

제5차 외국 탐지견전문가 초청
도시탐색(Urban Trailing)훈련 세미나
강사: *Marcia Koenig*

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SCENT



A Dog Handler's Perspective

Marcia Koenig

What is human scent?

- Combination of volatile substances
- Rafts (epithelial cells)
- Volatile organic compounds from outside sources – deodorant, etc.

Rafts



Vapor



Bacteria

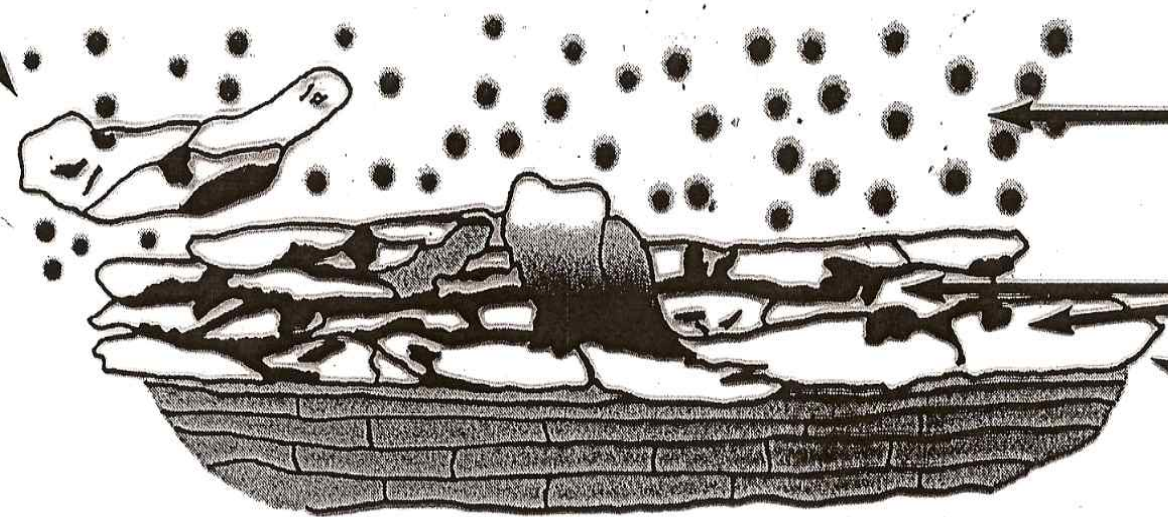


Dead Skin Cells

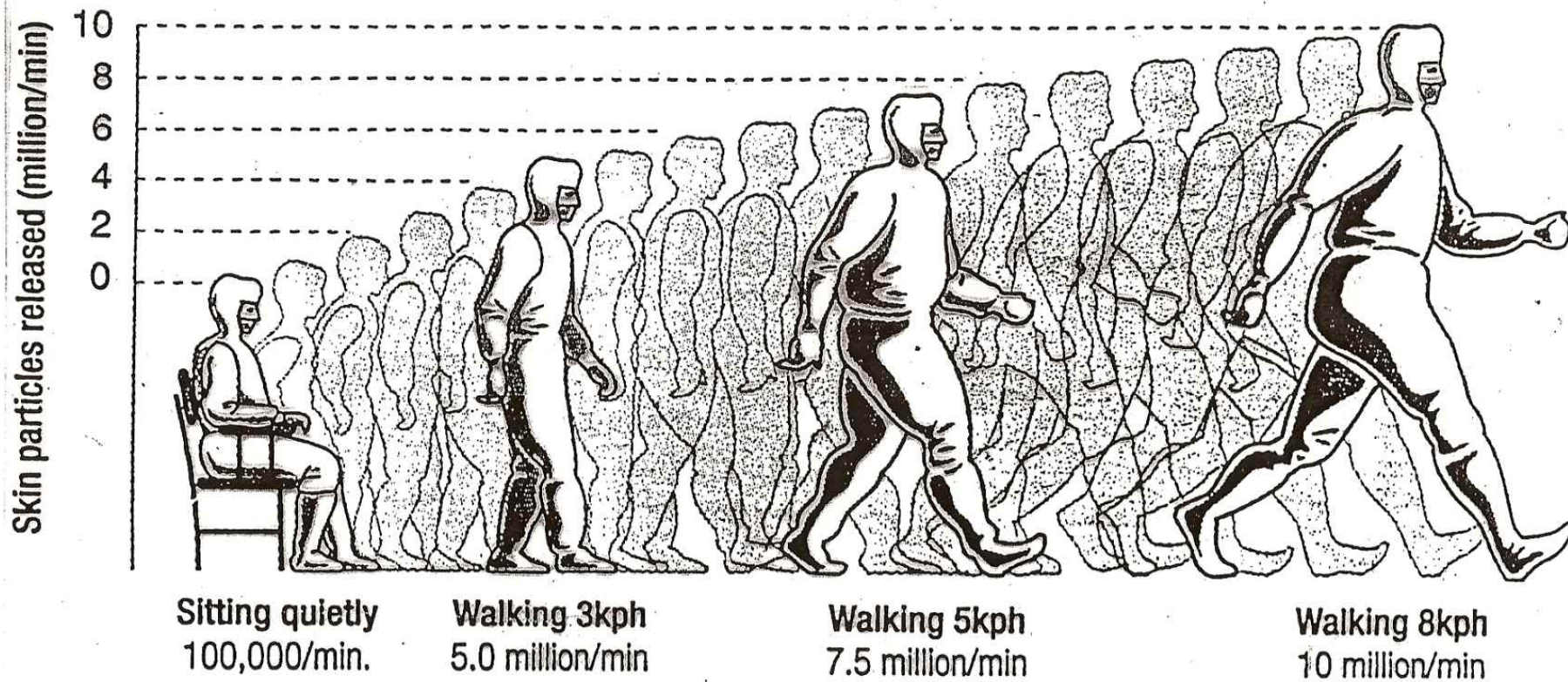


SKIN CELLS

SKIN CELLS



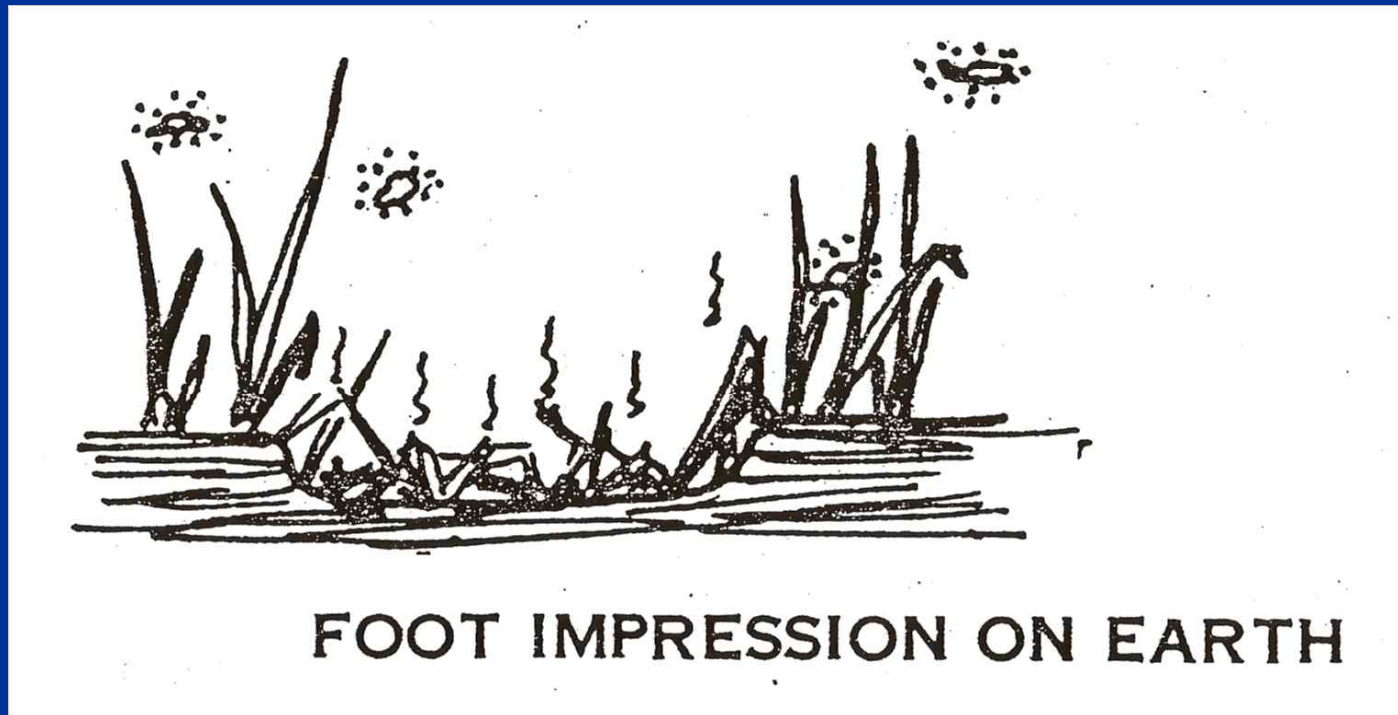
The skin we shed



Source: Dr. Ken Goldstein Cleanroom Consultants, and Mike Fitzpatrick, Lockwood Greene, Cleanrooms East 99

Components of Scent

- Human – Volatile fatty acids & Skin rafts
- Ground – Plants & Earth with bacteria

