

Creating Bloodstain Patterns

I created the following recognized patterns using red acrylic paint on white paper.

Amy Du Beau, PhD
Matanuska Forensic Science
dubeau@matanuskaforensicscience.com

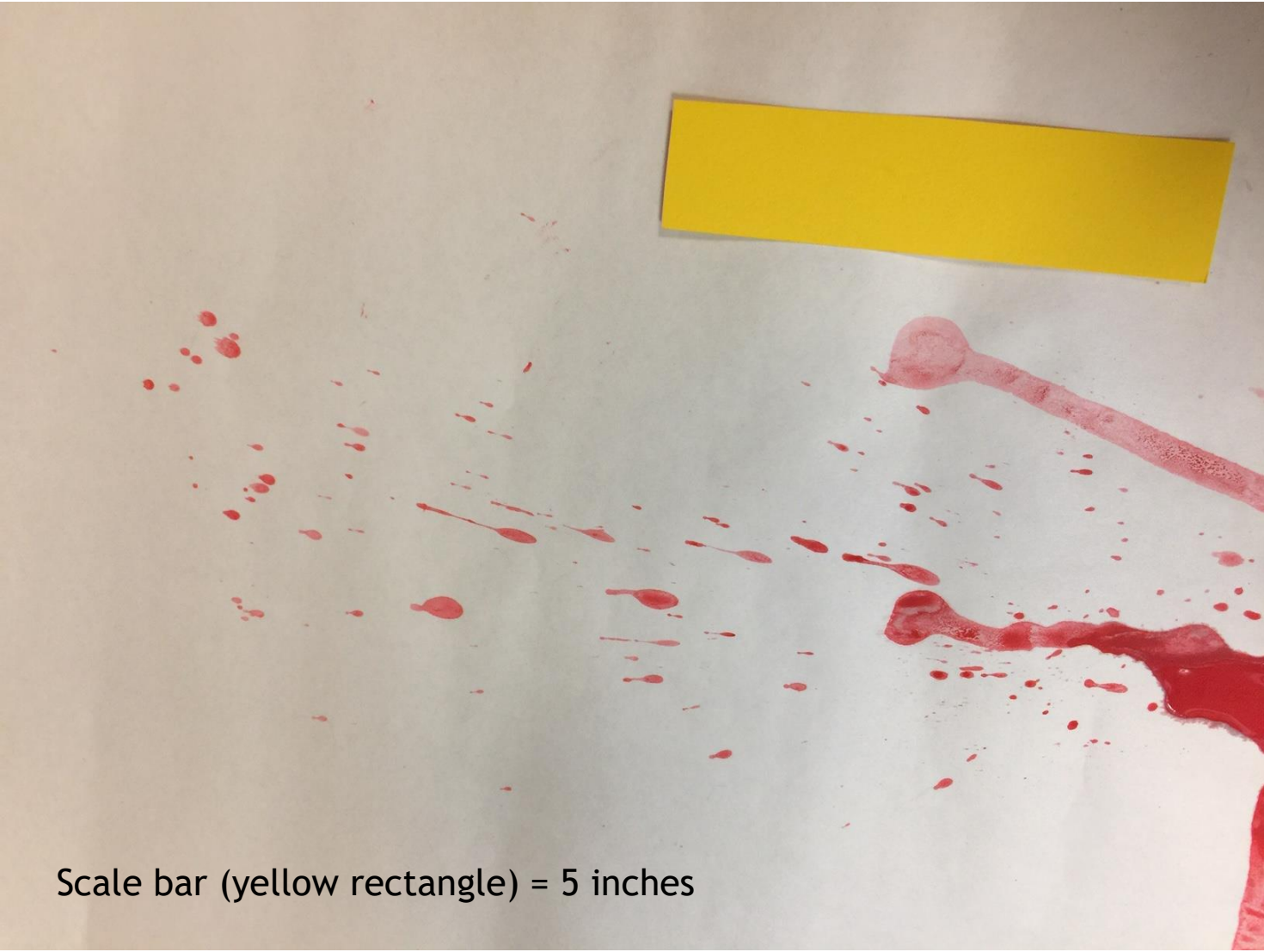
PATTERNS CREATED

- 1/ Low force
- 2/ Medium force
- 3/ High force
- 4/ Swipe
- 5/ Wipe
- 6/ Blood dripping into blood
- 7/ Contact transfer
- 8/ Void
- 9/ Directionality
- 10/ Cast off

