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A new study, published on May 15, 2024, in the journal *Current Biology*, posits that the earliest warm-blooded dinosaurs may have evolved around 180 million years ago, during the Early Jurassic period. This research unveils a significant milestone in dinosaur evolution, indicating when certain dinosaur groups developed the ability to internally regulate their body temperature.

Researchers from University College London and the Universidade de Vigo analyzed over 1,000 fossils, climate models, and dinosaur family trees. They discovered that two primary dinosaur groups, theropods (including *Tyrannosaurus rex* and velociraptors) and ornithischians (like triceratops), began to migrate to colder climates around this period. This migration pattern suggests that these dinosaurs evolved endothermy, or the ability to generate their own body heat.

Theropods and ornithischians showcased adaptability to diverse climatic conditions, which could imply an evolutionary advantage conferred by endothermy. Contrarily, another group, sauropods (including brontosaurs), remained in warmer regions, displaying different evolutionary paths likely influenced by their environments.

Lead author Dr. Alfio Alessandro Chiarenza from University College London highlighted that intense volcanic activity around 183 million years ago, known as the Jenkyns event, possibly triggered this shift. Co-author Dr. Sara Varela from Universidade de Vigo noted that this period also aligns with the emergence of many new dinosaur groups.

Jasmina Wiemann, a postdoctoral fellow at the Field Museum in Chicago, offered a contrasting viewpoint, suggesting that warm-blooded traits might have originated closer to 250 million years ago. Her research advocates for a multi-faceted approach, incorporating body temperatures and dietary habits, to refine our understanding of dinosaur evolution.

This study adds a layer of complexity to our knowledge of dinosaur biology and the evolutionary pressures that shaped their development. Further research, grounded in new fossil discoveries and climatic data, could continue to refine these evolutionary timelines.