Florissant Fossils Beds Elevation Studies

Researcher	Study	Paleo-Temp.(°C) (currently 4°C)	Technique Used	Elevation (meters) (currently 2600m)	Technique Used
Harry MacGinitie (1953)	**Compared fossil plants to the habitat of their closest living relatives, he predicted a low paleo-elevation.**	**>18°C**	**Floristic Closest living relative**	**305 - 915**	**Qualitative analysis using closest living relatives and current habitat.**
Dr. Herb Meyer (1986)	**Studied fossil leaf structures to predict past climate and elevation.**	**~14°C**	**Physiognomic First to apply plant features to the problem of paleo-elevation at Florissant.**	**2450**	**Compared Florissant flora with co-eval sea level flora and calculated elevation using an inferred lapse rate.**
Dr. Jack Wolfe (1992)	**Studied fossil leaves to calculate past temperature and elevation.**	**12°C**	**Physiognomic Compared leaf structures at Florissant with current leaf structures to est. temp.**	**2700 - 2900**	**Compared fossils from Florissant with sea level fossils and calculated elevation using lapse rate.**
Dr. Kate Gregory (1994)	**Studied fossil leaves and sequoia stumps to calculate past temp, and believes Florissant has not been uplifted since Eocene.**	**10.7°C**	**Physiognomic Plant features and sequoia affinis tree ring comparison.**	**2300 - 3300**	**Compared paleo temps at Florissant with co-eval (same age) temps from sea level and calculated using a lapse rate.**
Dr. Emmett Evanoff (1997)	**Hypothesized that the Florissant region has been uplifted since the Eocene.**	**—**	**Uplift Due to plate tectonics.**	**Lower than present elevation. Proposes that uplift began only 5 million years ago.**	**Studied sediment deposition in stream beds to calculate relative age of tilting and canyon cutting.**
Woodland High School Classes (2000)	**Hypothesized that the decrease in average temperature at Florissant since the Eocene could be caused by uplift.**	**Warm Temperate (~12°C)**	**Floristic Comparing fossil plants to closest living relative's habitat.**	**Lower than present elevation.**	**Propose to study landscape for evidence of Uplift. This would be geomorphic evidence.**