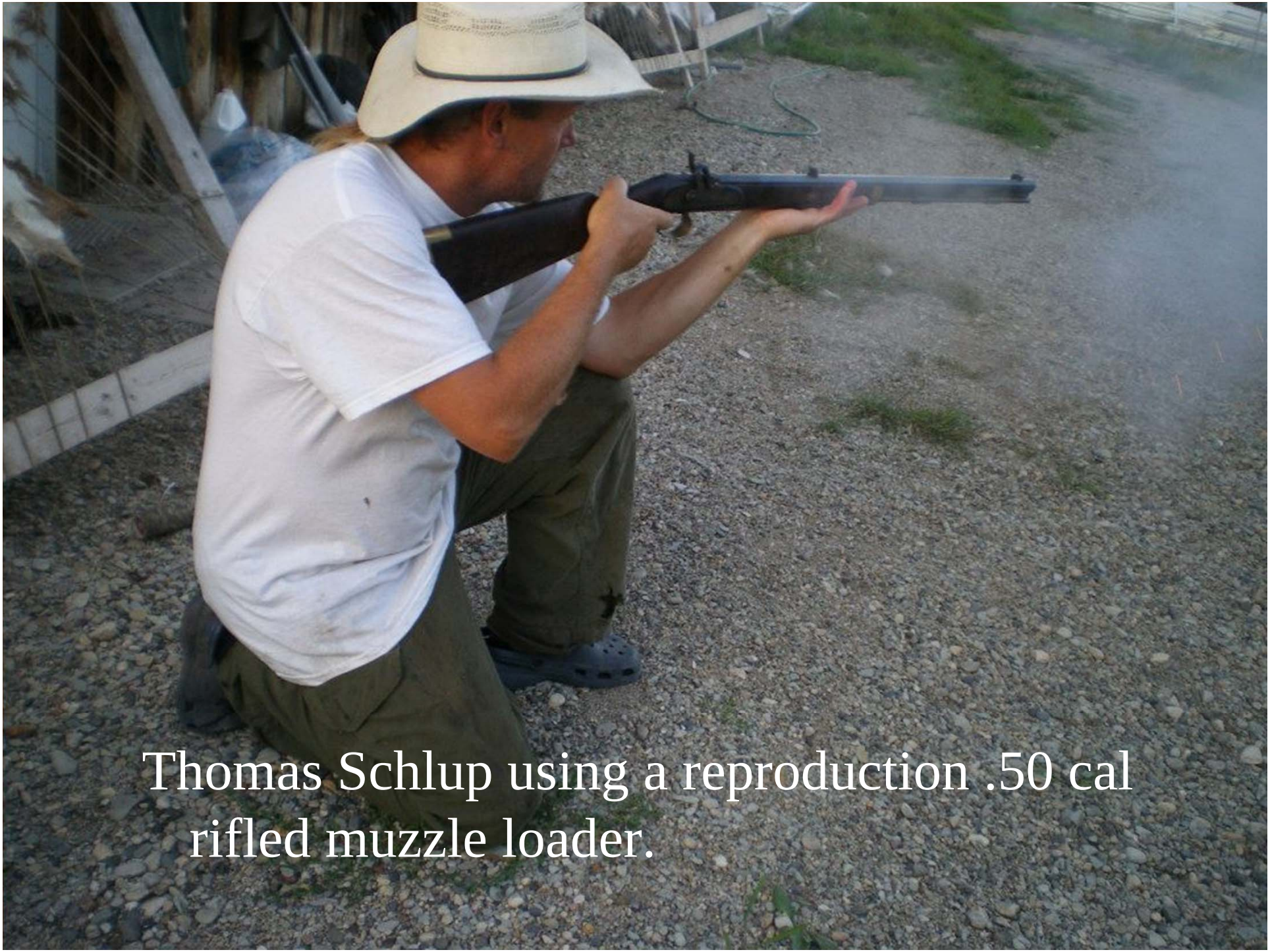
Material Culture Experiment

- The following slides document the 2012 experiment to
  - Test the effectiveness of a rawhide shield made from buffalo throat skin against a reproduction 19th century muzzle-loading rifle
  - Counter prevailing argument that rawhide shields were always inferior to European firearms
- Experiment carried out by Director Dr. Roland Bohr and Thomas Schlup (ANPO-Bison Ranch, Rossburn, Manitoba).