Low force

A sponge saturated with dilute red paint was placed on the edge of a wooden cutting board situated at a slightly elevated angle ($\approx 30^\circ$) from the flat horizontal paper.

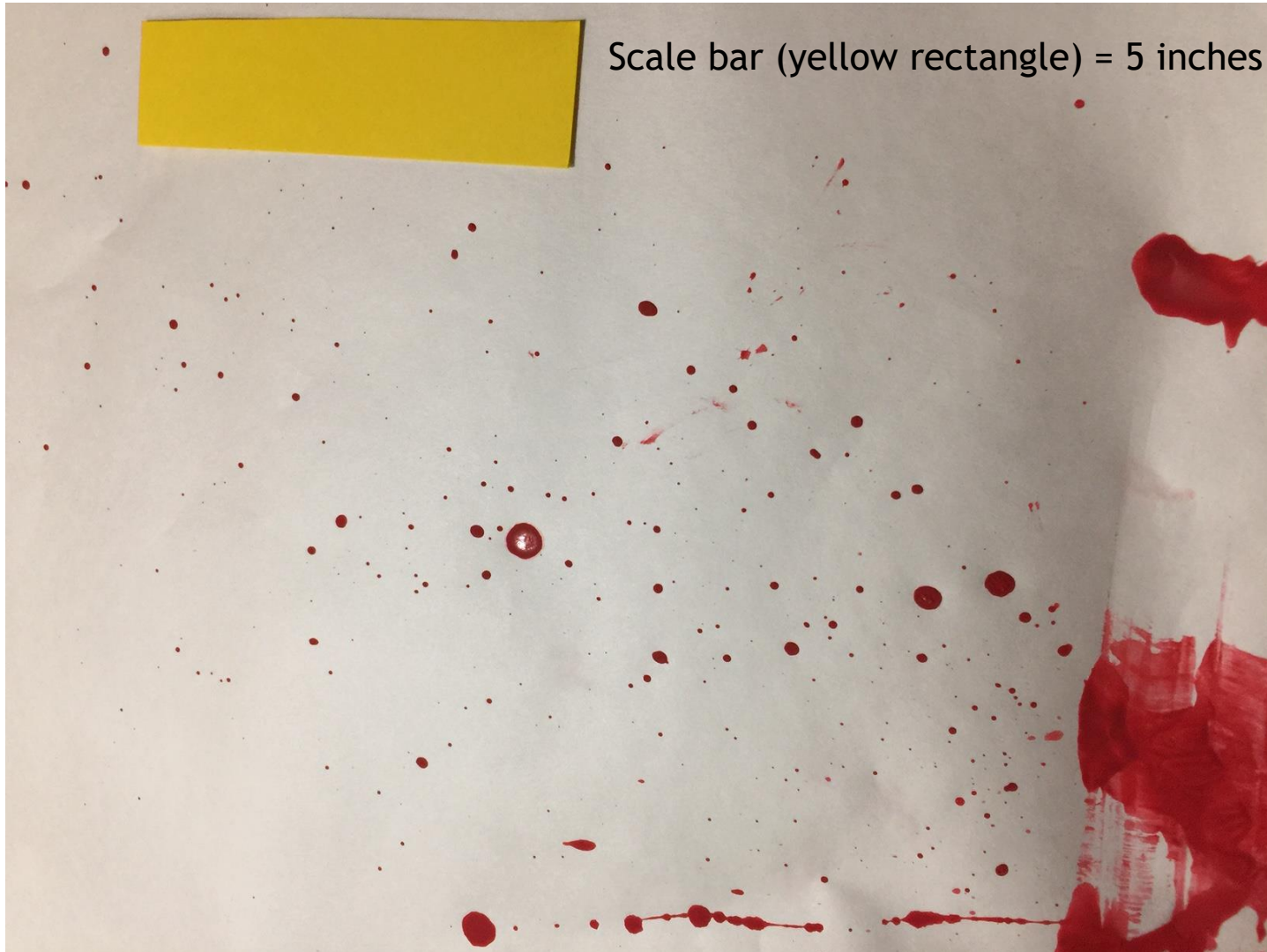
A second board was forcibly dropped onto the sponge, creating this low force stain on white paper.



