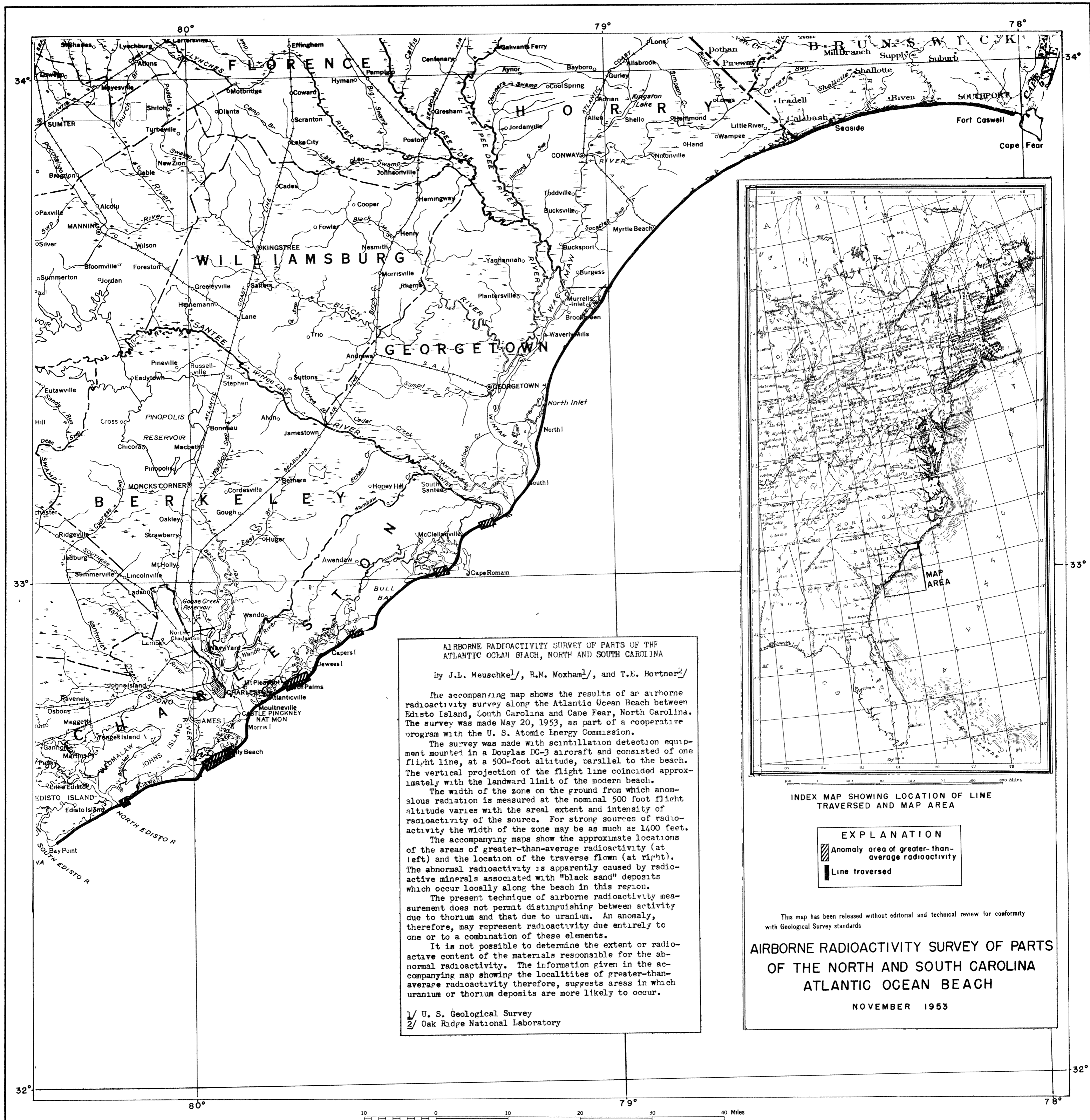


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AIRBORNE RADIOACTIVITY SURVEY OF PARTS OF THE ATLANTIC OCEAN BEACH, NORTH AND SOUTH CAROLINA

By J.L. Meuschke^{1/}, R.M. Moxham^{1/}, and T.E. Bortner^{2/}

The accompanying map shows the results of an airborne radioactivity survey along the Atlantic Ocean Beach between Edisto Island, South Carolina and Cape Fear, North Carolina. The survey was made May 20, 1953, as part of a cooperative program with the U. S. Atomic Energy Commission.

The survey was made with scintillation detection equipment mounted in a Douglas DC-3 aircraft and consisted of one flight line, at a 500-foot altitude, parallel to the beach. The vertical projection of the flight line coincided approximately with the landward limit of the modern beach.

The width of the zone on the ground from which anomalous radiation is measured at the nominal 500 foot flight altitude varies with the areal extent and intensity of radioactivity of the source. For strong sources of radioactivity the width of the zone may be as much as 1400 feet.

The accompanying maps show the approximate locations of the areas of greater-than-average radioactivity (at left) and the location of the traverse flown (at right). The abnormal radioactivity is apparently caused by radioactive minerals associated with "black sand" deposits which occur locally along the beach in this region.

The present technique of airborne radioactivity measurement does not permit distinguishing between activity due to thorium and that due to uranium. An anomaly, therefore, may represent radioactivity due entirely to one or to a combination of these elements.

It is not possible to determine the extent or radioactive content of the materials responsible for the abnormal radioactivity. The information given in the accompanying map showing the localities of greater-than-average radioactivity therefore, suggests areas in which uranium or thorium deposits are more likely to occur.

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INDEX MAP SHOWING LOCATION OF LINE TRAVERSED AND MAP AREA

EXPLANATION

	Anomaly area of greater-than-average radioactivity
	Line traversed

This map has been released without editorial and technical review for conformity with Geological Survey standards

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NOVEMBER 1953

