

the Tampa limestone by the discovery of beautifully preserved fossil shells and corals in the "silex beds" at Ballast Point at Tampa. T. A. Conrad (1846) visited Tampa Bay in 1842 and saw the "silex beds" and the limestone at several places in the vicinity of Tampa. He described several new species of fossils from the "silex beds" and referred them to the upper Eocene. J. H. Allen (1846) and others commented on the manner of preservation of the fossils at Ballast Point. Angelo Heilprin (1887) collected 47 species of mollusks at Ballast Point in 1886, and his study of them convinced him that the "silex beds" are of lower Miocene age, the age to which they are now assigned. W. H. Dall was the next naturalist to investigate the Tampa region. His studies, begun in the winter of 1886-87, resulted in a series of papers (Dall, 1892, 1890-1903, 1915) that culminated in a monograph on the molluscan fauna of the "silex beds." Some of his illustrations are reproduced in figure 15.

Mansfield (1937b) was the first to make a regional study of the molluscan fauna of the Tampa limestone. He found 306 species and subspecies, of which 27 were not assigned specific names. Only 9 were regarded as identical with species or subspecies in the Chipola formation, though 6 more are closely related (Mansfield, 1937b, p. 16). About 9 are reported also in the Suwannee limestone, but several of these were doubtfully identified.

The mollusks in the Tampa limestone at Tampa are notable for the inclusion of about 28 species of land snails, an indication that land was not far off. Another indication of nearby land is the occurrence at Ballast Point, Orient, and Wakulla of *Celliforma nuda* (Dall), the larval chamber of a mining bee (Brown, 1934, 1935) which was originally supposed to be the burrow of a bivalve mollusk (*Lithophaga*).

The Foraminifera of the Tampa limestone are not well known. The most conspicuous species is *Archaias floridanus* (Conrad). No species of *Lepidocyclina* have been found in the Tampa. That genus appears to have become extinct at the end of the Oligocene epoch.

Only one echinoid has been found in the Tampa. This is *Lovenia clarki* (Lambert) Cooke (1942, p. 60), which was