <i>Pheidole</i>	<i>Crematogaster</i> , <i>Monomorium</i> , <i>Pheidole</i>
7. Specialist Predators	<i>Bothroponera</i> , <i>Cerapachys</i> , <i>Leptogenys</i> , <i>Myrmecia</i>	<i>Dinoponera</i> , <i>Leptogenys</i> , <i>Pachycondyla</i> , <i>Polyergus</i>

^aSee text and Table 5.1 for details.

shown in Fig. 3.2. The seven functional groups are as the following:

1. *Dominant Dolichoderinae*. From a global perspective, competitively dominant taxa are by definition those that predominate in environments experiencing low levels of stress and disturbance. For ants, such environments are hot and open ones, and these are often dominated both numerically and functionally by highly aggressive dolichoderines. This is particularly true in Australia, where *Iridomyrmex* and other dolichoderines dominate the continental ant fauna to an extent unparalleled elsewhere. However, it is also true for warmer regions of the New World, where *Forelius*, *Linepithema*, and *Liometopum* are behaviorally dominant ants in open habitats, and *Azteca* and *Dolichoderus* are highly dominant in

the canopies of rainforest. It is important to appreciate that global dominance (where *global* defines the spatial scale on which dominance is considered) does not at all imply universal dominance (Andersen 1997b). Dolichoderines are not at all universally distributed, and they are often absent entirely from even moderately stressful habitats.

2. *Subordinate Camponotini*. Camponotine formicines, especially species of *Camponotus*, are also very often diverse and abundant in rich ant communities. Most are behaviorally submissive to dominant dolichoderines, and many are ecologically segregated from them owing to their large body size and often nocturnal foraging.
3. *Climate specialists*. These taxa have distributions heavily centered on either arid zones (hot climate specialists), the humid tropics