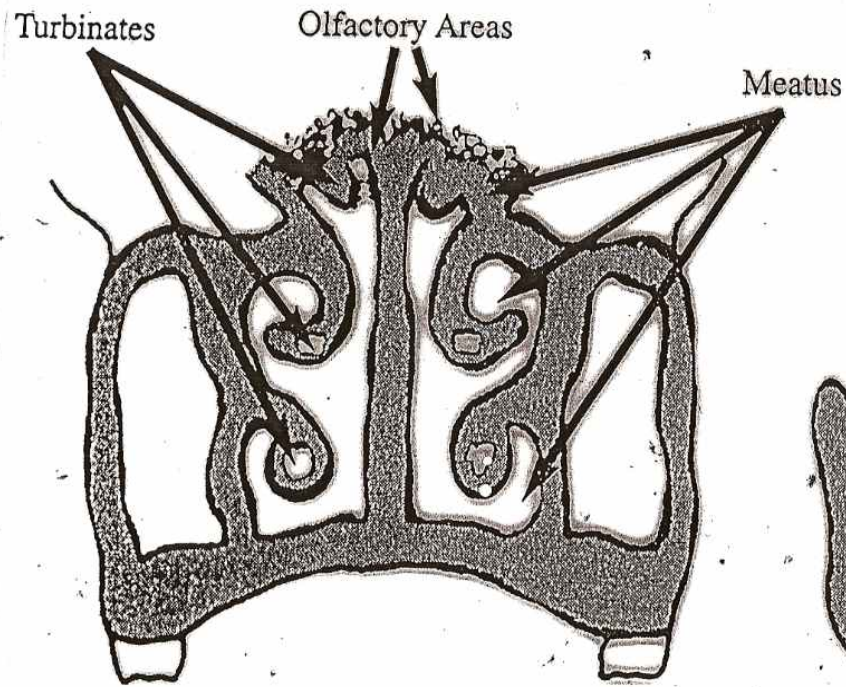


Olfactory Ability

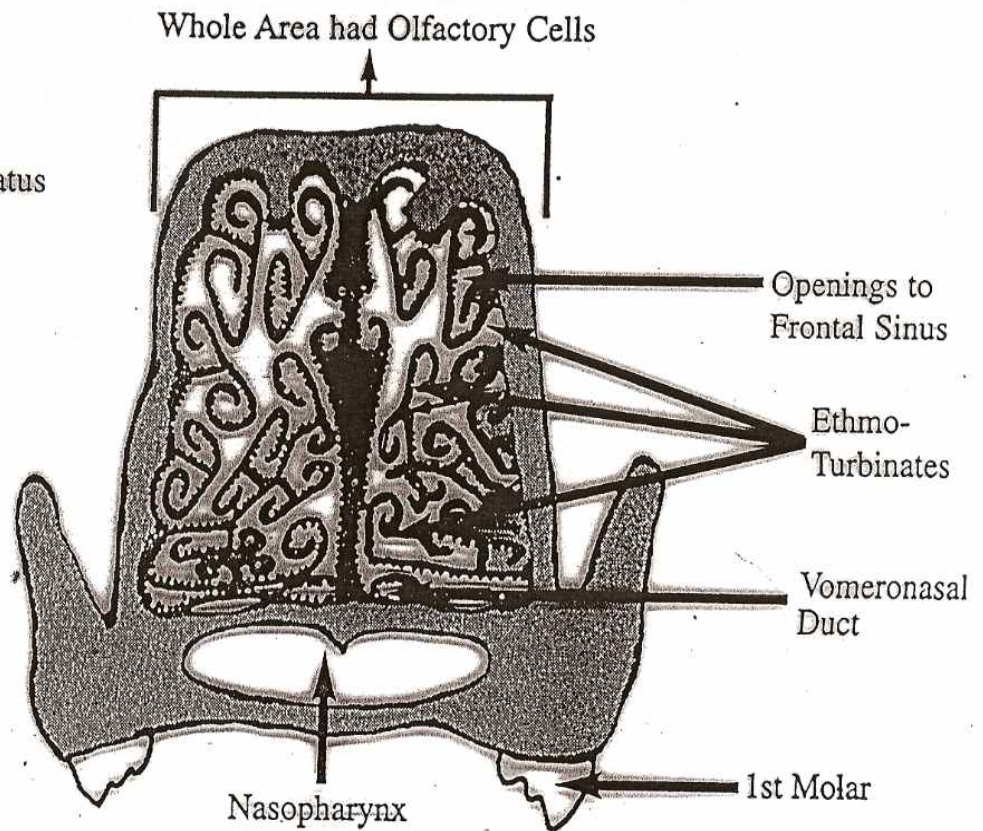
The latest study at Auburn University states that dogs may be able to smell at least 10 billion times better than a human...

How well can a dog smell?

If you put a drop of vinegar in a tub of 800 liters of water and mix it up –then take a drop of that water and mix it in another tub of 800 liters of water...dogs can still smell the vinegar!



Frontal Section of Human Nose



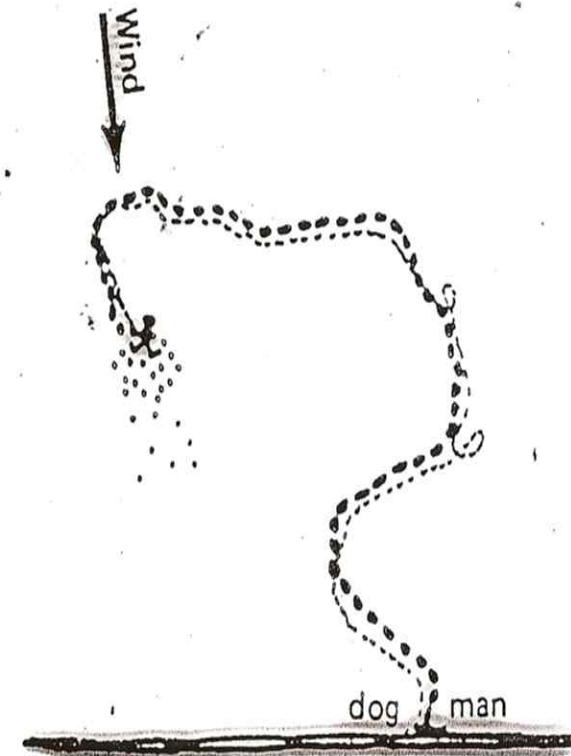
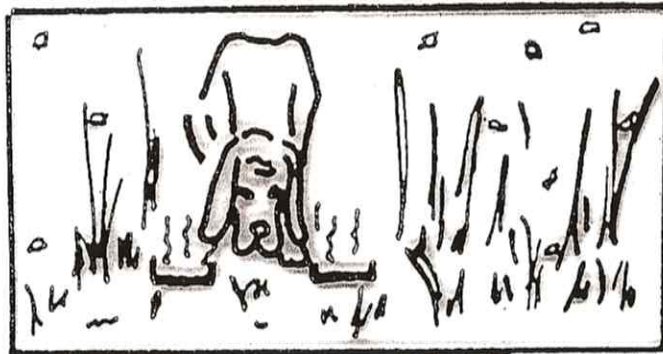
Frontal Section of Dog Nose

Part II

What Factors Affect Scent?

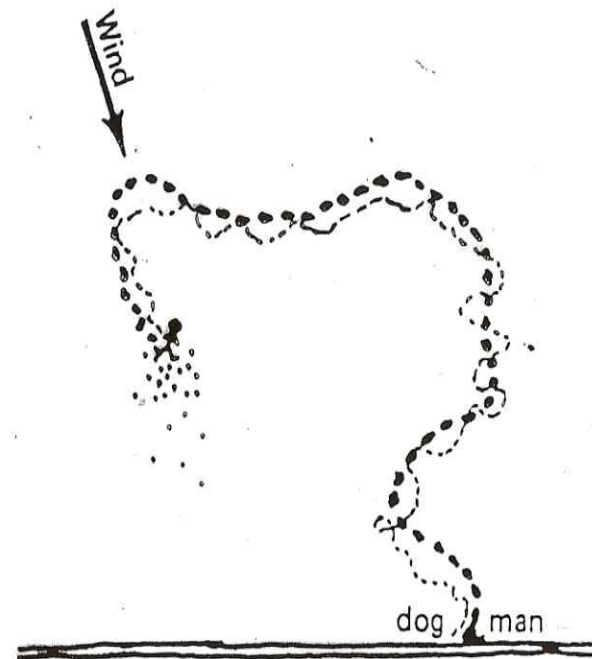
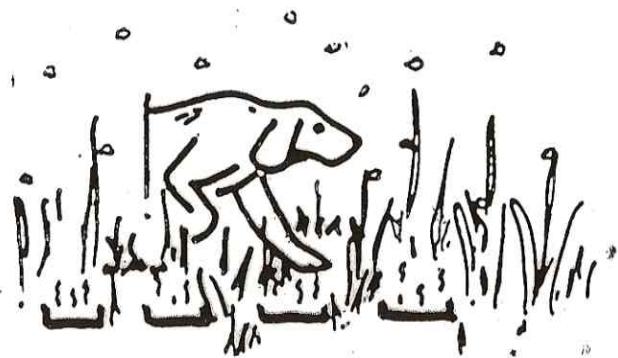
- Wind
- Temperature
- Rain
- Time

