

STRATIGRAPHY OF THE UPPER MIOCENE DEPOSITS IN SARASOTA COUNTY, FLORIDA

HERBERT C. EPPERT, JR.
Tulane University
New Orleans, La.

ABSTRACT

The presence of undisputed Upper Miocene sediments in Sarasota County, Florida, has not been widely known. Most authors have stated that the Middle Miocene Hawthorn Formation is overlain by Pliocene to Recent deposits. The Upper Miocene is represented in southern Florida by the Tamiami Formation. The Upper Miocene age determination is based on the characteristic faunal assemblage, *Ostrea disparalis*, *Chione ulocyma*, and *Ecphora quadricostata umbilicata*. Fossil mollusks, echinoderms, and bryozoans collected from outcrops, quarries, and sinkholes in this area definitely confirm the presence of Upper Miocene sediments in Sarasota County. Typical Upper Miocene species include *Anadara* cf. *A. idonea*, *Chione ulocyma*, *Ostrea* cf. *O. tamiamiensis*, *Ostrea tamiamiensis monroensis*, and *Encope macrophora tamiamiensis*.

Within the Upper Miocene deposits exists an impermeable but porous bed characterized by a decrease in radioactivity and electrical resistivity. These characteristics are indicative of clay and the interpretation of x-ray diffraction patterns verified the predominance of clay minerals in the aquiclude. Montmorillonite was the dominant clay mineral with lesser amounts of attapulgite and alpha sepiolite.

Based on evidence presented in this paper, the Upper Miocene deposits occurring in Sarasota County are considered to be a lithosome of the Tamiami Formation.