Rationale for Muzzle Loader Versus Rawhide Shield Experiment

- Aboriginal and European observers during the fur trade era often assigned great importance to the role of firearms in altering Aboriginal material culture, hunting techniques and military relations between Aboriginal communities.
- Based on these assessments, scholars in the first half of the twentieth century generally dismissed Indigenous weapons, including rawhide shields, as inferior to European weapons, especially firearms.
- In contrast, since the 1980s, a new generation of scholars has argued against this perspective, pointing out the many flaws of early firearms when compared to Aboriginal distance weapons, such as the bow and arrow.
- Following a discussion on this topic with the rancher Thomas Schlup, we conducted the following experiment to field-test the penetrative force of the reproduction of a fur trade era muzzle-loading gun against a shield made from the throat skin of a bison bull.

Site of experiment showing hide drying frames. Picture taken from site of target.



Thomas Schlup using a reproduction .50 cal rifled muzzle loader.


FAIRGATE
2 3cm 4 5 6 7 8 9 10 11 12 13 14
.50 cal ball


Buffalo hide shield


Set up of shield as seen on thick side which measures ca 2.5 cm.

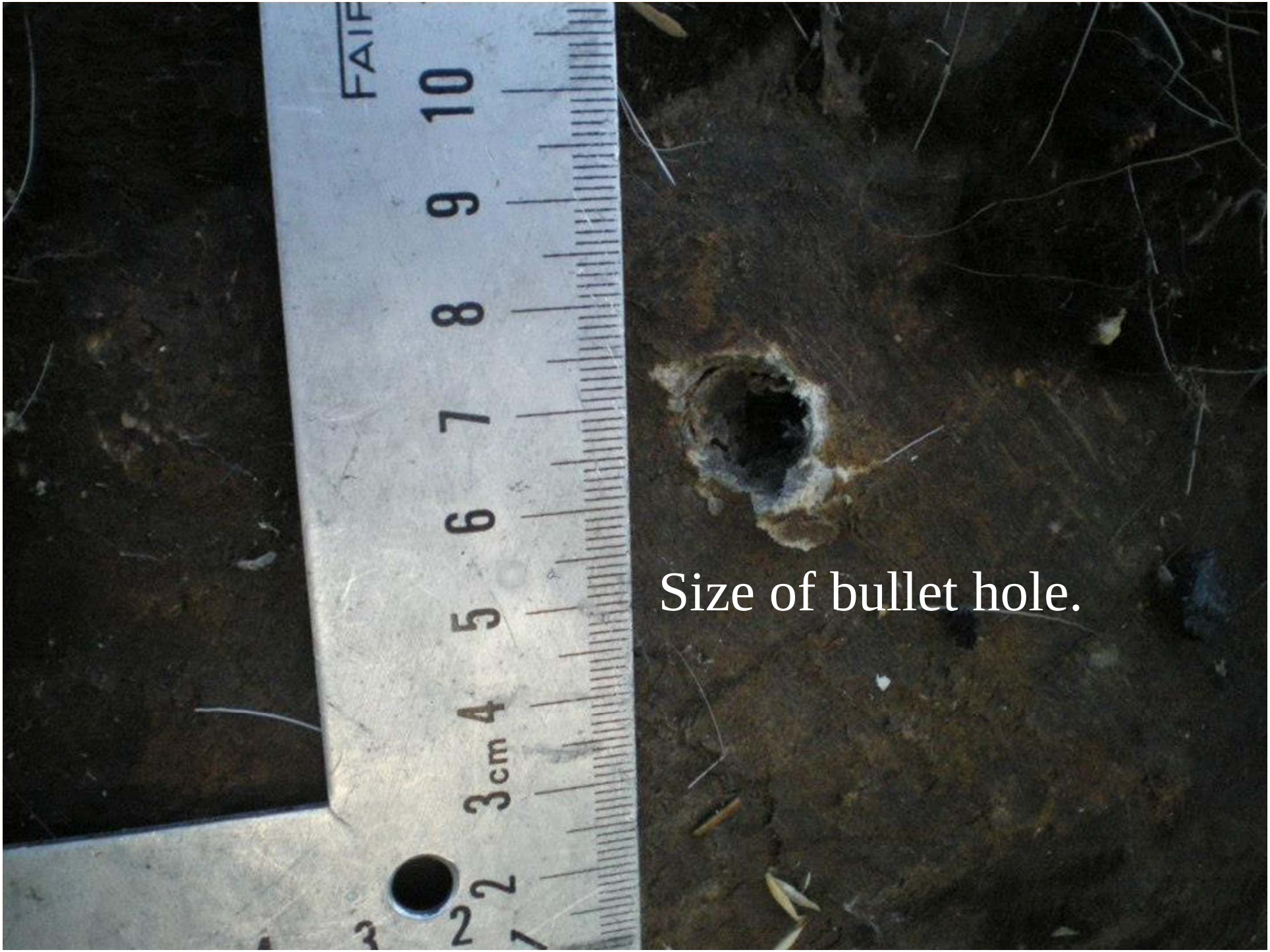

Set up as seen from thin side
which measures ca 0.5 cm.

