

PANEL 3: POLAR BEAR STUDIES

SUMMARY OF DISCUSSION

F. Craighead. I'd like to just make a few comments and then ask Dr. Jonkel a question. The summer dens that he mentioned, we have termed day beds and we have located quite a few of these in Yellowstone for the grizzly bear. There have been 2 types, one the shallow excavation, usually excavated down to mineral soil, and then an occasional burrow type den going back 3 or 4 feet. In addition to this, we have found that none of these are lined, but occasionally we find one in the fall of the year, just prior to entering the den for the winter, where the grizzly bear will line it with 5 or 6 inches of boughs or, in some cases, grasses and sedges. I was wondering whether you found any of these summer dens that had been lined in this manner?

C. Jonkel. Yes. One of my slides (Fig. 12 in the paper) showed where a bear had used lichens and mosses which she had raked from a great area. Whether she actually used this for a winter den, I don't know. It was about a 2 year-old den when we found it. I did find a den, though, on North Twin Island that I was certain was a winter den or had been used also as a winter den and again she'd raked mosses, not from such a large area, and also some willow and birch branches into the area—or into the den.

F. Craighead. Mr. Brooks, I'm not aware of the type of equipment that you're using but I thought I'd mention that the National Aeronautics and Space Administration in their Earth Resources Satellite Programme are using multi-sensing and multi-scanning devices, including infra-red, which they have indicated to me could quite conceivably be used to census big game animals under winter conditions. It may be that they're utilizing some equipment with greater refinements, I don't know, but it might be worth contacting them if you're not familiar with their equipment.

J. Brooks. There is some very refined equipment that is classified. It is possible to employ a variety of detectors which will allow you to essentially screen-out, according to emission frequency, and focus in on certain things. Then if you could tune out the trees and the rocks and focus in on the distinctive and characteristic radiations from a deer or a bear or moose, it might open a whole new field of opportunities for us but this equipment is not yet available. There are many applications for infra-red sensing. It's especially good for something like satellite scanning of ocean areas, it will certainly show you the edge of the Gulf Stream very precisely, or thermal pollution in a river. You can get beautiful pictures of this but these are rather gross targets and when you consider the size of a white-tailed deer from an over-flying aircraft or satellite, it becomes quite microscopic and the definition is usually not good enough to reveal it unless you have everything else going for you like we have on the polar bear. Here we have a trail that allows us to identify a very small target and distinguish it from the background.