

For orangutans, less food means lowered fertility

Ever-changing weather cycles have contributed to the declining population of orangutans, an animal which has a limited child-conceiving cycle, a scientist says. Boston University biological anthropologist Cheryl Knott said that in the high fruit season, the great apes' females are more likely to conceive than in the low season.

"Mast fruiting season has between two and seven year intervals due to El Nino weather. During the mast fruiting, up to 80 percent of trees bear fruit at the same time, affecting the diet of the orangutan," she said during a seminar held in Eijkman Institute of Molecular Biology.

Knott, who has been observing the great apes for a decade at the Gunung Palung Orangutan Conservation Project in West Kalimantan, said during the high fruit season, orangutans eat various fruits available, with intake amounting to up to 11,000 calories per day.

The calories would be spent for traveling through the forest and for reproduction. During the low fruit season, the orangutans make due with whatever fruit is available and tree bark and leaves, resulting in far lower caloric intake of only around 2,000 calories per day.

Studies revealed that orangutans in the wild have a birth interval of between eight to nine years. There are currently around 35,000 orangutans in the world, but the number is declining.

"The orangutan has a longer birth interval than most other apes, compared to chimpanzee and bonobo, for example, which give birth once every five to six years," she said. To collect data on the orangutans' caloric intake, Knott collected samples of urine and feces. She found that urine samples with high protein levels are found from pregnant orangutans, while samples with high leukocyte levels are found from pre and postpartum female orangutans and males with visible wounds.

"Protein is found in over 25 percent of samples during high fruit season. It may be caused by the low leaf intake during the high fruit season. Orangutans are able to store fat during the high fruit season and then lose it during the low fruit season," she said.

She added, however, that orangutans living in captivity were not affected by the season, and even tended to grow obese. Knott said that even in the high fruit season females did not immediately conceive as it depended on their lactation period. Orangutan mothers breast feed their babies for eight years, which is also the cause of low energy leading to the long conception cycle.

Sangkot Marzuki from Eijkman Institute of Molecular Biology said that the institute would provide the data presented at the seminar to the government and policy makers with the hope that it would affect policies on the conservation of the orangutan habitat.