

Applications and Limitations of a Data Fusion Approach to Monitor Forest-Dwelling Wildlife

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Abstract Body

Ecologists have increasingly recognized opportunities to adapt and adopt methodologies and information originally intended for other purposes in a “data fusion” approach. Recently, there has been an influx of studies and training focused on using unmanned aerial vehicles (UAV’s) and remote sensing in wildlife research. Leveraging these technologies could supplement the often resource-intensive field approaches used to monitor population and habitat dynamics for forest dwelling species such as the snowshoe hare (*Lepus americanus*). Barriers remain, however, especially as agencies lacking the resources to collect data using UAV’s are restricted to freely available, not wildlife-specific, products. Furthermore, technologies may not be advanced enough to “see through” the canopy to the understory, relevant for species that rely on vegetation cover. We thereby conducted a case study to determine whether an approach outlined by previous authors could be successful, wherein the remote sensing products were accessible and originally collected for broader purposes. Our models did not adequately predict snowshoe hare fecal pellet numbers, pointing to deficiencies in the scale and type of available data derived from remote sensing. We also note potential shortcomings in non-invasive field techniques. Regardless, we maintain that open-access remotely sensed imagery is valuable when ground-truthed and combined with supplemental information, adding to knowledge within and beyond the fields of forestry and wildlife biology.

SESSION DETAILS

[Technical Session 26: Wildlife Management III](#)

10:30am-12:15pm

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