



# CSI: CRITTER SALAD

Where The Evidence Never Lies

ST. CROIX COUNTY PUBLIC HEALTH

Memoir of a Health Inspector: Laurie Diaby-Gassama





- Health Inspector receives a phone call regarding a crying waitress at a local restaurant.





- She reports a customer had shown her a mouse in the side salad she served.





- St. Croix County Health Inspector and Health Officer arrive at the scene

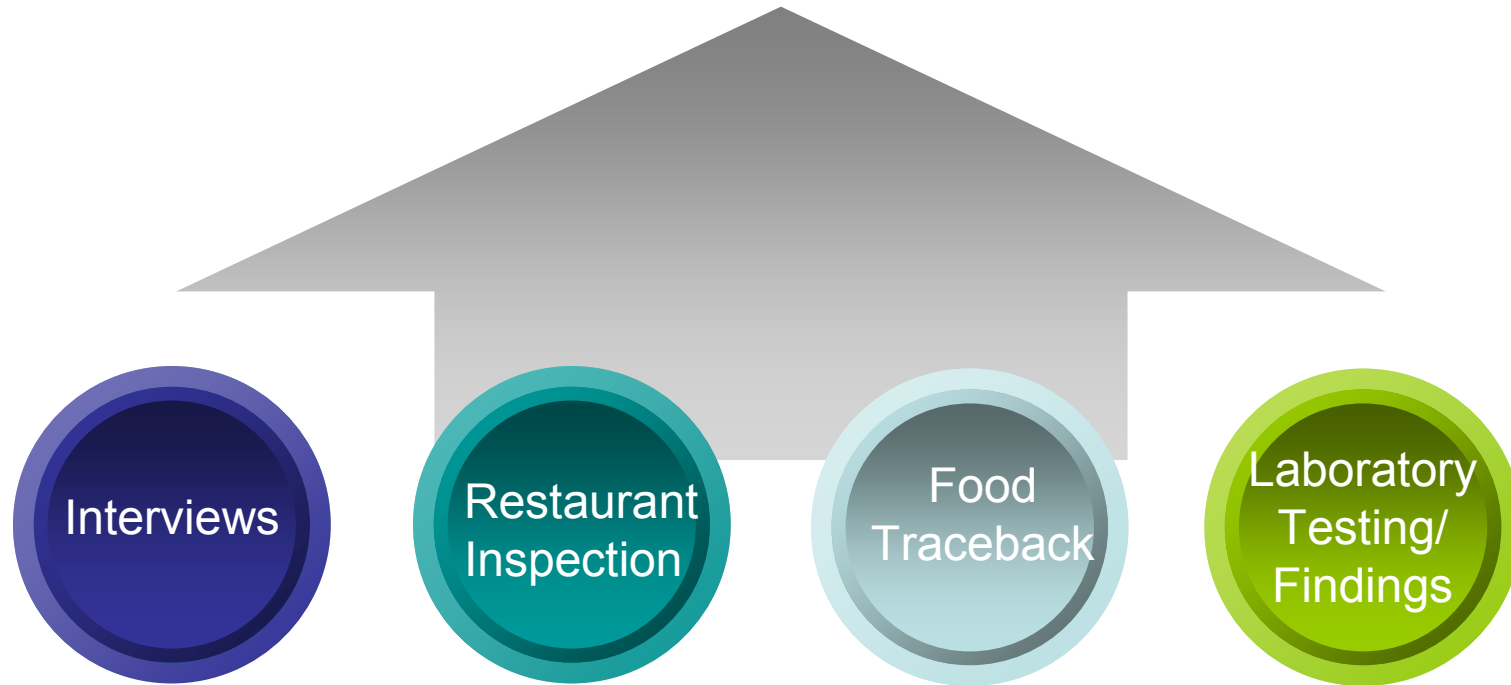


**Warning....**



# Investigation Overview

**Incident or Accident ?**



## Incident or Accident ?

- No illnesses were reported
- Had the mouse entered the salad due to an infestation in the restaurant?
- Had the mouse entered the salad via an ingredient of the salad?
- Was the mouse deliberately placed in the salad?
  - By staff
  - By customer/or member of his party
  - By another customer

## Incident or Accident ?

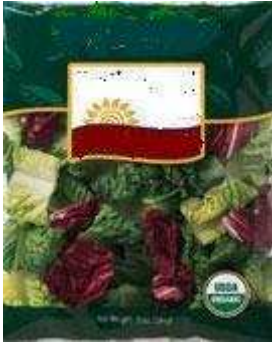
- What were the potential communicable diseases from eating a mouse or maybe the lettuce that was with mouse?
  - Salmonella
  - Yersiniosis
  - Campylobacter
  - Giardia
  - Lymphocytic Choriomeningitis(LCM) Virus
  - Rat bite fever-possible
  - Leptospirosis
  - Hymenolepiasis(tapeworm)
  - Hantaviral diseases??-normally is aerosol transmission but that doesn't really explain all human cases



