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DICTYOTA DICHOTOMA IN VIRGINIA

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Hoyt (1917-1918), in his excellent work on the marine algae of Beaufort, North Carolina, pointed out that this area is a transitional one between northern and southern algal floras of the Alantic coast of the United States. Of the 84 genera he reported for the Beaufort area, 24 genera and 46 species reached their northern known limit there, while 4 genera and 9 species reached their southern known limit at Beaufort. Subsequent publications by others have added considerably to the numbers of both groups.

Marine algae reaching their northern known limit in the Beaufort area (Cape Hatteras?) are present in the vegetative state mainly from May 15 to November 15 if they occur in the bays and sounds. If they occur offshore on the continental shelf in depths of 50 to 300 feet or more, they seem to be present the year around in a growing condition, as the offshore water temperatures fluctuate much less with season than do those of the bays and sounds.

One of the most abundant and conspicuous members of the inshore summer flora at Beaufort is *Dictyota dichotoma* (Hudson) Lamouroux. It appears annually about April 15 and disappears about November 15. There is annual variation in these dates of about two weeks, but they seem to represent an average. The genus *Dictyota* is essentially tropical. Taylor (1960) lists ten species known to occur around southern Florida, the West Indies, and Caribbean Sea. *D. dichotoma* is the species reaching farthest north in both the eastern and western North Atlantic and in the Gulf of Mexico. In the eastern Atlantic it occurs along the coasts of southern and western England and Ireland, and is occasional along the coast of eastern

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England and Scotland (Newton 1931). It is the one species that reaches the northern coast of the Gulf of Mexico where the salinity is sufficiently high (above 20 0/00), as in Alligator Harbor, south of Tallahassee, Florida. In the eastern Atlantic the species seems to occur in cooler waters in summer than it does along our own coasts of the western Atlantic.

On July 10, 1962, quantities of *Dictyota dichotoma*[1] were found attached to shells and drifting along the marshes east of Wachapreague on the Eastern Shore of Virginia. The species seems well-established in the area and may have been a constituent of the summer flora there for a long time. This is about 200 miles farther north than its previously known northern limit, but collections of algae along this section of the coastline have been so few in the past that it could easily have been missed. If its occurrence along the Eastern Shore of Virginia is an annual event, then it is a species that crosses the Beaufort transitional zone.

REFERENCES CITED

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Newton, Lily. 1931. Handbook of British Seaweeds. Brit. Museum, London, 478 p.

Taylor, W. R. 1960. Marine algae of the eastern tropical and subtropical coasts of the Americas. Univ. of Mich. Press, Ann Arbor. 870 p.

[1]Specimens have been deposited in the herbaria of the Virginia Institute of Marine Science and of Duke University.

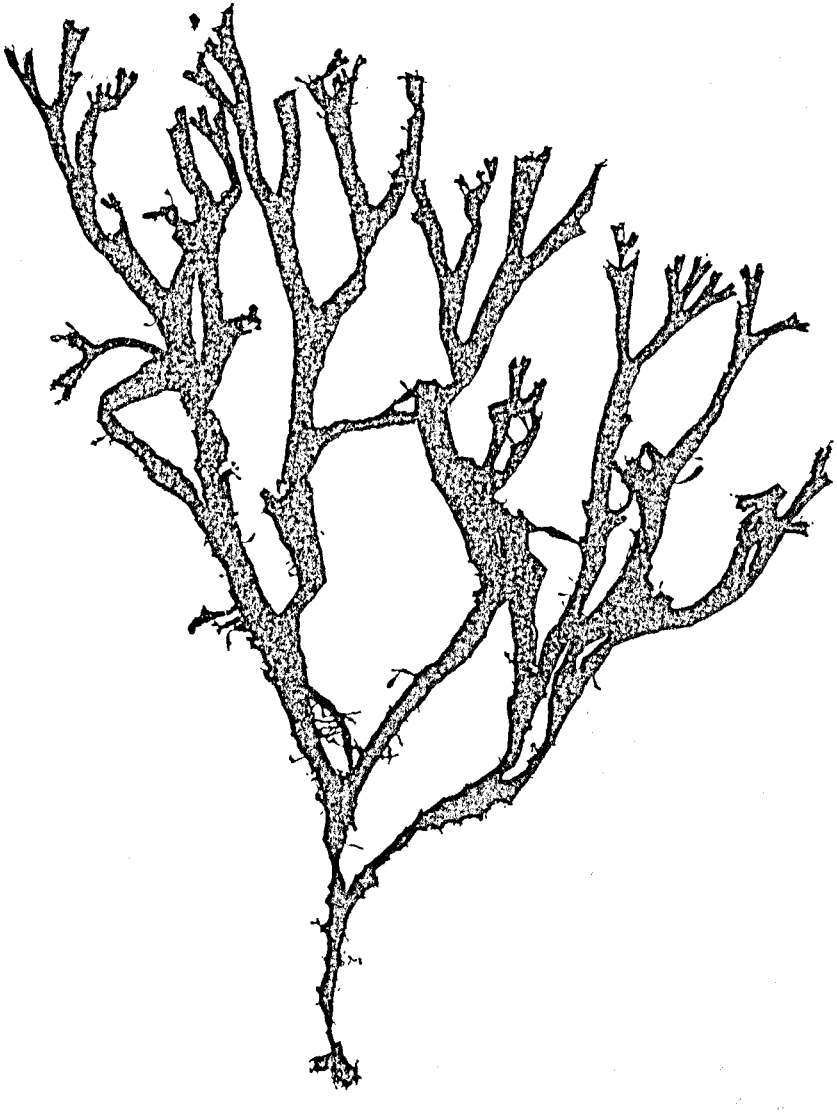

FIGURE 1.

A mature plant of *Dictyota dichotoma* from Hummock channel near Wachapreague, Virginia, July 16, 1962. The plant was about 11 inches tall and attached to an oyster shell in shallow water. Photograph of a specimen deposited in the herbarium of the Virginia Institute of Marine Science.