Scale bar (yellow rectangle) = 5 inches

Medium force

Scale bar (yellow rectangle) = 5 inches



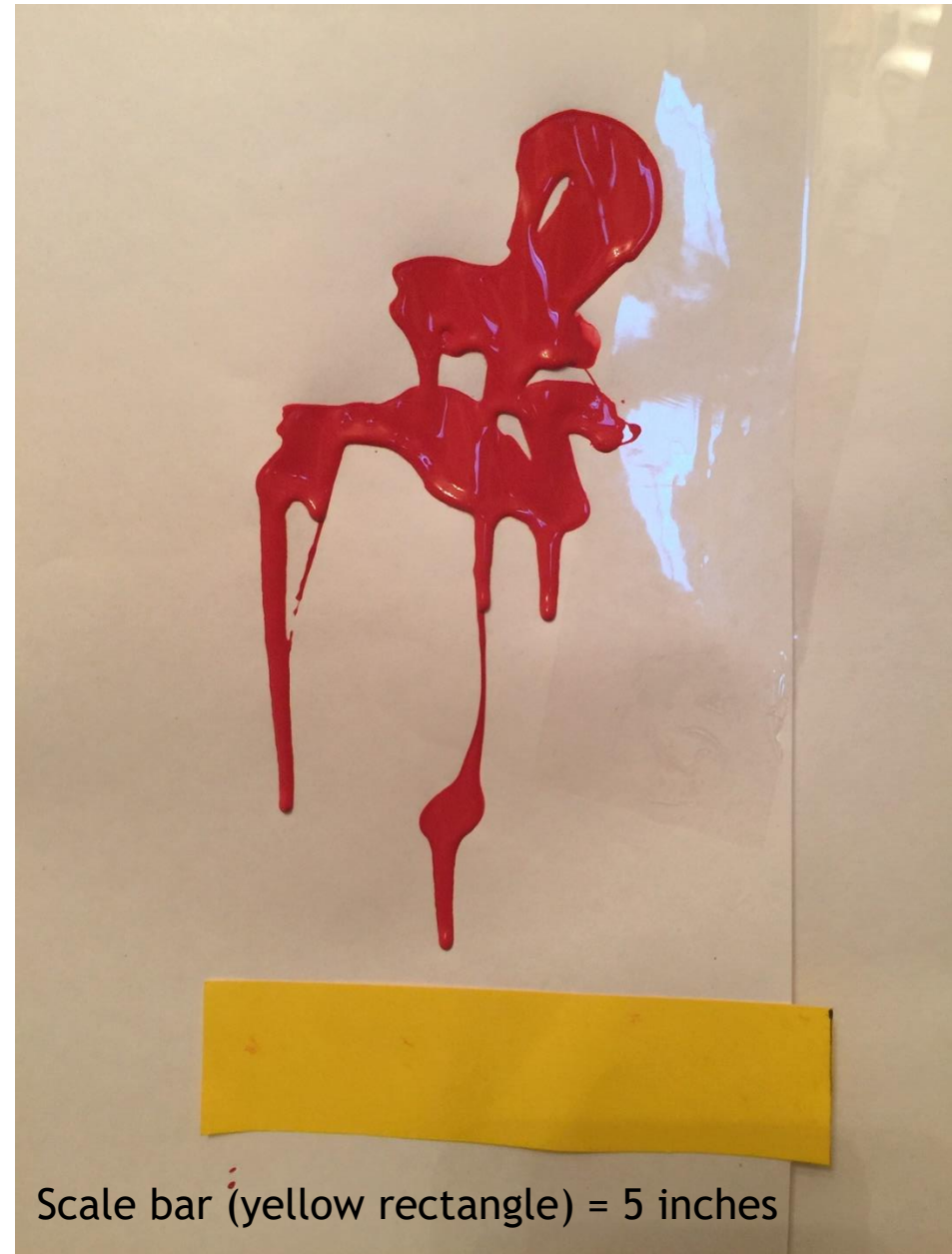
A sponge saturated with dilute red paint was placed on the edge of a wooden cutting board situated at an elevated angle ($\approx 60^\circ$) from the flat horizontal paper.

