standards. Even some larger islands of the West Indies have produced shorter lists of ants. M. R. Smith, who studied the ants of Puerto Rico for about a year, found 66 species (Smith 1936). Wheeler, drawing on the studies of a number of workers, lists 72 species from Trinidad (Wheeler 1916). Cuba has a more impressive fauna of about 137 species (Alayo 1974). Longer lists could undoubtedly be compiled from large West Indian islands today, but their fauna may still be depauperate compared with the Florida Keys when the respective sizes of these islands are taken into account. The fauna of the Florida Keys is, in turn, rather small when compared to that of the mainland. From one site in southern Florida 102 species of ants have been reported (Deyrup & Trager 1986), to which we recently added 2 additional species. In one sense, therefore, the ant fauna of the Florida Keys seems rather rich, but in another sense it seems rather depauperate.

The richness of the Keys fauna is derived in part from its close association with the mainland. This has allowed migration of about 31 widely distributed species of the southeastern coastal plain. This immigration must have been facilitated by broad land bridges that extended through the Keys in the past (Hoffmeister & Multer 1968). It seems likely, however, that the Keys fauna would be richer still if the Keys were attached to a large land mass with a tropical rather than a temperate climate.

The depauperate nature of the fauna relative to the mainland is probably due to the habitats and climate of the Keys. A number of species that are associated with well-drained sandy areas of the mainland seem to be missing from the Keys. The tropical hammocks have a deep humus layer that would seem ideal for soil-dwelling species such as dacetines, but the extreme dryness of this humus during much of the year appears inimical to ants. Rotten wood, which harbors many specialized ants in wetter climates, contains only a few generalists in south Florida in general and the Keys in particular. Flooding during tropical storms may also take its toll of the ants, as suggested by Wilson (1964), but the effects of the prolonged dry season are probably more important.

Exotic Species. The proportion of species introduced by man into the ant fauna of the Keys is higher than in any other known area of the U.S. There are 27 recognized exotics, 33% of the fauna, without counting any of the West Indian species that could easily be unrecognized exotics. The proportion of exotic ants seems to decrease from south to north in Florida. At the Archbold Biological Station in Highlands Co. there are 20 species, or 19.6% of the total (Deyrup & Trager 1986), and in Alachua Co. there are 17 species, or 15% of the total (Johnson 1987). The increase in exotics to the south is partly due to heavy trade between the ports of tropical Florida and the rich faunas of mainland tropical areas. It may also be partly due to an ecological vacuum caused by the unsuitability of the climate and habitats of the Keys for many mainland species to the north.

There has clearly been an increase in the populations of exotic ants since the 1958 survey. It would have been difficult to overlook such species as *Paratrechina guatemalensis, Pheidole megacephala, P. moerens, Tapinoma melanocephalum,* and *Wasmannia auropunctata* if these species had been as abundant as they are presently. There is no clear indication, however, that the exotic species are displacing native species. There are a few native species that are so scarce that it is difficult to avoid the impression that they are being affected by the influx of exotics, or by other forms of habitat modification. Such species include *Crematogaster minutissima, Discothyrea testacea, Myrmecina americana, Pachycondyla stigma, Smithistruma dietrichi, Paratrechina concionna,* and *P. wojciki.* The exotic species themselves may not have reached an equilibrium: *Tetramorium bicarinatum,* which was abundant 20 years ago (D. S. Simberloff, personal communicatiuon), is now extremely scarce.

Endemic Species. One would not expect that an archipelago of recent origin closely associated with the mainland would be home to many autochthonous species or sub-