

### **Amazon deep-sea fan facies classification scheme**

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The Shipboard Scientific Party of Ocean Drilling Program Leg 155 drilled 17 sites on the Amazon deep-sea fan in spring of 1994. The data collected on this cruise have been used to create a classification scheme for 11 different facies types present throughout all of the drill sites. The tops of individual turbidite units are distinguished by the presence of bioturbation, diagenetic fronts and by the presence of coccoliths (D.J.W. Piper, personal communication, 1995). This classification scheme is restricted to fine grained turbidites and related facies. The different facies types are interpreted to be the result of flow patterns of turbidity currents within the channels (D.J.W. Piper, personal communication, 1995). The depositional processes by which these are formed are not fully understood as of yet. Additional Coulter Counter analysis has been used to clarify facies types and have been arranged into stacked line graphs allowing for the easy identification of grain size trends.

The purpose of creating the facies scheme is two-fold. Primarily, it is intended to be used to identify any systematic variations of the facies types within the deep-sea fan itself. Distribution patterns of the facies types can be used as proximal/distal indicators for both distance downfan and distance from the channel. In this way the facies types can be used as indicators of paleofacies. Secondly, the facies types of the modern Amazon deep-sea fan have been compared with ancient fine grained turbidites of the Meguma Group rocks near the LaHave Islands (Mosher Island Member). Facies types from the Amazon turbidite classification scheme have been identified within the Mosher Island Member of the Meguma rocks. By using ancient turbidites, these similarities may help to shed light onto the depositional processes of the Amazon fan deep-sea turbidites.