uous overall size-graded sequence not interrupted by sediments or burrowed surfaces, indicating long periods of time in between the different sublayers.

This scenario has been challenged by several authors, who believe that the K/T sandstone complex can be interpreted differently. Stinnesbeck et al. (1993) conclude that the sandstone complex predates the K/T boundary and belongs to a normal turbidite system derived from the deltaic sediments of the Difunta group. Savrda (1993) interprets the sandstone complex as a normal low-stand sediment, because at Mussel Creek in Alabama bedding surfaces truncate burrow structures. Bohor (1994) interprets the K/T sandstone complex as an impact-triggered debris flow and turbidite.

At a first glance the K/T sandstone complex has many features in common with a turbidite fan, such as erosive base and channels, introduction of shallow marine benthos, plant debris and sands in a deeper marine environment, flute casts, loadings, plane beds with primary current lineation, and climbing ripples. However, comparing the K/T complex with generalized turbidite-fan models of Mutti and Normark (1987) and Walker (1978), it is clear that the K/T complex is not part of a distal outer fan or of the fan lobes. In the K/T complex none of the following occur: normal turbidites with Bouma sequences, separated by mud; thickening-up turbidite sequences (due to prograding lobes) and thinning-up compensation sequences (infillings between lobes); thicker mud intercalations between lobes (due to channel and lobe switch). The work of Mutti and Normark (1987) and Mutti and Ricci Lucchi (1972; their Fig. 16) enables us to quickly compare features, which they hold for characteristic of channels, lobes, and the transition zone in between.

Our K/T complex has the following in common with "channels of turbidite fans":

- erosional channels, in which infilling layers truncate against the scour (rarely occurring at Mimbral);
- depositional channels, in which infilling layers converge to the channel edge (at Mimbral in Units I and II and at Rancho Nuevo in Unit II);
- clast supported conglomerates (rare, except at Brazos River, Bochil, and Moscow Landing);
- thin-bedded overbank deposits (Unit III could be interpreted as such, but no wedging away from the channels is observed and instead opposing current directions or at Los Ramones even a winnowed channel top with current ripples moving at right angles to the channel); and
- outsize mud clasts and armored mud clasts.

Not observed in the K/T sandstone complex were the following:

- massive, graded or inversely graded infillings of channels (instead, Unit I generally shows internally laminated fills, sometimes as at Mimbral with lateral accretion, indicating shifting channels); and
- chaotic units pointing to sliding (instead vertical loading is seen, notably at Mimbral, Los Ramones, and Rancho Nuevo).

Our K/T complex unit has the following in common with "transition zone of turbidite fans":

- "zones of roughness" or levels with irregular scour, indicating bypass (such levels probably have been encountered at the base of the Unit 2 channel at Ramones and Rancho Nuevo, but that needs more study);
- low-amplitude megaripples (transition zone megaripples, according to Mutti and Ricci Lucchi [1972] are clast-supported parallel and cross-bedded units indicative of bypass); and
- stack of shallow channels (at Mimbral, Mulato, and Darting Minnows Creek; in our case, however, never with massive or graded fill and never with mud-drapes over a scoured surface).

Our K/T complex has nothing in common with "lobes of turbidite fans" except for the even parallel-bedded pattern (only at Lajilla) and repeating parts of the Bouma sequence B and C.

Concluding, we may say that our sandstone complex in some aspects resembles the channels and transition parts of a turbidite fan. The scarcity of mud-supported conglomerates, absence of chaotic masses, presence of bedded channel infillings, and indication of lateral migration of some of the channels of Unit I at Mimbral and Unit II at Mulato point to a low-gradient slope.

Having said this, we reject the hypothesis of the K/T sandstone complex as having been deposited as a turbidite-fan on the basis of the following arguments:

1. In all outcrops studied so far, the eventlike character is indicated by a general fining-up and thinning-up of our sandstone unit. Fining-up is clearly indicated by the conglomeratic and spherule rich Unit I, overlain by the sandy Unit II and the current-rippled flaser/mud alternation of Unit III and grading of Unit IV. Despite repetition of beds and sedimentary structures with similar features, pointing to a strongly pulsating current, the vertical order is invariably such that a higher unit indicates progressive waning of the current. This can be deduced from upward thinning of similar beds or channels or from the size and steepening of climbing rippled intervals.

2. The presence of a relatively thin and lensing sandstone complex over a vast area of at least 2,000 km between Brazos River, Texas, and La Ceiba (Bochil) in Mexico with a consistent superposition of spherule-rich channels, sandstone layers, and a current-rippled sandstone/mud alternation. Over this vast area, the unit varies between only a few centimeters to 10 m, generally between 1 and 3 m. In turbidite fans such thicknesses occur only in the distal parts of the fan.

3. Common reversals of currents as revealed by the orientation of ripple cross-bedding and flutes and without the current sense from the orientation of channel axes and primary