A metal-tipped mallet was swung onto the sponge, creating this medium force stain on white paper.

High force

A 3 milliliter plastic syringe filled with red paint was forcibly ejected at an oblique angle ($\approx 40^\circ$) from the vertically oriented paper, creating this (semi) high force stain on white paper.

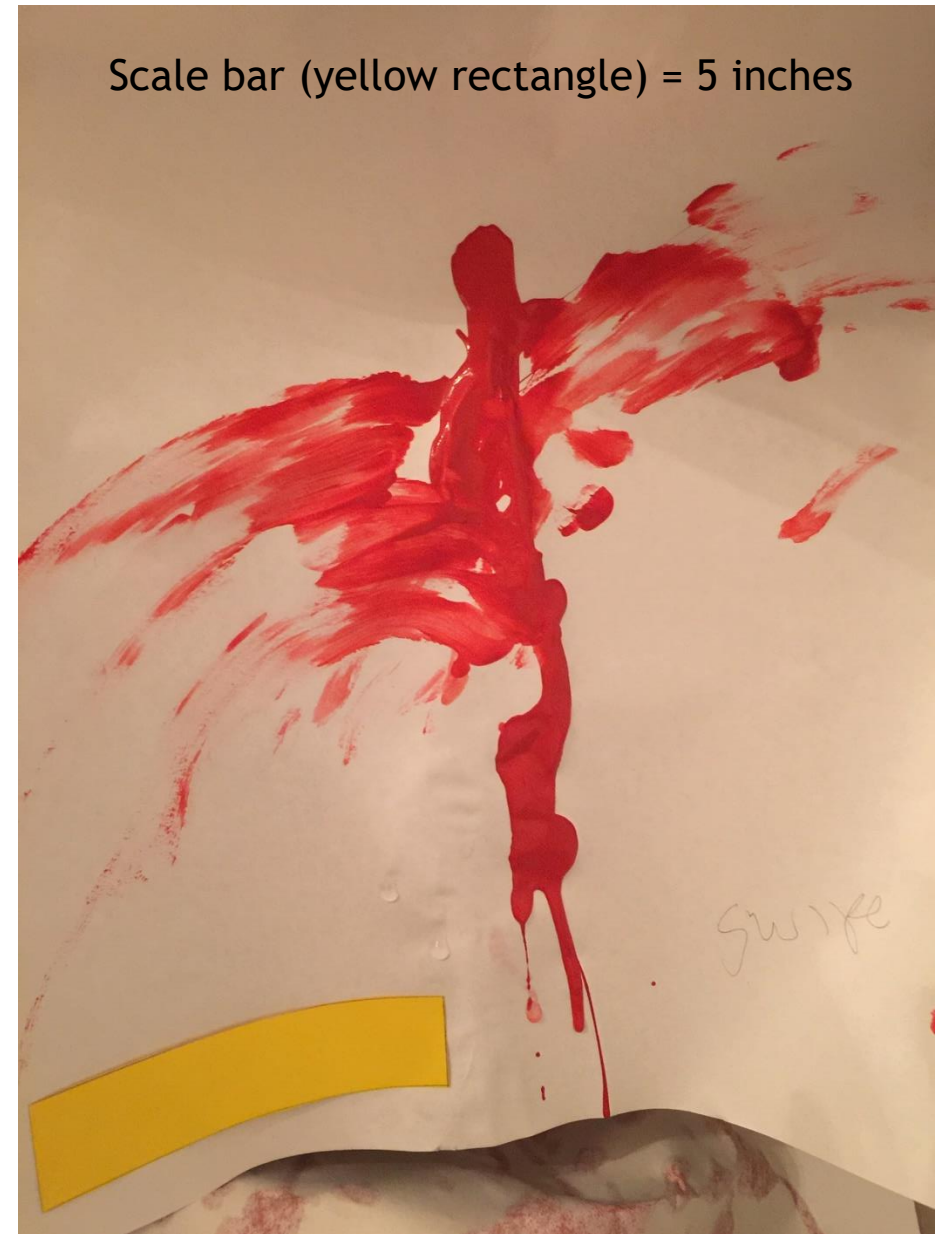
Misting spatter is typically associated with high force impact stains. This stain may not have been created with enough force to qualify. However, this paint was more viscous than blood.