Tracking Dog



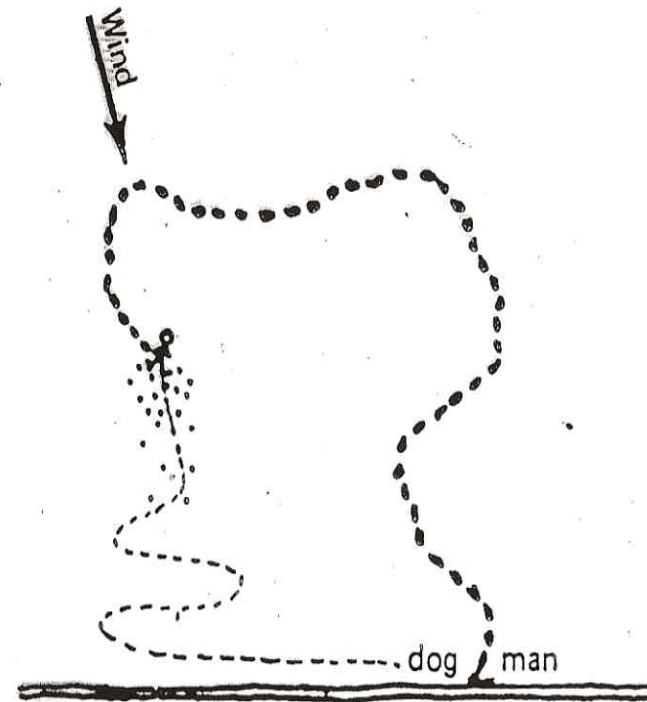
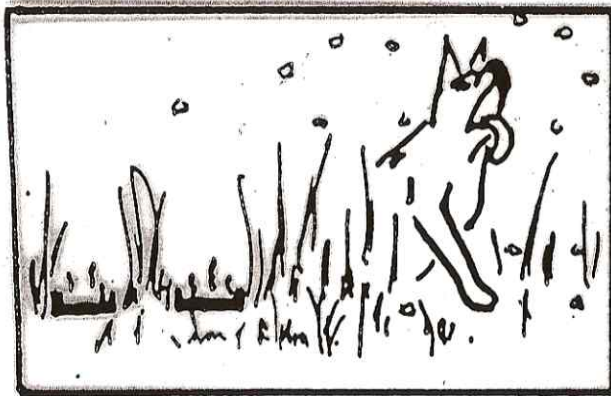
TRACKING DOG ORIENTATION

