An intermediate product of disintegration is gray or white, very light pumicelike vesicular sandstone, from which the lime and phosphate have been dissolved, leaving smooth, rounded blebs in place of the phosphatic grains. Rock of this kind, commonly in small lumps, caps many hills.

Thickness—Over much of its area of outcrop the upper part of the Hawthorn has been eroded to such an extent that it is impossible to measure the original thickness. A well at Quincy, which starts in the Hawthorn formation, passed through it into the Tampa limestone at a depth of 210 feet (Cole, 1944, p. 13). The cuttings from 90 to nearly 500 feet in the Hilliard no. 1 well, 4 miles northwest of Hilliard, are referred to the Hawthorn formation by Cole (1944, p. 23). Farther south in the peninsula the Hawthorn appears to be much thinner.

Distribution—The Hawthorn formation apparently underlies the entire peninsula except in the Ocala uplift, from much of which it has been completely eroded. Northward it extends through the Tifton Upland (wire grass region) of Georgia (Cooke, 1944, p. 90) and northeastward to Berkeley County, South Carolina (Cooke, 1936b, p. 104). The western boundary of the Hawthorn formation is arbitrarily drawn along Apalachicola River, though possibly part of the Chipola formation might equally as well be referred to the Hawthorn.

Stratigraphic relations—The Hawthorn formation comprises the deposits of a transgressing sea that flooded an eroded land surface. Whether this land included the area of the Tampa limestone or whether the Hawthorn sea was merely an expanded Tampa sea has not been conclusively determined. The latter seems the more probable. If so, the Hawthorn lies conformably on the Tampa limestone and unconformably on older formations across which it transgressed. The Hawthorn merges westward into the Chipola formation and probably includes also equivalents of the Shoal River formation. It is overlain unconformably by the Duplin marl or by younger deposits.

Fauna—Although fossils are common in the Hawthorn formation, few of them are well enough preserved to be determinable. The beds exposed to view are at most places so deeply weathered that all the shell substance has been dis-