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HUDDLING GROUPS OF JAPANESE MACAQUES IN ARASHIYAMA, KYOTO, CENTRAL JAPAN

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We studied huddling of Japanese macaques (*Macaca fuscata*) in Arashiyama E troop at “Arashiyama Monkey Park Iwatayama” in Kyoto, central Japan. Japanese macaques made physical contact with other individuals and formed a huddling group when air temperature was low. The 99-101 adult females and 26-36 adult males in the study troop formed 345 huddling groups during 42 times of scan samplings in 2001 winter, and 376 huddling groups during 52 scan samplings in 2002 winter. The size of huddling groups was 2.3 (range: 2-7) in 2001 and 2.3 (range: 2-6) in 2002. Two individuals usually huddled ventrally-ventrally, ventrally-laterally, or ventrally-dorsally. In addition, a third individual usually put the ventral part of its body to the first individual and simultaneously put its lateral part to the second individual, so that the three individuals formed a triangular huddling group. This indicates that Japanese macaques chose their position and body direction in the huddling to conserve their body heat efficiently. Males less frequently formed a huddling group than females did. Two females formed a huddling group of maternal kin related dyads more frequently than unrelated dyads. Such choice of position, body direction, and huddling partners might restrict the size of huddling groups and form various shapes of huddling groups.

Keywords: huddling, Japanese macaque (*Macaca fuscata*), ventral contact, kin relationship