Trailing Dog

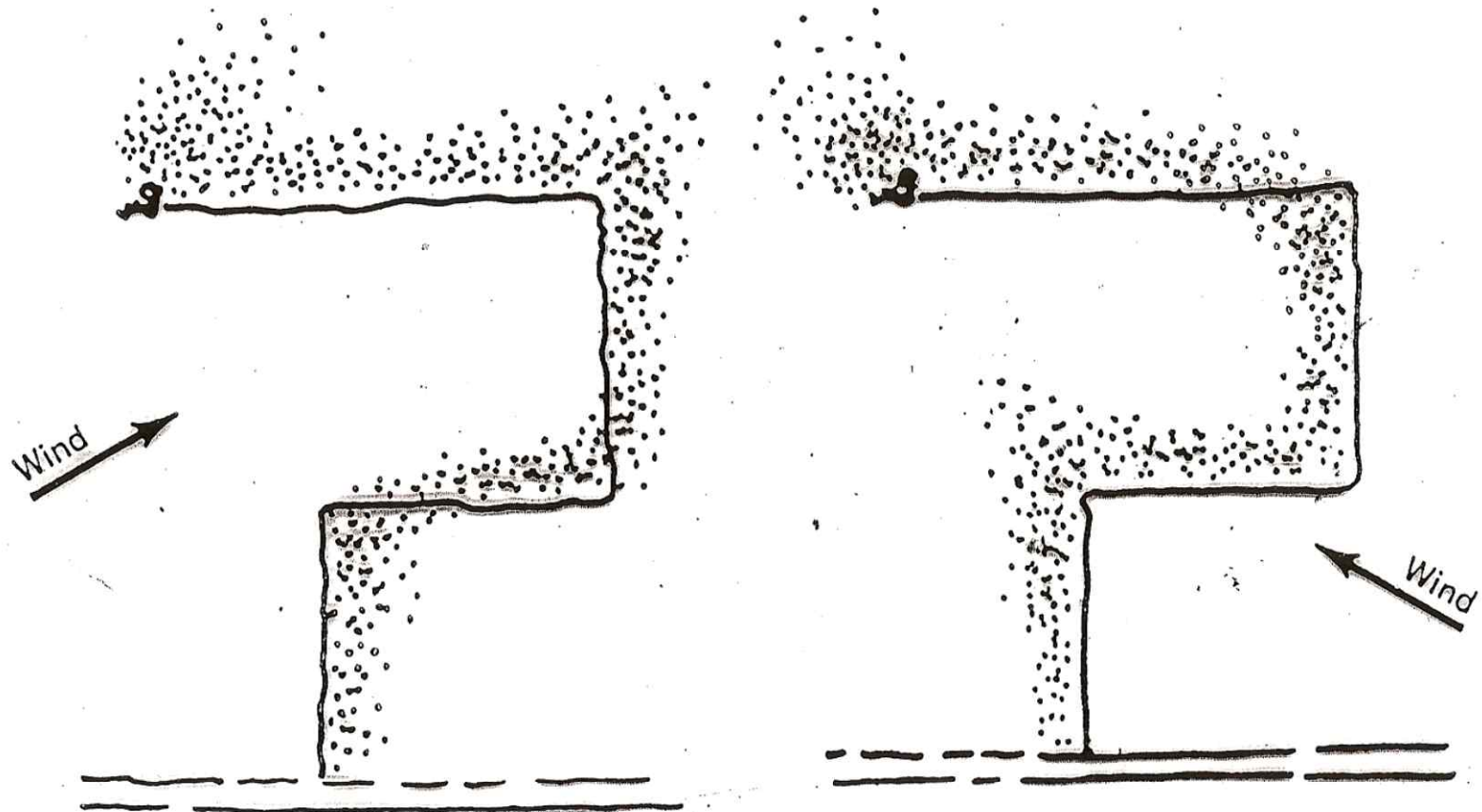


TRAILING DOG ORIENTATION

Air Scenting Dog

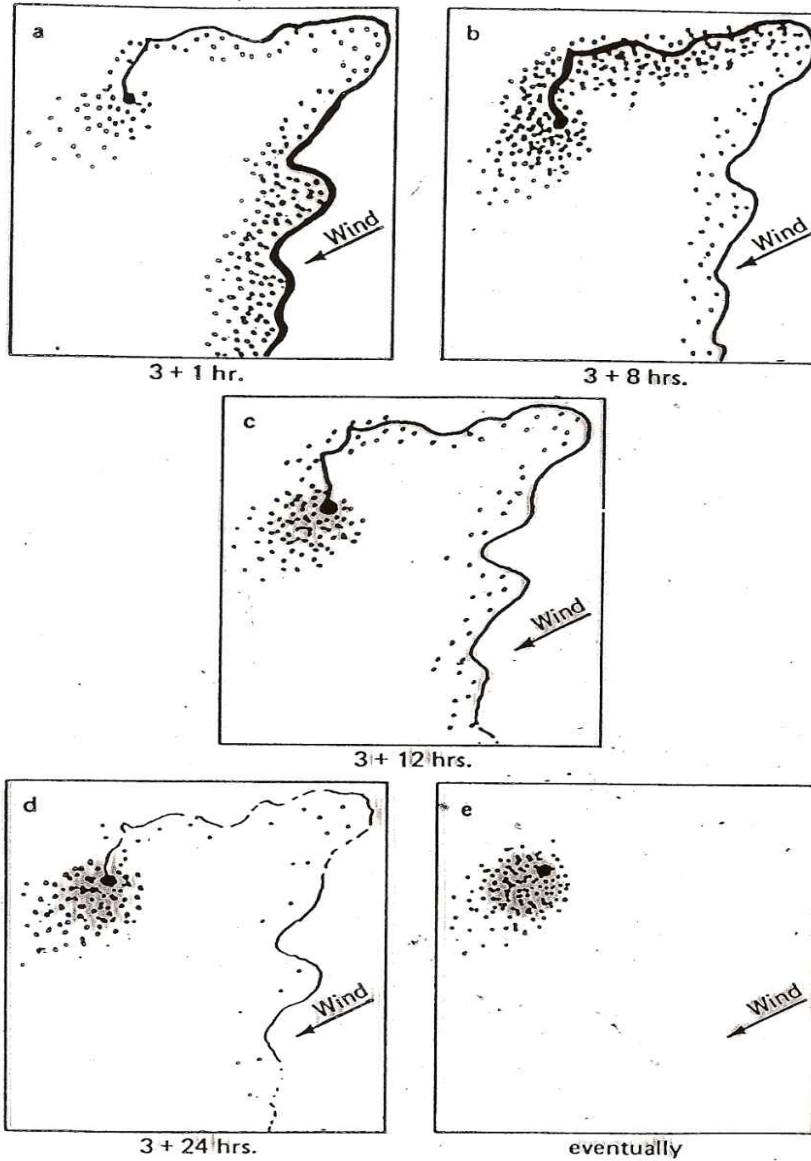


AIR SCENTING DOG (SEARCHING) ORIENTATION



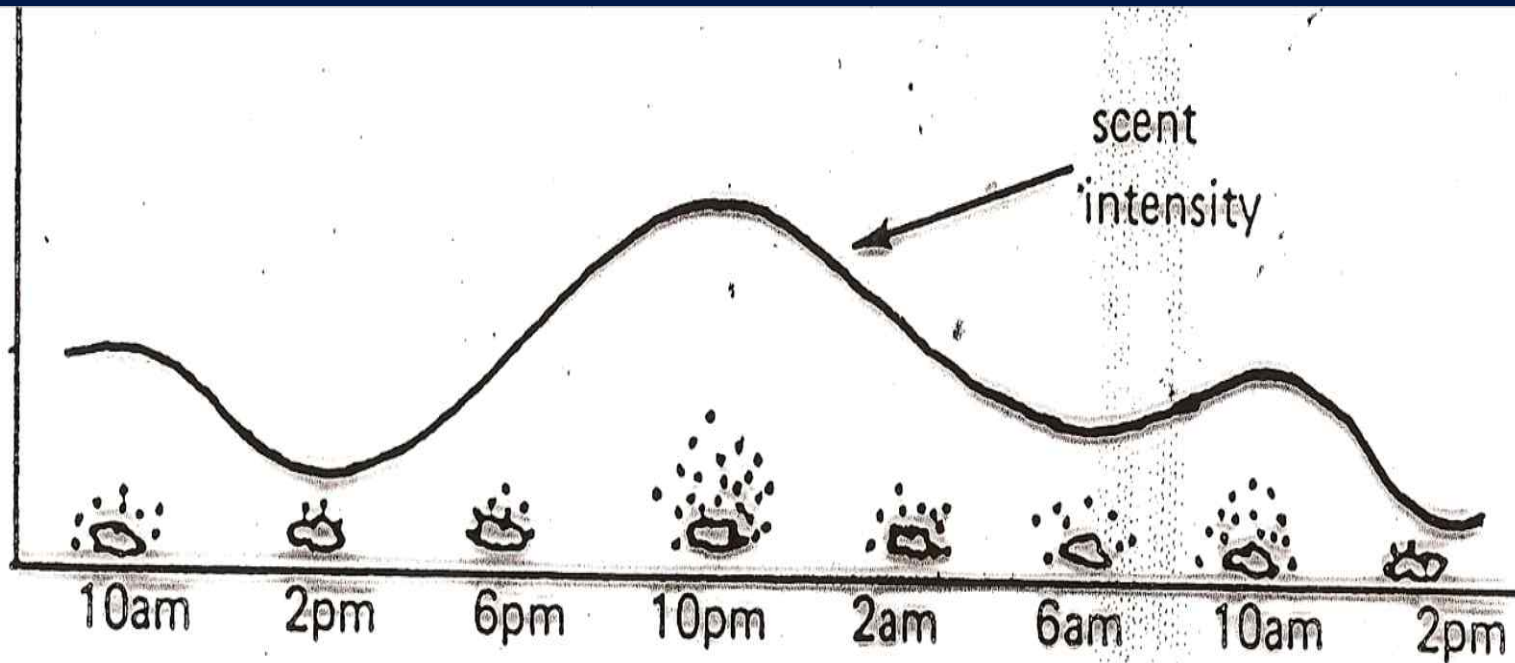
Wind direction will affect the deposition of rafts along the route.

DEPOSITION OF RAFTS ALONG ROUTE



These time intervals represent only one possible set of circumstances. Humidity, temperature and ground cover will make them vary in each instance.

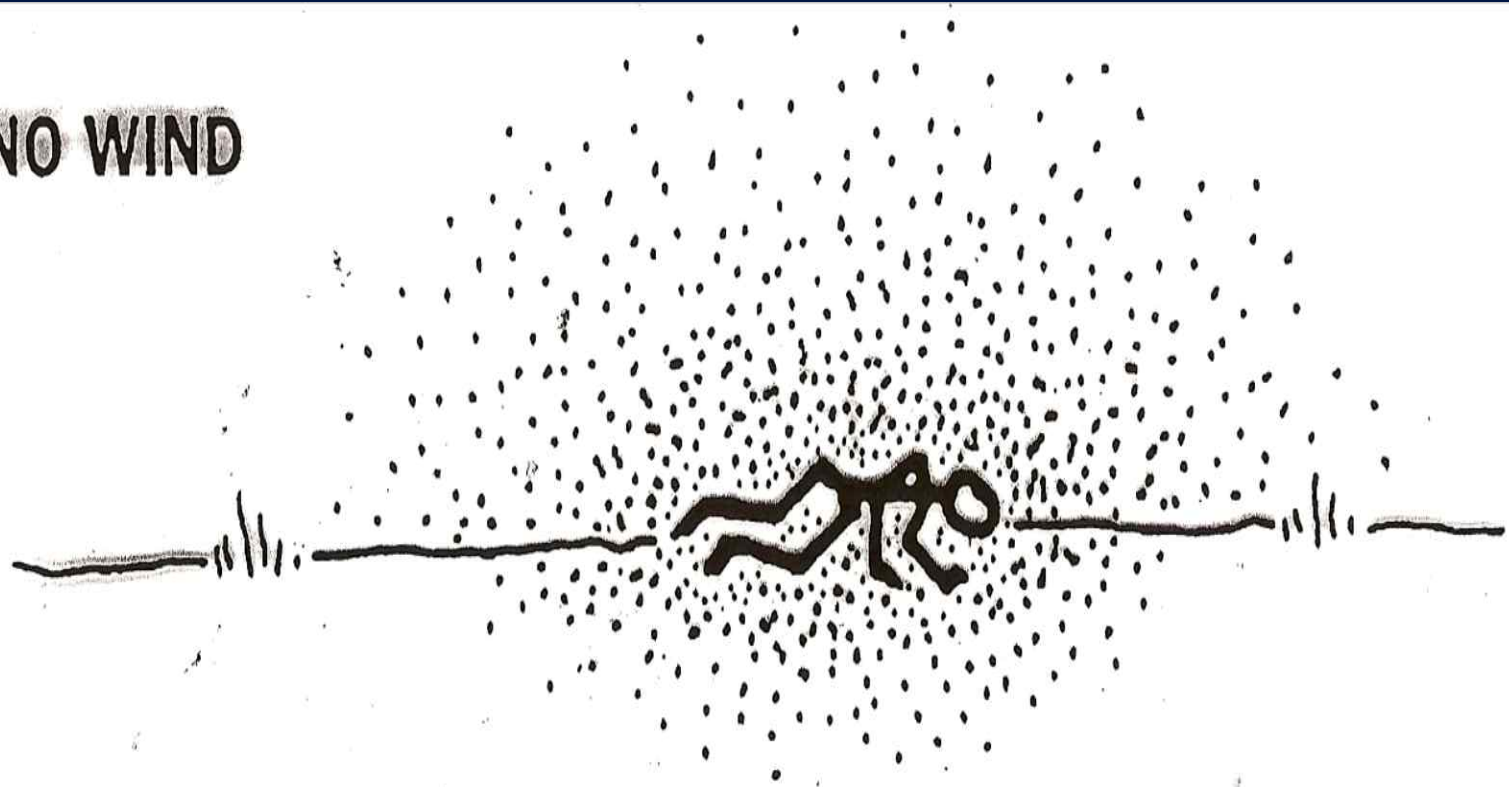
THREE HOUR TRIP - SCENT PICTURES



These time values are only one possible example.

EFFECT OF TIME OF DAY ON BACTERIAL ACTIVITY

NO WIND



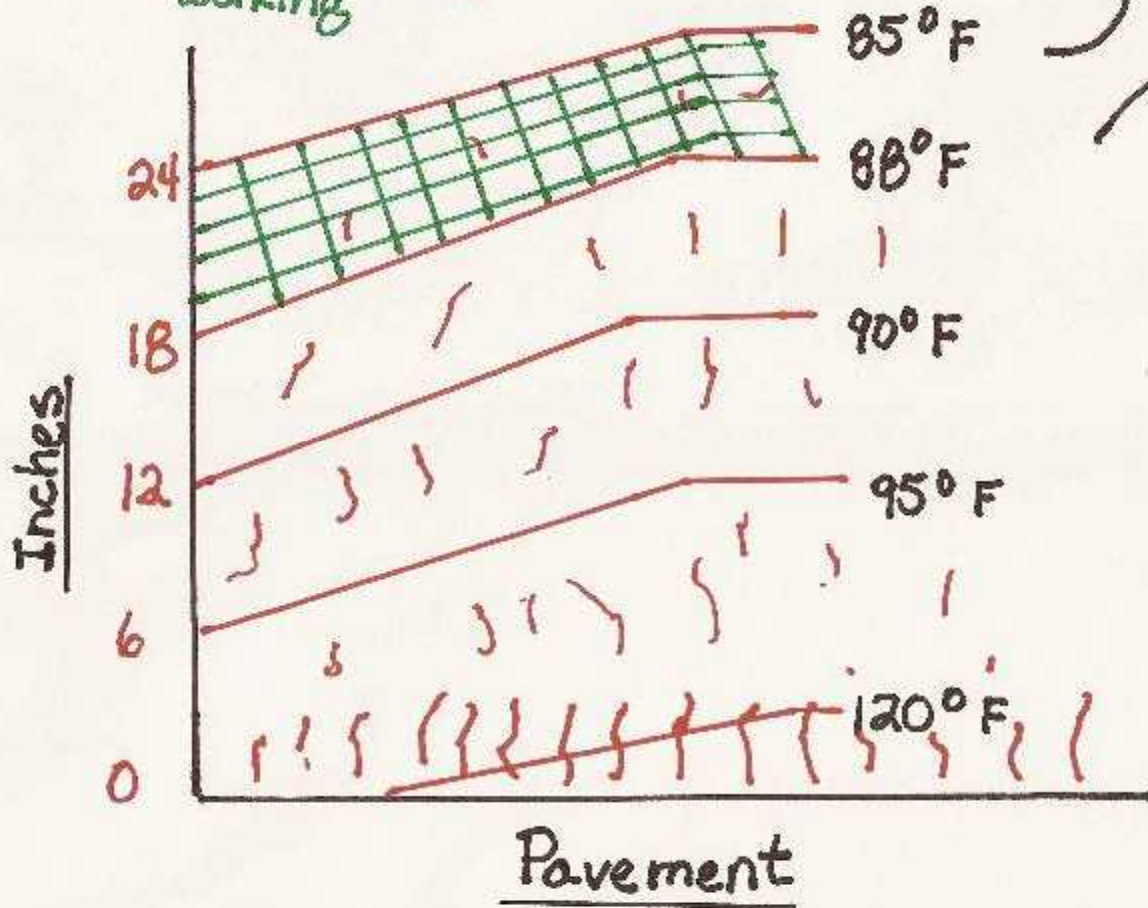
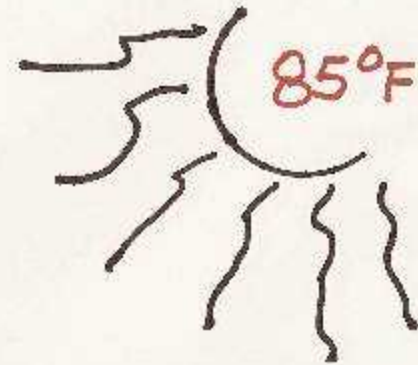
Primary scent pool

Part III

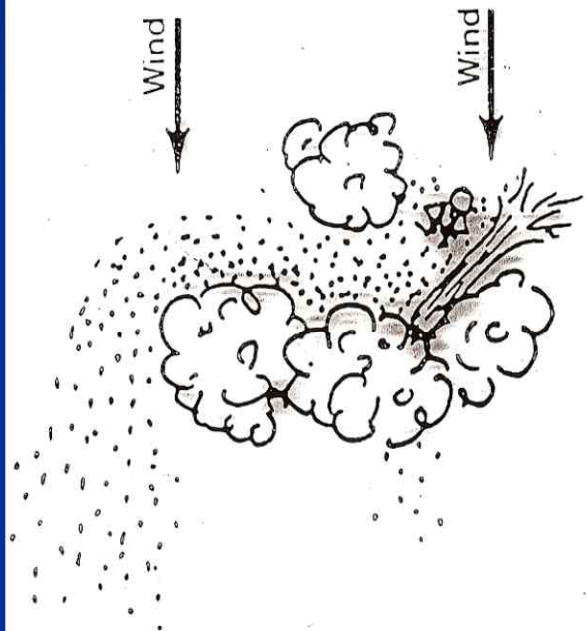
Where does scent go and what
does it do?



