Use of a Video Surveillance System to Determine Prey Delivery Rates to Northern Goshawk (*Accipiter gentilis*) Nests on the Tongass National Forest, Southeast Alaska

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Biologists traditionally have used direct observations from blinds to determine prey delivery rates to nests. We used a closed-circuit video surveillance system to monitor five Northern Goshawk nests in southeast Alaska during the 1998 breeding season. Each system consisted of a miniature color video camera, a time-lapse VHS recorder (VCR), two deep cycle marine batteries (100 amp-hr, group 27), a black and white video monitor, and assorted cables and mounting hardware. The cost per unit was $2,887.00. Cameras were mounted between 60 cm and 90 cm above the nest, 5d to 14d after hatching. A coaxial cable was used to connect the camera in the nest tree with the VCR and battery on the ground. Each system was programmed to film 1.25 frames/sec from 03:45 to 22:15 hrs daily. This filming schedule was continued until nests were no longer used. At one Goshawk nest, we were able to record 718.2 hrs over the nestling and early fledgling periods. This accounts for approximately 94% of the available daylight hours between 29 May 1998, when the camera was installed, and 09 July 1998, when the fledglings no longer used the nest. During this period, 216 deliveries were documented. Data from four other nests will also be presented. Difficulties encountered with this system included problems associated with the use of battery power at remote nest sites, use of electronics in a wet, rainforest environment, and power failures due to inconsistency in battery power storage.

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