# Waitress

- person with mouse seemed less upset than others in the party
- couldn't see the mouse at first-it blended in
- mouse looked wet and had body injuries
- party left before their main meal was served
- The customer with mouse was sat up against the wall and inaccessible to other patrons of restaurant.
- She didn't know the customer
- She didn't know of any motive that an employee could have for putting the mouse in the salad

# Chef



– process of making the salad

- opened the premixed bagged lettuce into the lexan/cambro of cold rack unit drawer
- used a tong to dispense lettuce into stainless mixing bowl per order
- dispensed commercial dressing from bottle onto lettuce and mixed with a tong
- poured salad onto 6 inch salad plate
- placed toppings onto salad
- set up in window for waitress to serve



## Chef cont'd

- didn't know the customer or any in his party
- didn't know of any employee that would have a motive for adding the mouse
- couldn't believe that he wouldn't have seen the mouse or felt it
- he thought he made so many of the side salads that he could make one with his eyes closed



# Manager

- obtained the name and phone number of the customer with mouse
- apologized
- placed mouse in freezer
- didn't know the customer or anyone in the party
- didn't know of any employee that would have a motive to tamper
- based on where the customer was seated another customer of restaurant wouldn't have had access to the salad



# Customer

- surprisingly calm
- explained that the mouse blended in so well visually with the varied colors of the salad
- it wasn't until he turned over what he thought was a firm piece of lettuce for a "second-better stab" with his fork that he saw the legs, tail, and nose
- said the mouse was drenched with dressing and it's body was cut up, like it had been in a trap
- didn't believe any of his friends would play such a joke on him
- didn't know anyone at the restaurant and had never eaten there before
- they left the restaurant before receiving their main course

## Restaurant Inspection



- Followed the entire process of the making of a side salad from ingredients to table
- Obtained product names, lot numbers, packing dates, purveyors names of all ingredients of salad
- Obtained copies of employee work schedule for that day
- Obtained samples and the mouse
- Looked under and behind for any rodent activity in restaurant
- Reviewed records of pest control company
- Ordered a pest control company in immediately for a review to be supplied to the health department
- Overall sanitation was OK

# Working hypothesis

- Mouse did not come from the restaurant. It came in the bagged lettuce.
  - Because mouse was found in the salad dressing, it must have been in the lettuce when made by chef.
    - Mouse could not have fit through the dressing bottle nozzle
    - Because mouse was drenched in dressing, so it did not enter the salad with the toppings that are just sprinkled on after salad is mixed.
  - No evidence of a pest control issues at the restaurant
  - The mouse could not have crawled into the sealed refrigerator unit drawer which is the only point the bagged lettuce was open. Thus the mouse must have been inside the commercial bagged lettuce.
  - No one appeared to have motive to tamper.
  - Restaurant was allowed to stay open under close watch while investigation continued

