



## **WILD DISCOVERIES**

### *Changes of maternal care in *Dendrolagus matschiei*, Matchie's tree kangaroo relating to stress*

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The Santa Fe College Teaching Zoo houses an endangered species of macropod, the Matchie's tree kangaroo, which is endemic to the Huon Peninsula of Papua New Guinea. Previous observations noticed the mother and her offspring feeling from their display area after a loud noise from a guest. This observation led us to design an observational experiment to find out if the number of guests outside the tree kangaroo exhibit would alter maternal care. We hypothesized that a group of more than five visitors outside the exhibit would induce more stress-like behaviors in the mother, and thus reducing the frequency of maternal care behaviors. We developed an ethogram for our use which included stress-indicating behaviors such as arm licking or retreating to the back area, and also recorded the mother's proximity to the joey. We conducted each observation for 10 minutes, and recorded the mother and joey's behavior every 30 seconds. Six observations were conducted with a group  $> 5$  people outside the exhibit. Near the end of the experiment, we decided to compare her activity levels with large groups present ( $5 \geq$ ) compared to smaller groups present ( $> 5$ ). We found no statistical differences in either behavior or distance between the mother and her joey.