Development of a Snow Matrix for Indirect Wildlife Assessment

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The purpose of this project was to use information from animal tracks and knowledge of snow types to conduct indirect wildlife assessments in the field. I had hypothesized that changing snow conditions and different surface areas would support different weights and that that information could be made into a reference tool for wildlife biologists. To test this, I used 3D-printed plates of different sizes (to simulate tracks from different-sized animals) and measured the depth that those plates sunk into the snow following the application of various masses. I conducted tests on five different snow types using five different plate dimensions and four different weights for each plate type. In conclusion, I was able to accept my hypothesis that changing snow types does affect the depth of a print and I was able to create a field reference that can be used to assess an animals' weight based on its snow track, which will assist in monitoring the population and health of wildlife in the winter.

Awards Won: