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Figure Captions

Figure 1. Location of the field trip area in West-Central Tennessee. The type section for the Coon Creek Formation is the Coon Creek Science Center (CCSC), where the field trip will spend the night. Two additional Coon Creek sites can be visited, the Saw Mill site in northern Decatur County and the I.T.T. section in Selmer. An optional side trip to the Vulcan Materials Quarry in Parsons is included.

Figure 2. A. Paleogeographic map of North America showing the Cretaceous Interior Seaway and the partially inundated ancestral Mississippi Embayment region, which includes the West Tennessee region. B. Outcrop map of the Upper Cretaceous in the southeast showing N-S trending Cretaceous belt of West Tennessee. CC = Coon Creek Science Center (both figures after Schwimmer, 2002).

Figure 3. Simplified north-south facies diagram showing the relationship of the Coon Creek to surrounding lithofacies (from Russell and Parks, 1975). The Coon Creek Formation marks the beginning of a regressive phase to the south during the Late Cretaceous.

Figure 4. Photograph of a typical creek bed exposure of the Coon Creek Formation at the CCSC fossil site.

Figure 5. Simplified stratigraphic section showing recognizable zones as they appear on the Coon Creek outcrops (see text for details).

Figure 6. Photograph of a prepared block of Coon Creek sediment. The lack of cementation while retaining cohesion allows the sediment to be carved using away using small picks to expose the fossils and produce display stands.

Figure 7. Early 20th century photograph of Dave Weeks on Coon Creek. Large carbonate concretions are visible along the outcrop. White areas in the outcrop are fossil shells.

Figure 8. Photograph of the highwall in the Vulcan Materials quarry showing the Upper Silurian Decatur Limestone, overlain by the interbedded shales and limestones of the Lower Devonian Ross Formation. Unconformably overlying the Ross is a thin section of Camden Chert, which is unconformably overlain by Cretaceous McNairy Sand.

Figure 9. Simplified stratigraphic section exposed in the Vulcan Materials Quarry in Parsons, Tennessee (from Walker and Pruitt, 1975).

Figure 10. Block diagram depicting the Birdsong sea floor during muddy bottom conditions. During the phases of deposition, larval attachment sites were a major limiting factor promoting the recruitment of fauna with specialized adult adaptations to cope with the soft nature of the substrate, the occurrence of symbiotic biotic interactions, and epitaphic associations.

Figure 11. Developmental pathways for invertebrate communities preserved in the Birdsong Shale (from Gibson, 1995c) under the influence of frequent storm events. Pathways begin with a barren substrate (A or D) and can become modified along any of three pathways leading to either a soft mud substrate, or a firm mud substrate. At any point in a pathway, depositional processes can reset or redirect the development. Spat arrival may be limited seasonally or by biological processes that are determined by which spat settle a substrate first. The stage of development of communities depends upon the original substrate characteristics, timing and composition of biotic interactions between adult and larvae, larvae and larvae, host and epibiont, and in established communities, competition for resources, predation, etc.

Figure 12. Inset of the Leapwood 7.5 minute quadrangle showing the location of Stop 1, the Coon Creek Science Center (CCSC), which is also the type locality for the Coon Creek Formation.

Figure 13. Inset of the Jeanette 7.5 minute quadrangle showing the Vulcan Materials Quarry (Alternate Stop 1) north of Parsons, Tennessee.

Figure 14. Inset of the Holladay 7.5 minute quadrangle showing Alternate Stop 3, the Saw Mill Site.

Figure 15. Inset of the Purdy 7.5 minute quadrangle showing Alternate Stop 4, the I.T.T. exposure.