Swipe

A cloth wet with red paint was used to create a simple linear vertical contact stain on vertically oriented paper.

Using my bare hand, palm slightly wet with paint, I quickly swiped right then left from the center of this wet stain, creating this swipe stain.



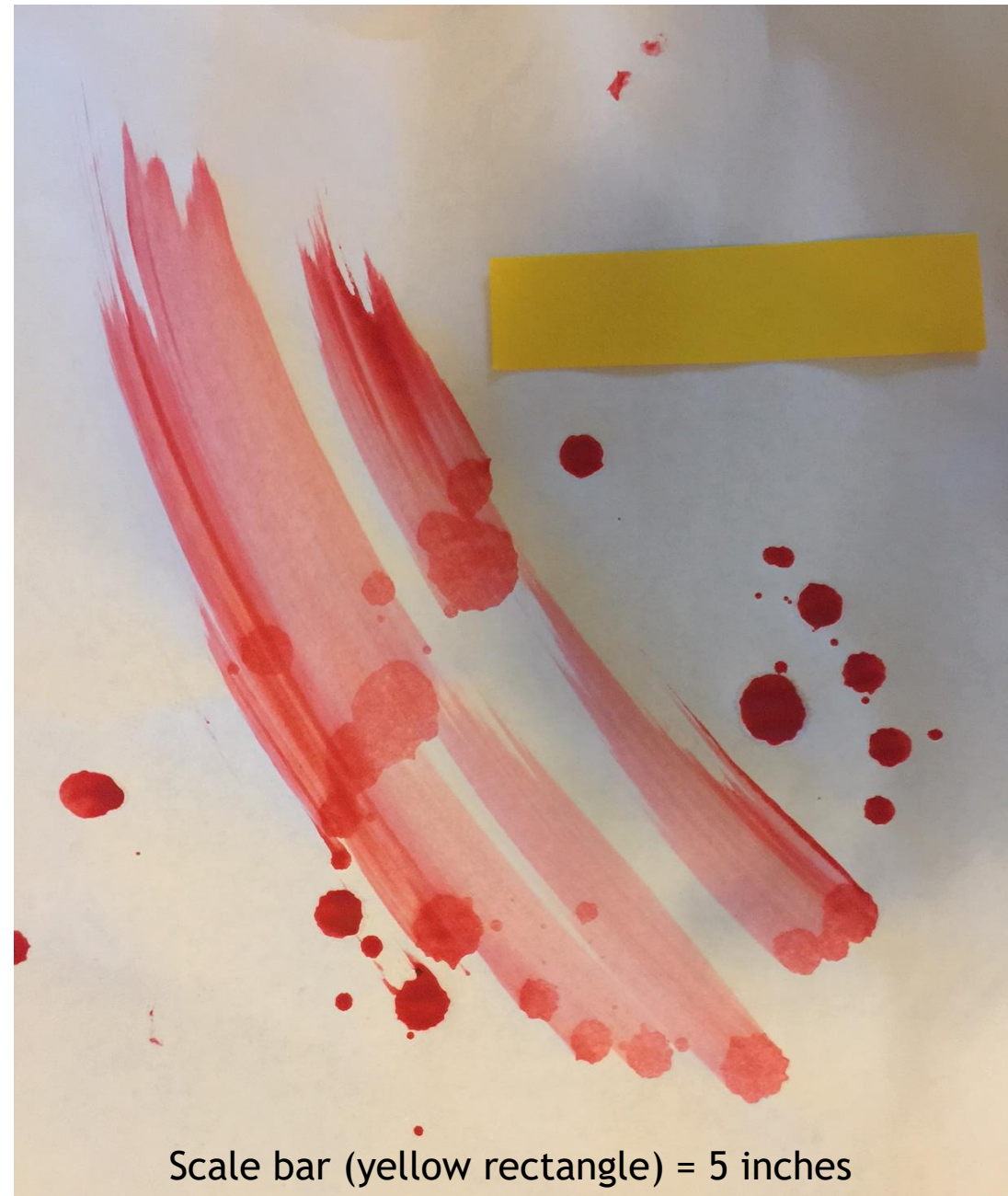
Scale bar (yellow rectangle) = 5 inches

Wipe

Squeezing a sponge wet with red paint, I created a few passive drops onto paper lying flat.

Using dry paper toweling, loosely crumpled into a ball, I quickly wiped with an upward motion, creating this wipe stain.

To note, this pattern may be best described as a swipe after all. By definition, a clean mark through blood denotes a wipe.



Scale bar (yellow rectangle) = 5 inches

Blood dripping into blood

Using a poultry baster liberally filled with red paint, I created passive drop stains with splashing while standing over paper on the floor.

Dripping more paint onto the paper, I created this blood dripping into blood stain pattern.