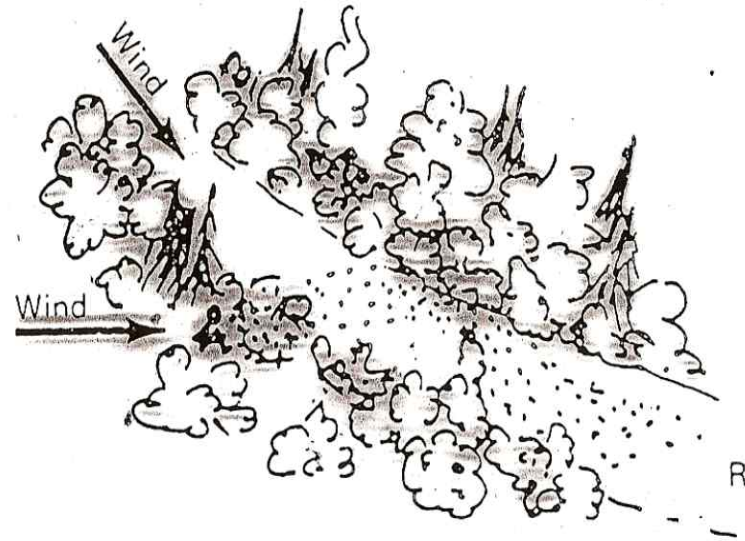
= area in which
hound will be
working



}}}} =
heat from
pavement



Wind and scent particles being carried along path of least resistance.



While the prevailing wind may be from one direction, roadways (R) tend to channel air and scent along their length.

