patterned ground; and (3) present day stillstand or slight wastage of the front, permitting the formation of a new moraine ridge.

In support of this interpretation we refer to the recent work of Dr. Péwé. Working in this area Péwé found little or no advance or retreat of the fronts of many glaciers since the time of Griffith Taylor's visit nearly 50 years ago.[2] Moreover, on the basis of a ^{14}C date on algae in ablation moraine in front of the Hobbs Glacier, Péwé has stated that the minimum age for the last, or Koettlitz, ice cover is 6,000 years. Moraines presumed to be of this age which flank the Garwood Glacier are only 200 yards (180 m.) from the present edge of the ice.[3]

Furthermore, the occurrence of mummified seal carcasses in nearly every ice-free area around McMurdo Sound, and the C–14 dating of one of these carcasses (which lay on glacial drift in Taylor Dry Valley) at 1,600–2,600 years of age,[4] furnishes additional evidence that glacier recession has in general occurred quite some time ago.

Institute of Polar Studies,   WESTON BLAKE, JR., and JOHN HOLLIN
   The Ohio State University,
     125 South Oval Drive,
       Columbus 10, Ohio, U.S.A.
        30 May 1960

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SIR,   *Distant release of avalanches*

I read your recent article on snow and avalanches in the *Newsletter of the Chicago Mountaineering Club*, Vol 13, No. 2, March 1959, and was very interested to note your suggestion that avalanche releases attributed to voices might actually have resulted from propagation of disturbances through the snow for long distances. This coincides with my own opinion, and I thought you might be interested to know that I have from time to time observed evidence of sympathetic or distant avalanche releases in this manner.

Early this winter we observed a striking example here at Alta. A shallow snow cover on north exposures was converted to depth hoar during fair weather in December, and then overloaded by a couple of heavy storms early in January. The avalanche slopes were very unstable, and in one particular case we released a large slab avalanche in the ski area by artillery fire. Adjacent slopes, though not connected ones, also slid with this release, and an observer located further up the valley reported that slides on the opposite side of the mountain also fell at the same time. We were later able to trace cracks in the snow through almost all the areas between these slides up to the farthest one about a mile away over the ridge. There seems little doubt that this single artillery shell initiated cracking and release of creep tension over this wide distance, and that wherever the cracks propagated across an open, steep slope, an avalanche was released.

Last winter we had a similar situation on another area, where a single artillery shell released a whole series of slides along about ¾ mile of a long ridge. I have a 16 mm. film of this event which shows very clearly the progressive release of one slide path after another.

EDWARD R. LACHAPELLE

U.S. Department of Agriculture, Forest Service,   *Avalanche Hazard Forecaster*
  Wasach National Forest, Alta, Utah.
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