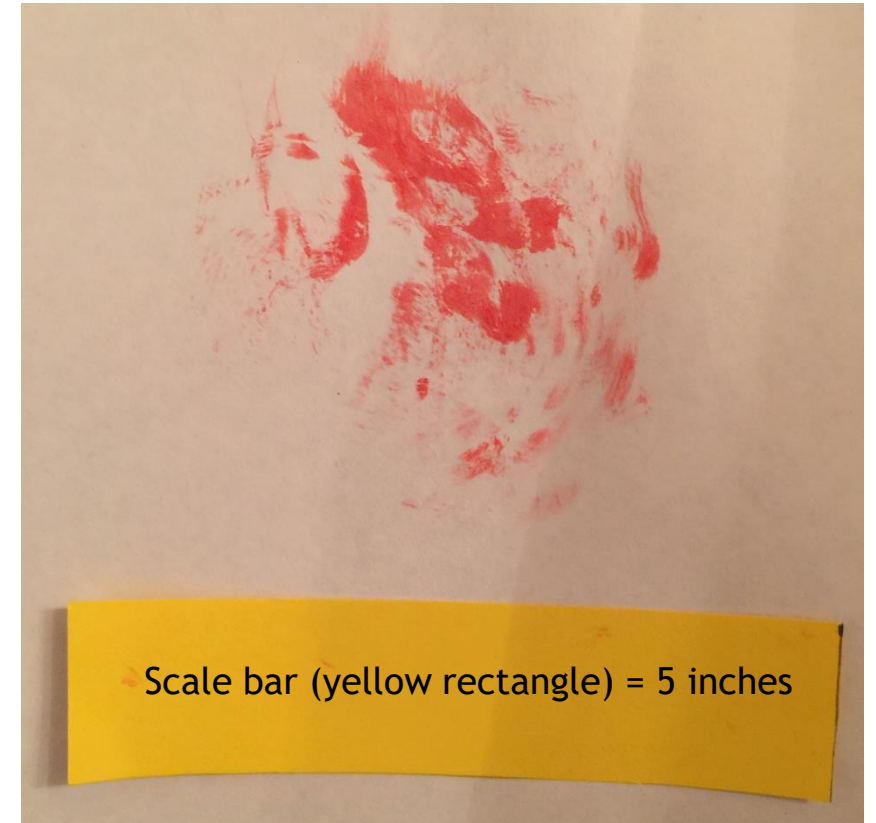
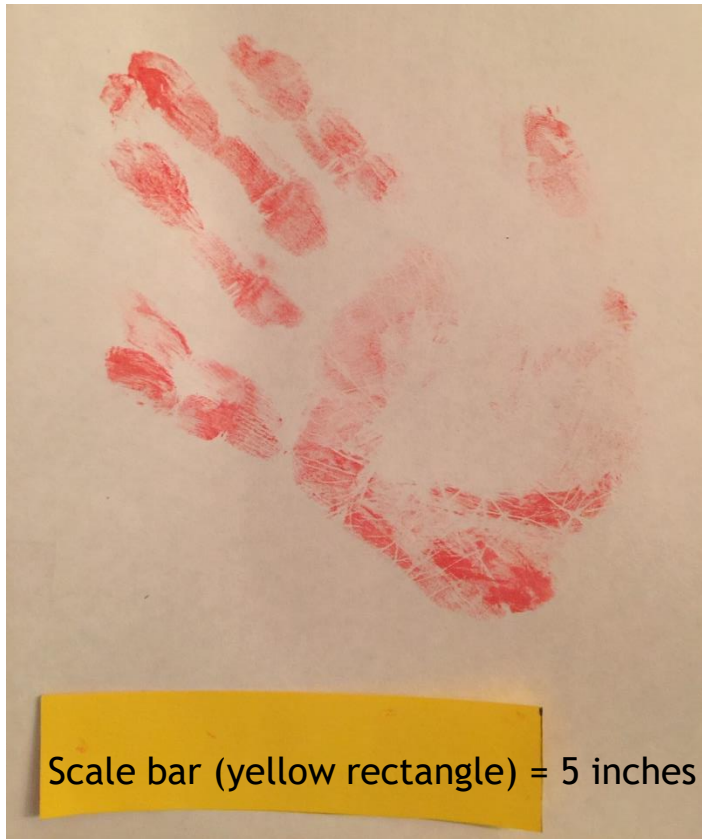
Inset detail (left)
Scale bar (yellow rectangle) = 1 inches



Scale bar (yellow rectangle) = 5 inches

Contact transfer

Lightly blotting my bare left hand coated with red paint, I created this contact transfer stain onto vertically oriented white paper (below).



Using the same method, I quickly blotted a cloth rag lightly saturated with red paint to create this contact transfer stain onto vertically oriented white paper (above).

Void

A mallet was placed onto paper lying flat on the floor.

Using a sponge liberally saturated red paint, I drizzled paint 'Jackson Pollock style' while standing over this paper, creating this void stain.