WIND EFFECT ON SCENT

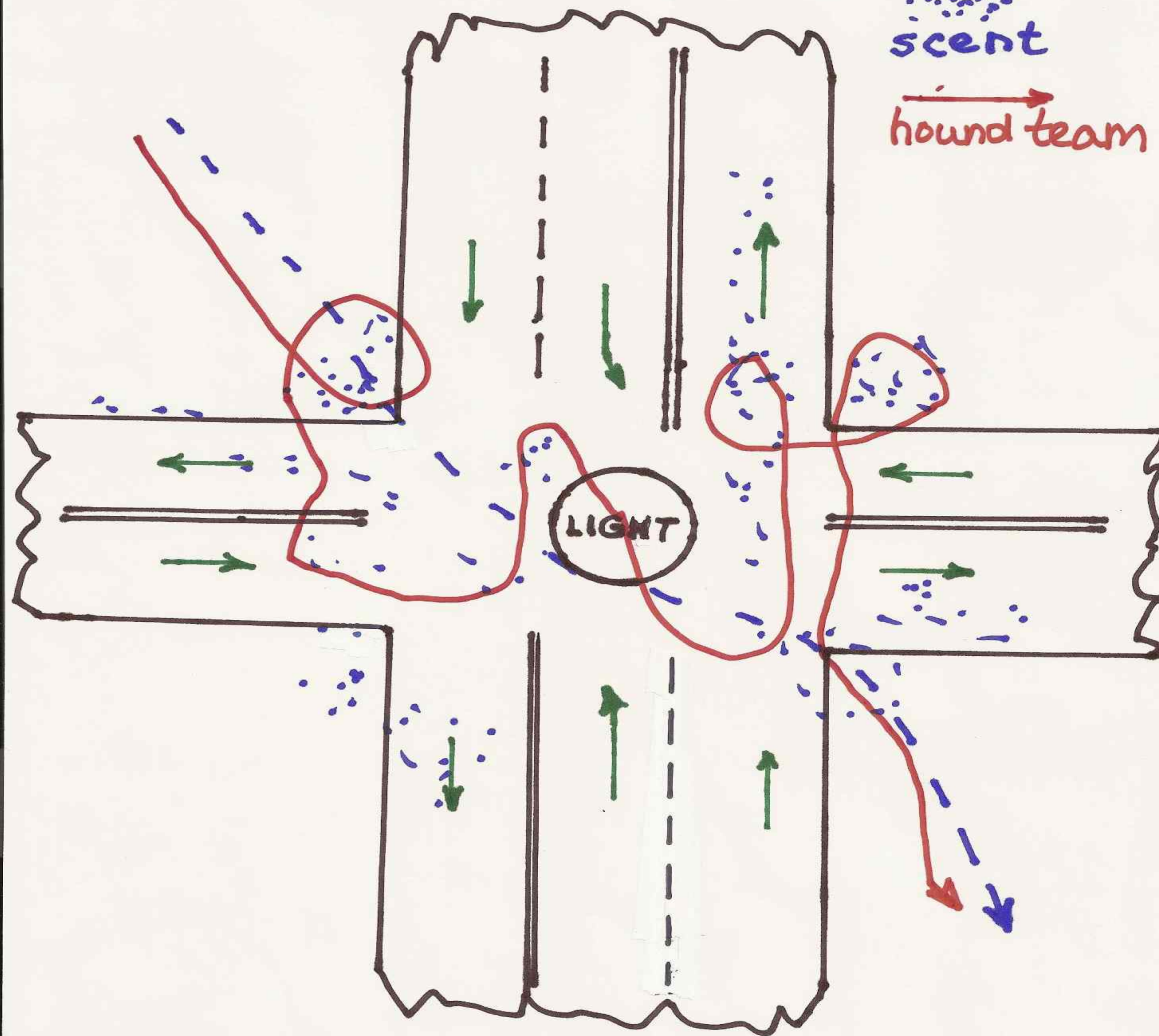


Intersection

trail layer

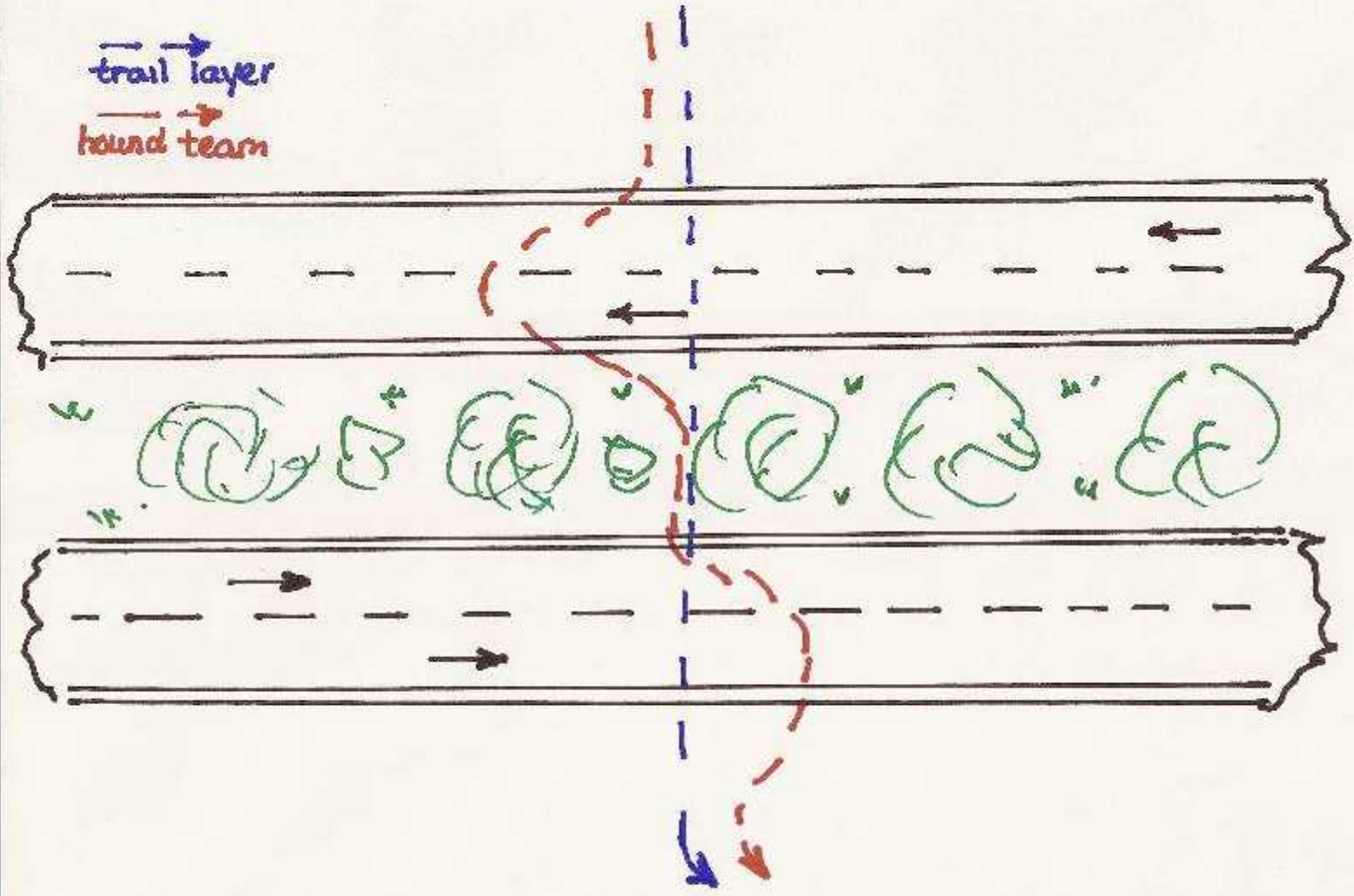
scent

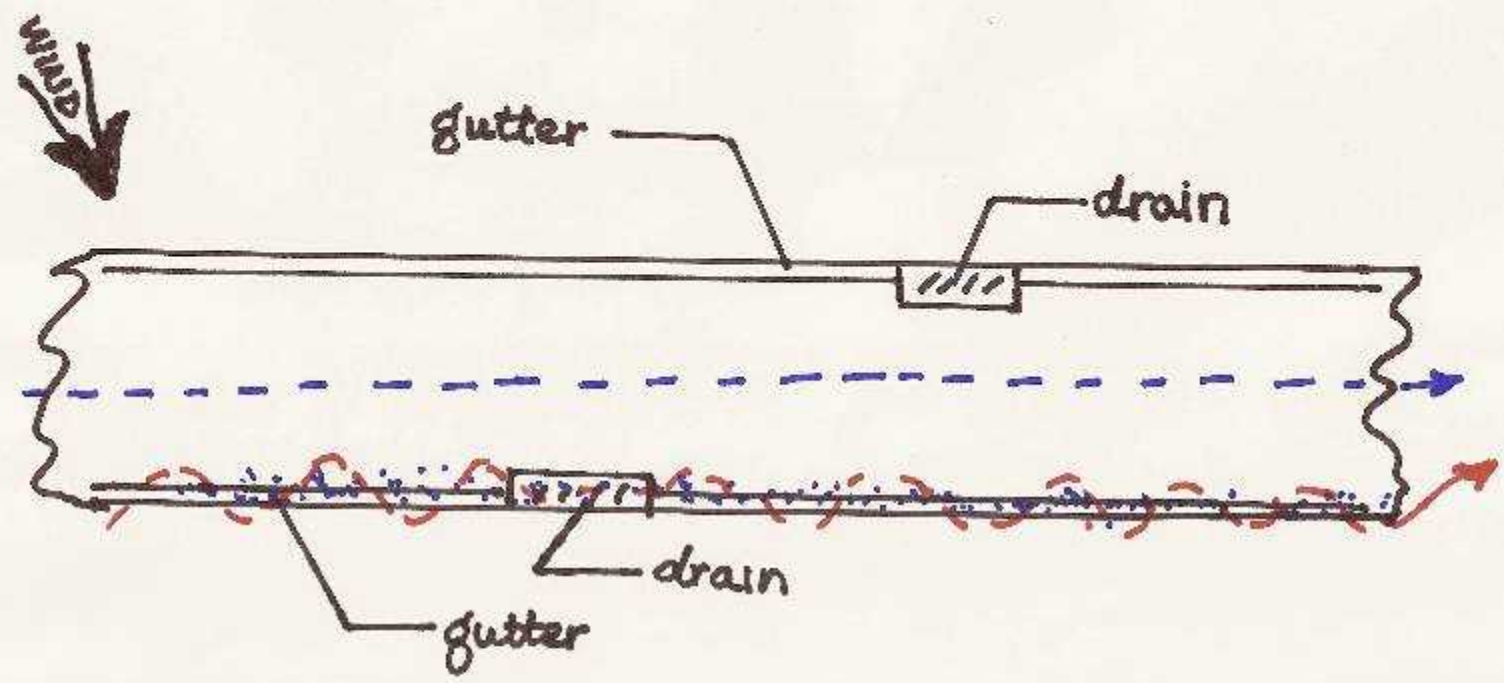
hound team





trail layer
hound team





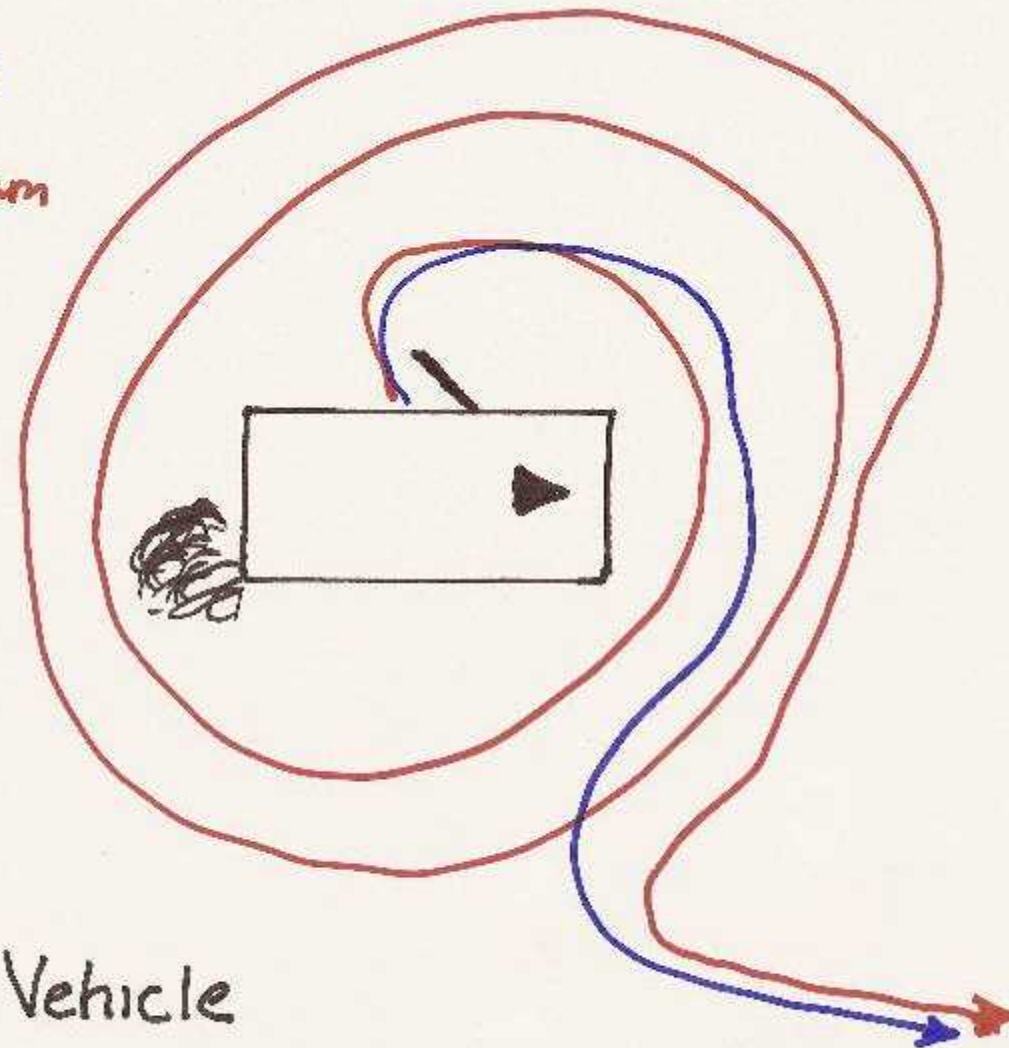
- - - ->
 trail layer

 scent
