# Jurassic Radiolaria in the Subsurface of the Northern Gulf of Mexico, Haynesville Formation, North Louisiana

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## ABSTRACT

The presence of Upper Jurassic Radiolaria in cored levels of Lower Bossier–Upper Haynesville Formation at 11,220 ft (3420 m) and 11,190 ft (3410 m) in the North Louisiana Salt Province is reported here for first time.

This Upper Jurassic section contains a distinctive assemblage of Radiolaria with a well defined lower upper Tithonian to uppermost Kimmeridgian age. The association is characterized by several conspicuous forms as: *Vallupus hopsoni*, *Pantanellium ranchitoense*, *Pantanellium quintachillaensis*, *Pantanellium meraceibaense*, *Protovallupus* sp., *Praeconocaryomma* spp., *Perispyridium tamanense*, and *Bivallupus* spp..

This fauna allows temporal correlations with similar assemblages in many worldwide Upper Jurassic sections: Antarctica, Argentina, Japan, Central Pacific, California, and most importantly with the Taman and La Caja formations in eastern Mexico. The living environment according to the radiolarian presence corresponds to normal marine conditions possible with high productivity favored by coastal upwelling. Deposition and preservation occurred in anoxic conditions.

The use and developing of this biostratigraphic tool in subsurface will contribute to develop a more precise description and classification of deep sources and reservoirs in the Gulf of Mexico Basin.