Mallet = 11 inches

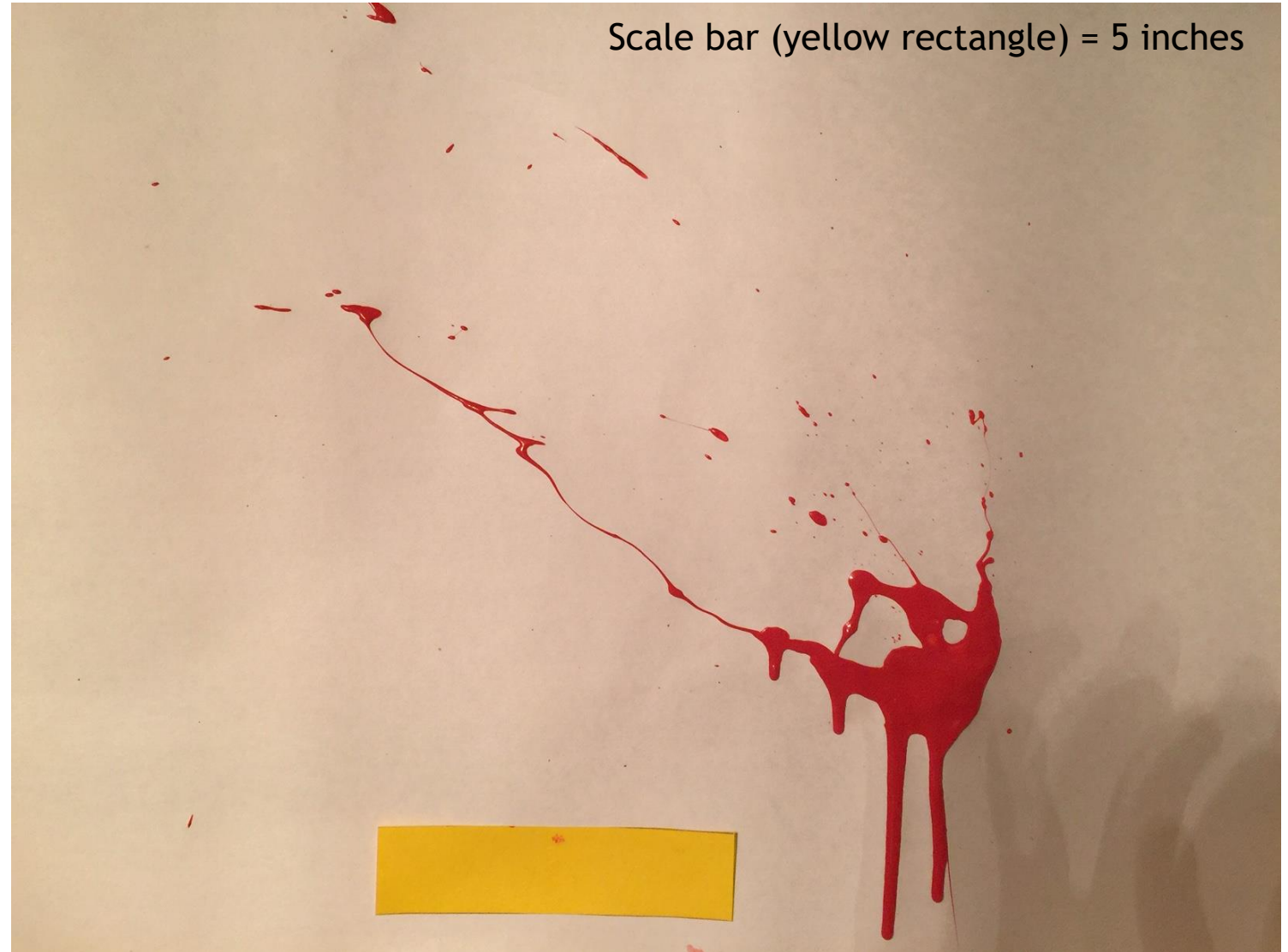


Scale bar (yellow rectangle) = 5 inches

Directionality

Using a 3 millimeter syringe loaded with red paint, I forcibly ejected paint at an oblique angle ($\approx 40^\circ$) onto vertically oriented paper.

Directionality on this surface is towards the upper left, approximately 10 o'clock, from the parent stain.



Cast off

White paper was fixed onto the 8' ceiling (using a stepladder and duct tape, noting that I am 5'2").

Forcibly swinging a mallet wet with red paint overhead, I made 5 passes to create this cast off pattern.



Scale bar (yellow rectangle) = 5 inches



Murdoch, my 14 lb tuxedo cat, investigating the scene while the paint dries. Murdoch assisted with this project.