 - - - ->
 hound team

HEAVY RAIN

→ trail layer

→ hound team

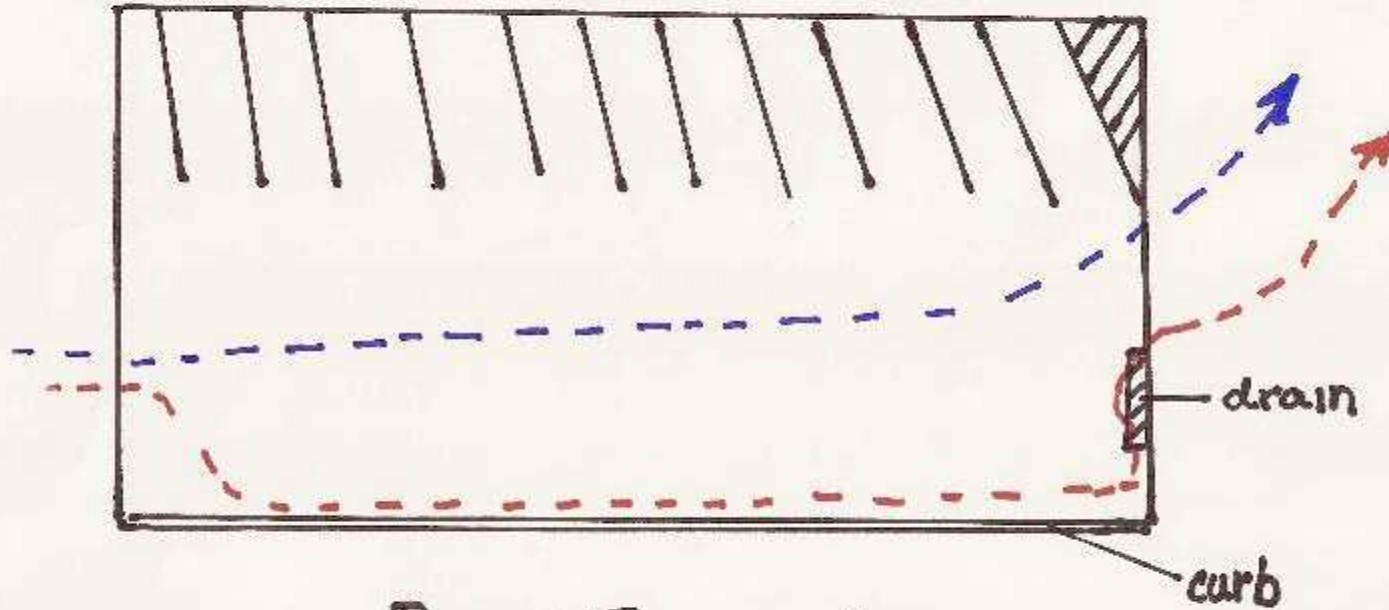


Stolen Vehicle

WIND

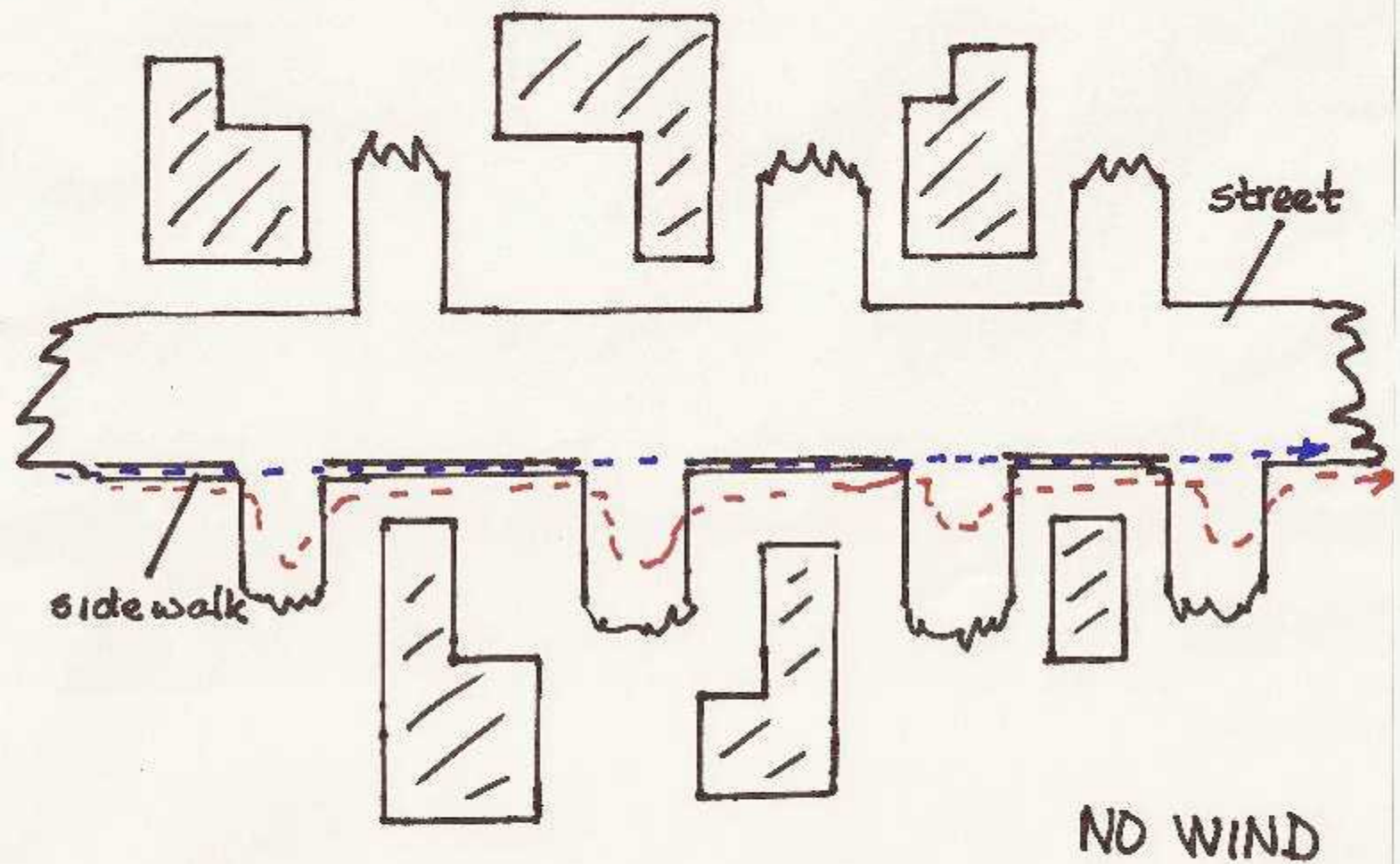
trail layer

hound team



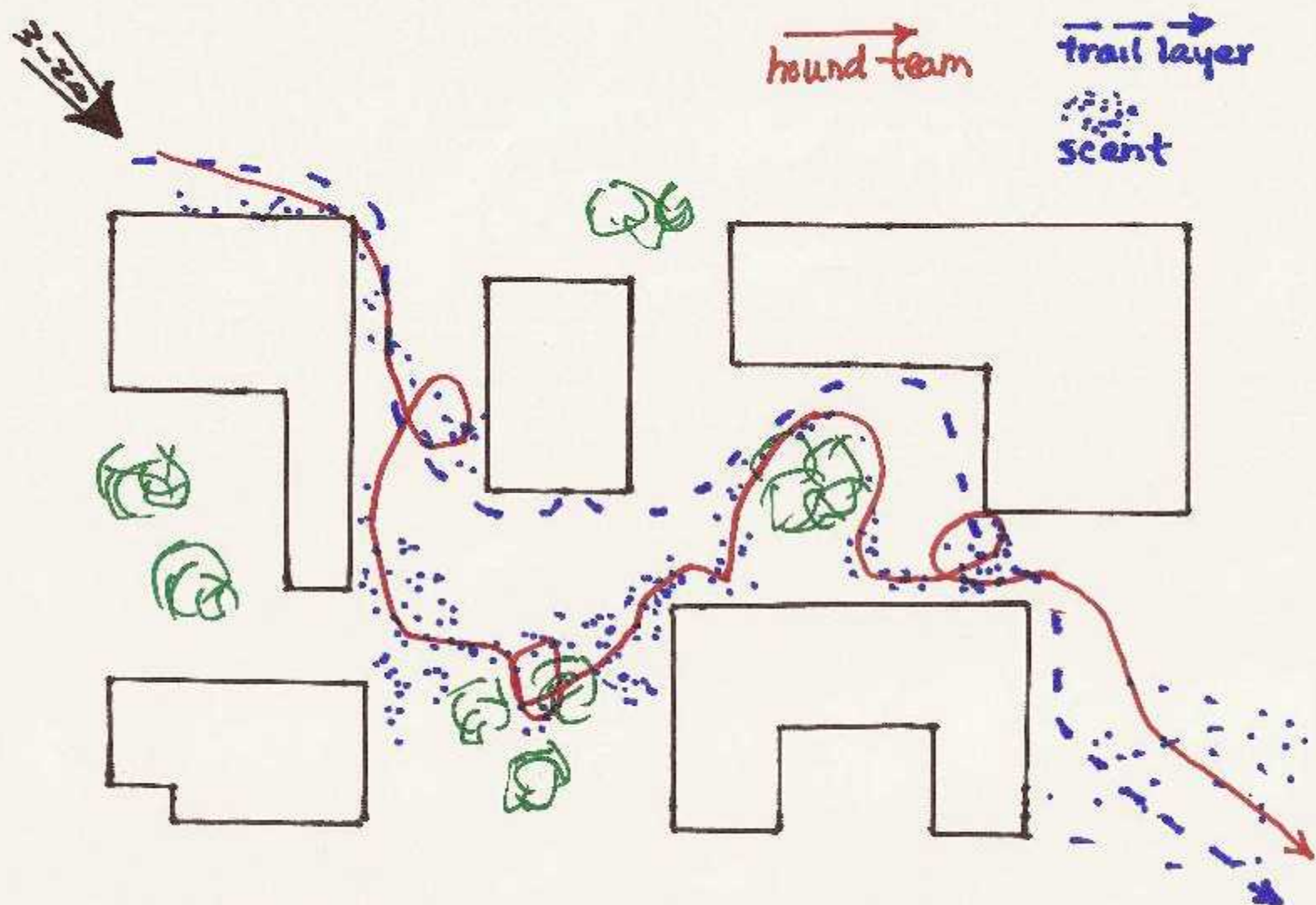
Paved Parking Lot

Scent keeps moving until something stops it!



