Preliminary Analysis of Turtle Material from the Gault Site, Texas

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American archaeologists have frequently debated subsistence strategies of Clovis Paleoamericans (Bryan 1991; Dillehay 2000:15–17; Waguespack and Surovell 2003). Zooarchaeological assemblages often are interpreted as reflecting either generalized or specialized strategies. Such remains from Great Plains and Southern High Plains sites suggest generalized strategies, a database that increasingly underscores the validity of revising the Clovis-as-big-game-hunter model. The diversity of faunal taxa at such sites as Aubrey,

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Kincaid, and Wilson-Leonard suggests an array of resources available along ecotonal boundary zones (Balinsky 1998; Collins et al. 1989; Ferring 2001). Turtle and other vertebrate remains from the Gault site, central Texas, also reflect an array of resources found at multiple environmental edges in close proximity to the site.

The condition and extent of faunal skeletal preservation at Gault is limited as a consequence of groundwater activity and other taphonomic processes (Collins 2002; Timperley et al. 2003). Of 20,483 vertebrate specimens recovered from sediments of Clovis, Folsom, and Archaic age, 127 of the 1,724 identifiable elements are turtle. All specimens closely associated with lithic artifacts are moderately to poorly preserved carapace and plastron fragments. The majority of turtle material recovered from all temporal designations was burnt (80 percent), a taphonomic factor contributing to the overall more robust preservation of this portion of the vertebrate assemblage. Despite this, much surface detail is lacking owing to heavy taphonomic degradation, which has obliterated or obscured taxonomically diagnostic features and any possible cut marks.

Since the assemblage lacks complete skeletal elements, morphologically diagnostic attributes of shell texture and shape (vertebrals, costals, and marginals) were used to aid in identification. Owing to the poor preservation, only 28 of the 127 turtle specimens (22 percent) could be taxonomically identified. Twenty-two were identified as members of Kinosternidae, a family of approximately 25 species including mud and musk turtles (Pecor 2003a). One specimen was further identified as *Sternotherus odoratus* (stinkpot turtle). Five specimens were identified as Emydidae, the most diverse turtle family, comprising approximately 33 genera of box and pond turtles (Pecor 2003b). Two of the five are marginals that compare favorably with *Terrapene* (box turtles). However, surface feature deterioration and the lack of a diagnostic flair made positive species identification impossible.

Of the 127 turtle specimens, 62 were recovered from Clovis context. Of these, 26 percent were identifiable: Kinosternidae (n = 14, 13 burned), *Sternotherus odoratus* (n = 1, burnt), and *Terrapene* sp. (n = 1, not burnt). One of the larger and more complete specimens in this assemblage, a fragmented plastron, was recovered from Clovis context, but could not be taxonomically identified. Two burnt specimens of indeterminate taxon were from Folsom context. Of 60 specimens recovered from cultural context of undetermined age, 20 percent were identifiable: Kinosternidae (n = 8, 7 burnt), Emydidae (n = 3, 3 burnt), and *Terrapene* (n = 1, burnt). Three other specimens, burnt and taxonomically unidentified, were from mixed cultural context.

The larger, more diverse family identified in this study, Emydidae, consists of both freshwater and terrestrial turtles found on every continent except Australia and Antarctica. Genus *Terrapene*, within Emydidae, comprises the North American box turtles, which are terrestrial (Niedzielski 2002). Family Kinosternidae occurs only in slow-moving bodies of water in the New World and can be seasonally active depending on local climate (Pecor 2003a). *Sternotherus odoratus* occurs today in slow-moving freshwater and is rarely found on land (Ward and Cash 2001).

Buttermilk Creek, a spring-fed water system that drains the Gault site,

historically has never run dry. The occurrence of *S. odoratus* in Clovis context suggests that in prehistory the Buttermilk Creek valley offered constant flowing water. However, it is as likely that this specimen may have been collected or hunted from a similar area, presumably no further than nearby drainages. The presence of *Terrapene* sp. is evidence of terrestrially oriented subsistence sources, such as utilization of the local upland environment.

The variegated discoloration of dark gray to white on most of the burnt specimens suggests exposure to intense and fluctuating heat for an extended period of time (Bennett 1999). The brief exposure and low temperatures of a prairie fire would not cause such extensive change to the bone, but a campfire or cooking fire would (Bellomo 1993). While mud turtles would be expected in sediments near a stream, the relative abundance and close cultural association indicates that these were not simply part of the background biota, but deliberately taken as regular part of the overall Clovis subsistence strategy.

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