

EX PARTE ) No. 99-11-06435-CR-2  
) IN THE DISTRICT COURT  
LARRY RAY SWEARINGEN ) 9<sup>TH</sup> JUDICIAL DISTRICT  
(WR-53.613-04) ) MONTGOMERY COUNTY, TEXAS

**STATEMENT OF DAEL MORRIS**

My name is Dael Morris, consulting entomologist in this case. In my January 2007 report, I noted that temperatures were not favorable for ovipositing by blow flies until December 18, 1998. I also noted that this was consistent with my finding that *C. cadaverina* colonized the remains beginning on this date.

I have reviewed submission by the State in which the State asserts that the January 2007 report is "neutral" because it does not preclude the possibility that Ms. Trotter's body was left in the woods on December 8, 1998.

This statement is to clarify information already present in my report since there is some confusion on the part of the State. First, it should be understood that "degree days" are units of energy that drive blow fly development. Since blow flies are exothermic development is temperature dependent. The accumulation of degree days begins from the time the insects are discovered on the remains and are calculated back in time until the required energy units are met (185 degree days). This is seen from the top down in Table 1, from January 3<sup>rd</sup> 1999 back in time to December 17<sup>th</sup> to 18<sup>th</sup> 1998 when the energy requirements are met for first egg laying.


Twelve degrees Celcius (or 53.6°F) is the minimum threshold temperature for blow fly oviposition. Temperatures below this are not favorable to egg-laying. The generalization that conditions were not favorable for egg-laying prior to the 18<sup>th</sup> cannot

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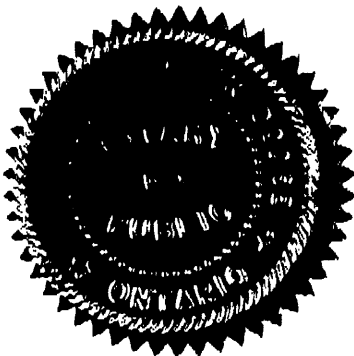
be made and this is readily clarified by the temperature data. It is plainly seen in Table 1 that average temperatures from December 14<sup>th</sup> to 17<sup>th</sup> fall below 53.6°F. Daily high and low temperature data, however, show that daytime temperatures rose above 12°C each day during the period December 14<sup>th</sup> to 17<sup>th</sup>, 1998. Hourly (unedited NOAA data) temperatures from the 14<sup>th</sup> to the 17<sup>th</sup> rise well above the 12°C threshold indicating there were substantial opportunities for egg-laying by blow flies, from 11AM to 5PM on the 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> and from 10AM to 5PM on the 17<sup>th</sup>. To calculate back further than the 17<sup>th</sup>, however, is to accumulate extraneous energy units that do not fit the profile of insect development as it existed when the body was found then autopsied.

To clarify, there were substantial opportunities for ovipositing from 1PM to 4PM on the 8<sup>th</sup>, noon to 7PM on the 9<sup>th</sup> and 11AM to 5PM on the 13<sup>th</sup> when temperatures were above the 12°C threshold. But, again, to calculate back in time this far is to accumulate extraneous degree days that do not fit the profile of fly development when Melissa Trotter's remains were found and postmortemed.

Signed this 29th day of March, 2007.



Dael Morris



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