

2011 State NMJAS Paper Competition Winner

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Innovation and Imitation: Learning Processes used by a Juvenile Siamang at the El Paso Zoo

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Abstract: In order to determine whether gibbons (lesser apes) are cognitively more similar to apes or monkeys, I examined processes of learning in a young siamang. If social learning of a customary complex behavior is observed, then siamangs would be interpreted as intellectually more like great apes. Forty-six observation hours were made of the juvenile siamang at the El Paso Zoo over 21 days during a three year period (2008-2011). The customary complex adult behavior I focused on is the use of a particular set of logs over a moat as a latrine. Latrine use is not observed in wild siamangs (not instinctive) and was not taught to them by humans. As a 25 month old the baby siamang expressed great curiosity toward latrine use and toward the water, and would join her mother on the latrine, but did not use it. As a 36 month old she accompanied both parents to the latrine and used it when they do. On one occasion she went to the latrine on her own but could not go, then went to her father who she brought back to the latrine where they used it simultaneously. On another occasion the father pulled the juvenile to the latrine and made her sit on it alone. Such behaviors and others are interpreted as active teaching and learning of a complex family tradition. This is viewed as strong evidence of social learning in siamangs in a manner typical of great apes and humans rather than monkeys. --- A video of Fiona's presentation at the NM Science and Engineering Fair Senior Awards Assembly is available at Innovation and Imitation.