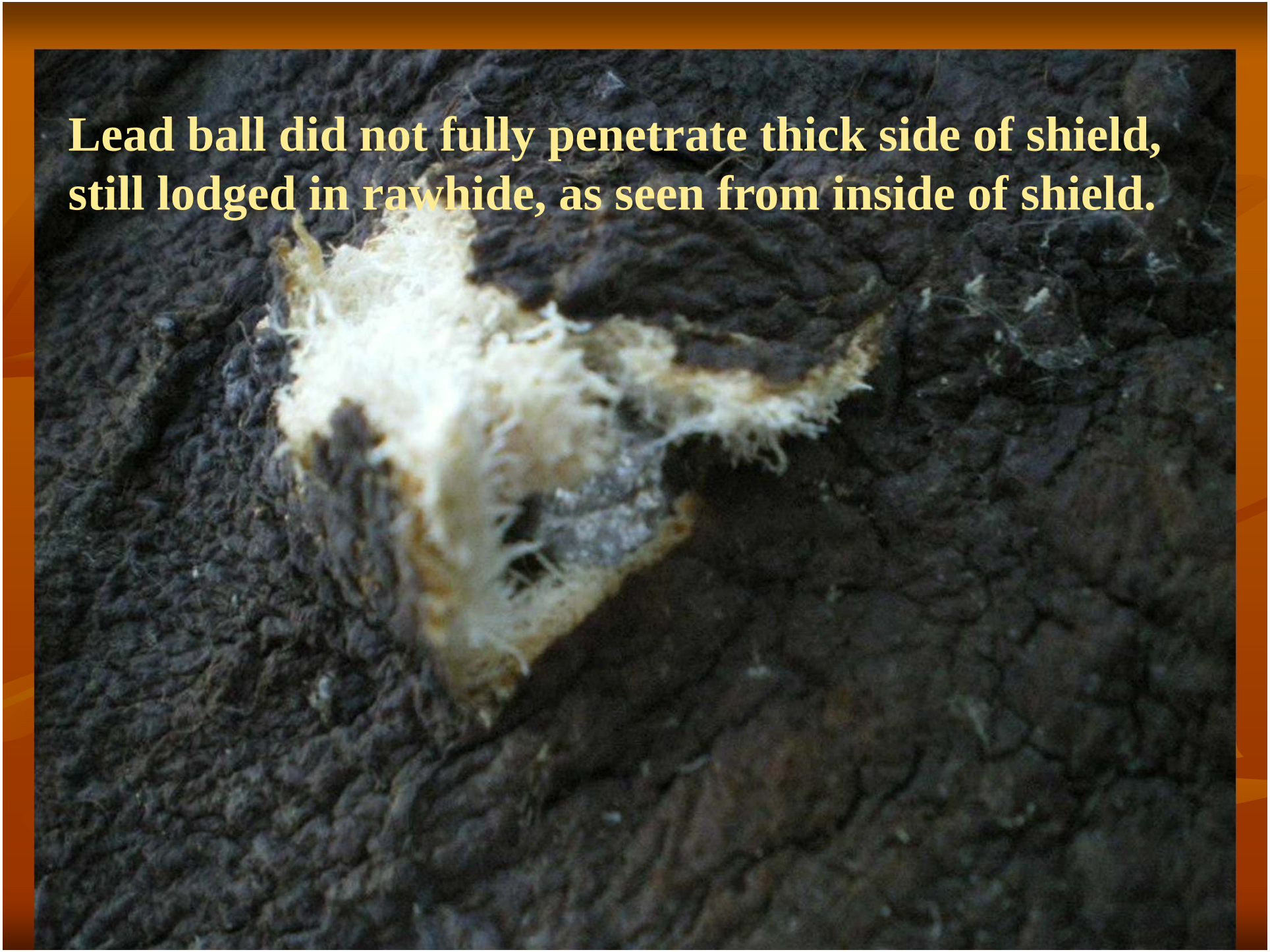

Damage from shot through
thin side of shield.

Damage through thin side of shield as seen from the back.

Damage through thin side of shield as seen from the side. Full penetration by projectile.

Close-up of bullet hole on thick side of shield.


Size of bullet hole.


Lead ball did not fully penetrate thick side of shield, still lodged in rawhide, as seen from inside of shield.

Results of the Experiment

- While the shield was penetrated on its thin side by all three lead balls impacting this area, the thick side prevented the lead ball from fully penetrating the shield. However, the impact was strong enough to completely throw the shield out of its position and catapult it more than three meters upwards. While this projectile may not have killed the bearer of the shield, had there been one, it would likely have caused substantial injury to the person using the shield.