

# Relative Densities of Cockroach Populations in Urban Residential Area, Republic of Korea

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Studies of the population and infestation of cockroaches were made in 154 residences in 21 districts (dong) in Busan and 170 residences in 12 districts (dong) in Seoul using sticky traps from September, 1999 to October, 2000. The German cockroach, *Blattella germanica*, was the dominant species of four domestic species in residences. Busan had twice higher population of German cockroaches, with average 6.4 individuals/trap than that (3.6 ind./trap) of Seoul area. In Busan, German cockroaches were collected more in villa type houses (avg. 8.1 ind./trap) followed by houses (avg. 6.9 ind./trap) and apartments (avg. 5.5 ind./trap). In Seoul, the cockroaches were collected more in houses (avg. 11.4 ind./trap) than in villas (avg. 3.6 ind./trap) and apartments (avg. 2.0 ind./trap) during investigated months. Comparing of medians in Seoul between 1999 and 2000, medians of cockroach densities (both avg. 0.67 ind./trap) in September and October, 2000 were higher than those (both avg. 0.0 ind./trap) in the same months of 1999. Higher infestation rates of German cockroaches appeared in September (avg. 66.9%) and October (avg. 79.6%) of 1999 compare with those in same months of 2000 (avg. 58.5% and avg. 55.2%, respectively) in Busan. On the contrary, the rates in Seoul were twice higher in the same months of 2000 (75.0% and 87.4%, respectively) than those (38.2% and 34.3%) of 1999. The most widely infested German cockroaches in residences were found in houses (avg. 72.9% of infestation rate in Busan and avg. 93.8% in Seoul) and followed by apartments (avg. 54.2% in Busan and avg. 68.3% in Seoul). Cockroach densities and infestation rates seemed to be related more to the cockroach control practices and management of each residences. Smoky-brown cockroaches (*Periplaneta fuliginosa*) in residences were collected more as averages of 0.2 and 0.7 ind./trap than American cockroaches (*P. americana*) (ave. 0.1 and 0.2 ind./trap) in Busan and Seoul, respectively. The infestation rates of American cockroaches and Smoky-brown cockroaches in residences were 8.2% and 13.7% in Busan, respectively, which were higher in comparison with those (0.6% and 2.8%, respectively) of Seoul. The densities and infestation rates of German cockroaches appear to be strongly correlated to the pest control and food management of the restaurants.