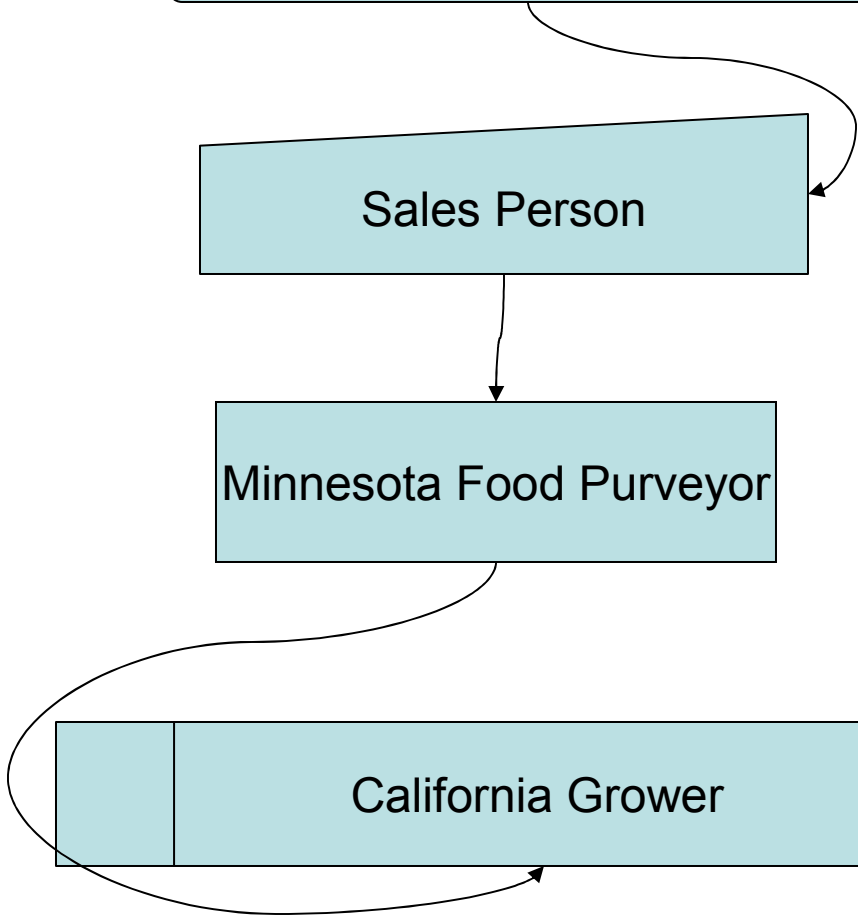
Food Traceback

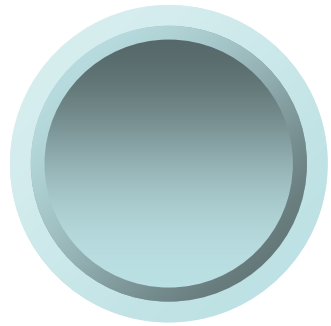
Musclin Mix lettuce at restaurant

Sales Person

Minnesota Food Purveyor

California Grower





# Traceback Preliminary Report

- Working with the Minnesota Department of Agriculture and the California Department of Agriculture it was determined
  - Minnesota purveyor did no processing only distributed the product
  - The lettuce was bagged at the farm where it was grown in Salinas Valley, California

Food  
Traceback



- The farm where the lettuce was grown had just gone from cutting the lettuce in the fields by hand with knives to.....



- a system of mechanical harvesting





- Following being picked:
  - The lettuce is placed on a shaker table to remove dirt and any small debris.
  - Then the greens are quickly put into a cold bath to lower temperature of the lettuce.



## Food Traceback

- placed on a conveyor under lights and is picked over by hand for larger debris.
- washed twice
- bagged





- Notified Tom Haupt from Epidemiology Section
- Contacted Central Animal Health Lab in Madison
- Was referred to: Dr. Annette Gendron-Fitzpatrick the director of Pathology and Laboratory Services at the Research Animal Resource Center at the UW
- Not her “normal” but Dr. Gendron agreed to look at the mouse.
- She also sent on to the UW Zoology and Museum Department to speciate.



# Lab Report

RESEARCH ANIMAL RESOURCES CENTER  
Diagnostic Laboratory - 385 Enzyme Institute  
University of Wisconsin-Madison  
Madison, WI 53705  
(608) 263-6464

Submission Date 8/16/2005 Fund # Bill St. Croix Health Dept.  
Veterinarian none given Investigator Laurie Digby-Gassma Dept. St. Croix Public Health Dept.  
Address 1445 North 4<sup>th</sup> Street, New Richmond, WI Phone No. 715-246-8361  
Species Mouse Strain Unknown No. 1 Age Unknown Sex Male ID None given  
Specimen Submitted: dead vole Protocol #

## HISTOPATHOLOGY

Tissues show a mixed degree of autolysis and post-freezing artifact. The heart and lung appear to be relatively unremarkable while the liver shows only artifact of freezing. Salivary glands show focal areas of what appear to be marked autolytic change, which is likely due to the traumatic exposure of the tissue. GI system, however, is unremarkable and renal sections show no evidence of inflammatory, infectious or degenerative disease present. A single cyst is seen in the cortex of the kidney but this is likely a congenital lesion.

**Diagnoses:** Apparently healthy vole

**Comment:** As reported by the zoologist at the UW Zoology museum, this animal appears to be a California vole or *Microtus californicus*. The UW Zoologist who conducted the examination stated that the characteristics of this animal cannot be found in Wisconsin species. Histopathology reveals no evidence of disease and as lettuce was found in the mouth and stomach, it is presumed the animal died of its wounds (likely in transit) after being caught up in the lettuce picker. As this is a State of Wisconsin Public Health Dept. case, charges have been reduced to cost.

- Mouse is not a mouse! It is a male vole.
- Voles live only outside. So not from within the restaurant.
- Vole had died a violent death:
  - lacerations on face and body
  - broken ribs
  - Cause of death: chest trauma and pulmonary collapse.
- Vole was soaked with oil/dressing
- Vole had lettuce in his mouth
- The stomach contents of the vole was lettuce.
- The vole was a California vole: *Microtus Californicus*

Annette Gendron, DVM, Ph.D.  
Diplomate, American College of Veterinary Pathologists

**Warning....**

Laboratory  
Testing/  
Findings



Laboratory  
Testing/  
Findings



Laboratory  
Testing/  
Findings



# Once upon a time.....



A little boy vole was out eating his breakfast of musclin lettuce in a beautiful furrowed field in the Salinas Valley.





He heard the noise approaching.

He wasn't nervous because his mother told him the humans were slow with their knives.

 He thought... I will have plenty of time to run.



But there was a new boss in town, a tractor,  
and there was no time to run.

**That was... The End.**

# CSI: CRITTER SALAD

## Special Thanks

Barb Nelson-St.Croix County Health Officer

Dr. Annette Gendron-Fitzpatrick-UW  
Research Center

UW Zoology/Museum Department

Dept of Agriculture Minnesota

Dept of Agriculture California

