Camera Trap as a Tool for Monitoring the Sika Deer Density after Culling in the Forest, Japan

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Recently, the damage to forestry by sika deer (Cervus nippon) has drastically increased in Japan. Although the most effective action to reduce the forestry damage must be the reduction of sika deer population, it is difficult not only to evaluate the effect of reducing population size but also to monitor the results of culling. In this study, we used the value of sika deer appearance frequency trapped by the camera in the forest in order to monitor the fluctuation of population size.

From Jun. 2014 to Feb. 2016, we monitored the number of sika deer in the intensive culling area (2km×2km) compared to that in the surrounding area (4km×4km) located at the national forest of Izu Peninsula, central Japan. We set one or two sensor cameras every ca. 500m and harvested 31 sika deer in the intensive culling area from Jul. 2015 to Aug. 2015. After the culling, the mean number of sika deer trapped by cameras in the intensive culling area were drastically decreased and remained to be low compared to that of surrounding area. Camera trap have proven to be an effective tool to monitor the results of culling sika deer.