



FIGURE 8. The relation of size of genus to number of contained Stage-I species in the Ponerinae, Cerapachyinae, and Myrmicinae in Asia (open circles) and in New Guinea (closed circles). Note that no genus has been able to generate more than four Stage-I species from one source area. See also table 3 and further explanation in the text.

genus tend to be markedly different from one another in morphology, ecology, and behavior. In most cases where the same broad species group is represented by more than one Stage-I member, for example, *Odontomachus simillimus* with *O. cephalotes*, *O. malignus* with *O. saevissimus*, the members occur in different major habitats. Additional supporting evidence is found in the phenomenon of *ecological release*: although the Stage-I species tend to be restricted to marginal habitats on New Guinea and Fiji, which have large endemic faunas, they are not so restricted in the more depauperate Solomon Islands and New Hebrides. On Espiritu Santo, where the author conducted field studies, several Stage-I species, for example, *Odontomachus simillimus*, *Pheidole oceanica*, *P. sexspinosa*, *P. umbonata*, were among the dominant ant species in deep virgin rain forest. At lowland stations on New Guinea, the same species were much sparser and limited to marginal habitats. Other Stage-I species that have marginal distributions on New Guinea, including *Rhytidoponera araneoides*, *Iridomyrmex cordatus*, and *Oecophylla smaragdina*, are dominant in the rain forests of the Solomon Islands (Mann, 1919). There can be no question that interspecific exclusion underlies this phenomenon. Suitable nesting sites and trophophoric fields are virtually saturated with ant colonies in both New Guinea and outer Melanesia. Where large native faunas exist, there is literally no room for significant populations of Stage-I species. Reference has already been made to the role of direct colony conflict in interspecific exclusion of Stage-I ant introduced spe-