VISIBLE PROOFS
FORENSIC VIEWS OF THE BODY

Student Worksheet: Climatological Data & ADH Calculation

Review the "Preliminary Local Climatological Data" and review the following questions:

1. Review the data sheet and list three top categories of information that may affect entomological factors?

2. Review the wind and precipitation data. Would these two factors affect entomological behaviors highly, moderately, or not much? Explain your analysis.

3. Complete the following table based on the climatological data sheet and the fact that the Forensic entomologist started to rear some collected specimen at 5 PM on September 22*:

Table 1: ADH calculation for period between September 7-22, 1986

Date (September)	Average Temperature	Hours	Daily ambient thermal energy	ADH (accumulated degree hour)
22	56° F	17*	952	952
21	62° F	24	1488	2440
20	62° F	24	1488	3928
19	65° F	24	1560	
18	58° F			
17				
16				
15				
14				
13				
12				
11				
10				
9				
8				
7				

4. The forensic entomologist used various entomological references in calculating the ADH to count back to the earliest possible time of ovipostion by adult black blow fly. One of the references used states that at a constant 80° F, it takes between 10-12 days from the oviposition to emergence of the adult fly.

    a. Calculate the ADH at constant 80° F and fill in row A in Table 2 below.
    b. Calculate the thermal heat provided at the laboratory for the 25 flies emerged at 4 PM on September 27. Fill in row B in Table 2.
    c. Subtract B from A and record them on row C.
    d. Use the values from row C and Table 1 above to identify corresponding dates in row D.

Table 2: Calculations

Row	Life cycle duration	10 days	11 days	12 days
A	ADH value at 80° F			
B	ADH from Laboratory'			
C	subtract B from A (remaining ADH value)			
D	approximate date of the oviposition based on Table 1			

5. When do you estimate the earliest possible date when the first adult blow flies deposited eggs on the victim's body?