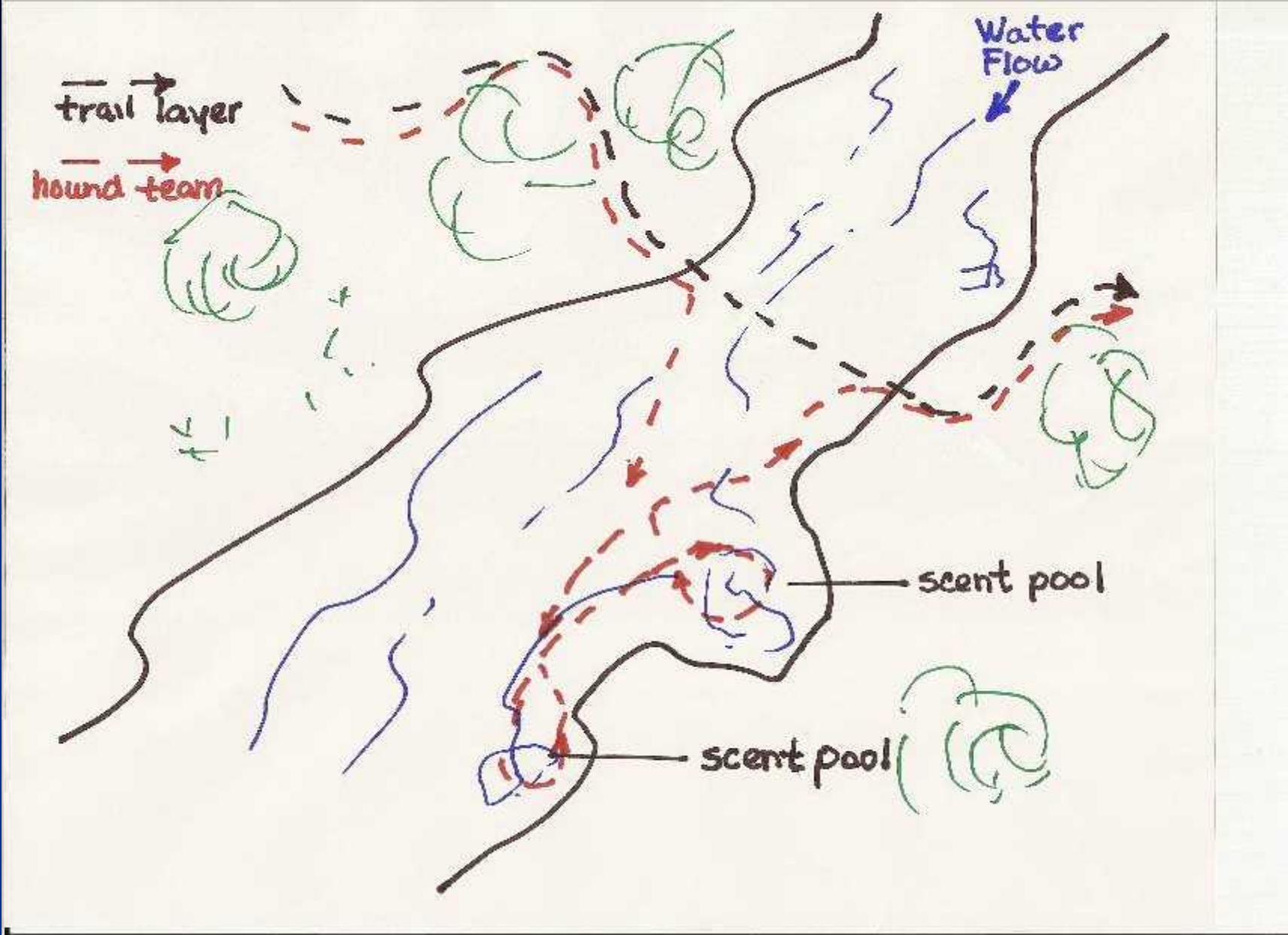
Residential Area

— — — — —
→ trail layer
— — — — —
→ hazard team



Multiple Buildings

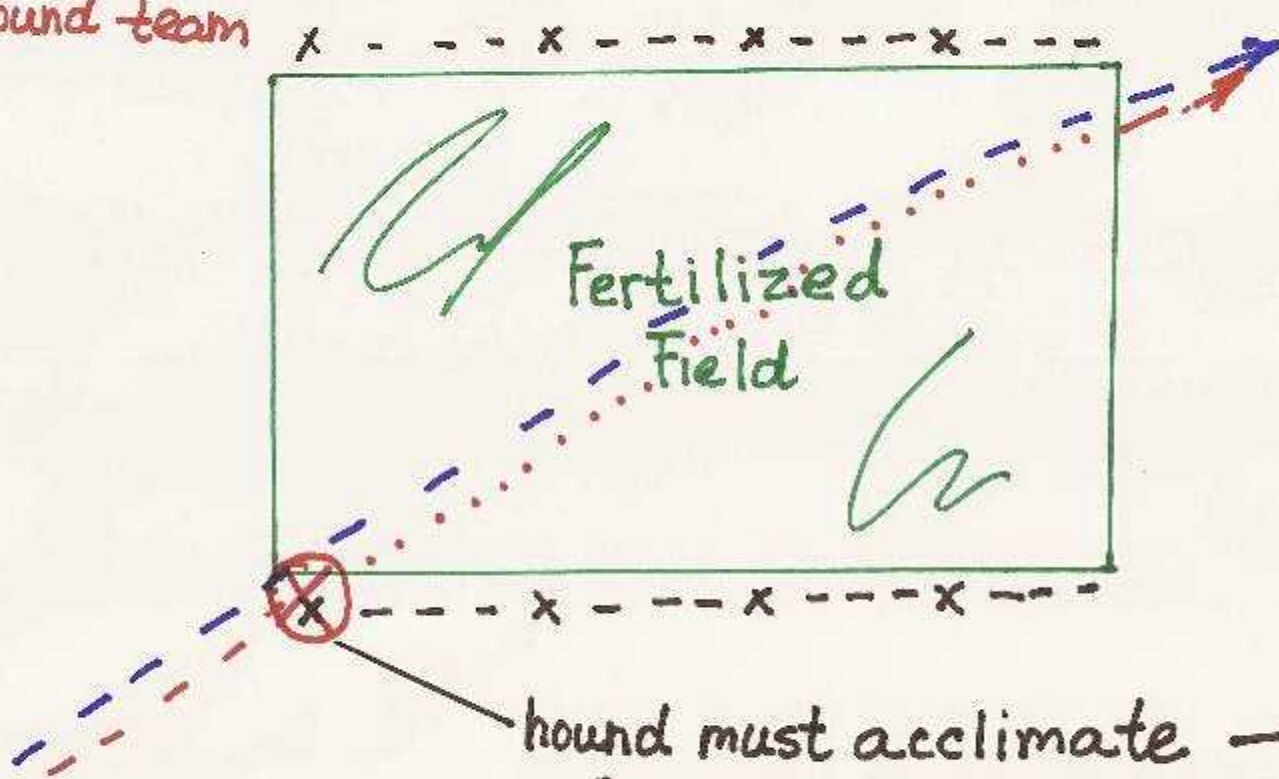






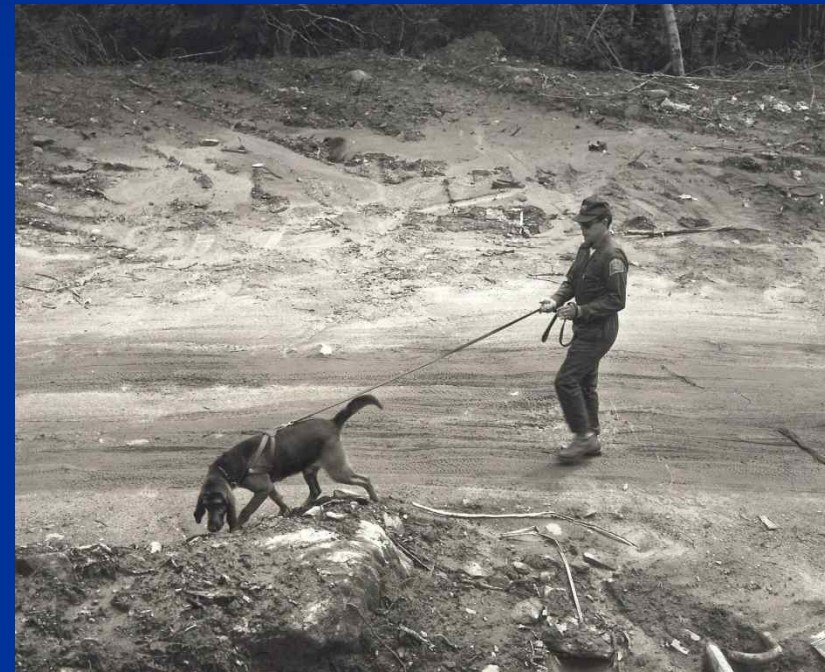
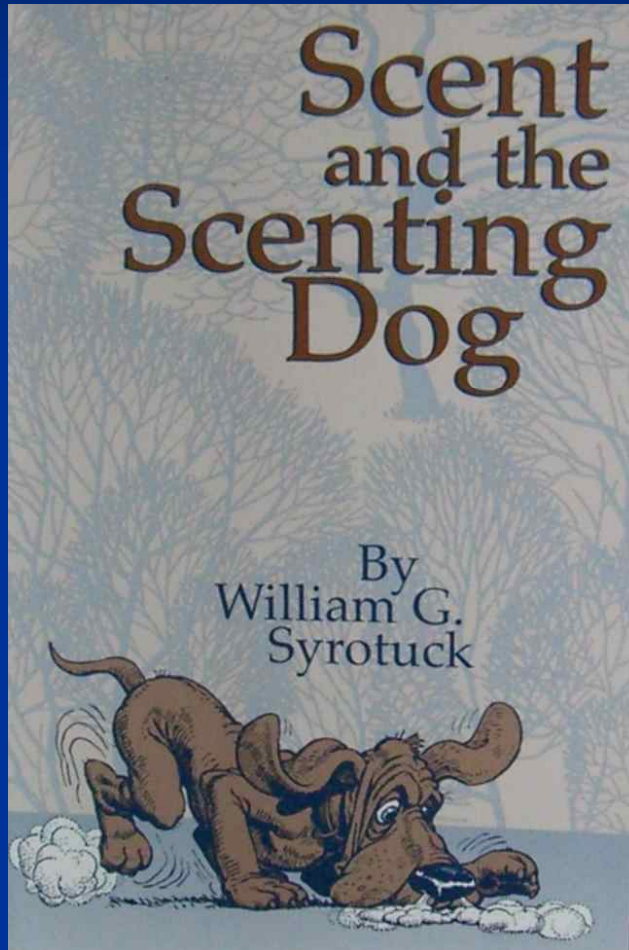
--->
trail layer

--->
hound team



hound must acclimate —
"SCENT INTOXICATION"

Information in this presentation comes from: Scent and the Scenting Dog, William Syrotuck, David Barger, Connecticut State Police for the illustrations of what scent does, and Andy Rebmann, CT State Police, retired, who taught me to trail people.



Memo.