

THE PHYSICAL GEOGRAPHY
GEOLOGY, MINERALOGY
AND PALEONTOLOGY

OF

ESSEX COUNTY, MASSACHUSETTS

BY

JOHN HENRY SEARS

CURATOR OF GEOLOGY, MINERALOGY, AND BOTANY
AT THE PEABODY MUSEUM,
SALEM, MASS.

Inv. No. 37348



SALEM, MASS.

PUBLISHED BY THE ESSEX INSTITUTE

1905

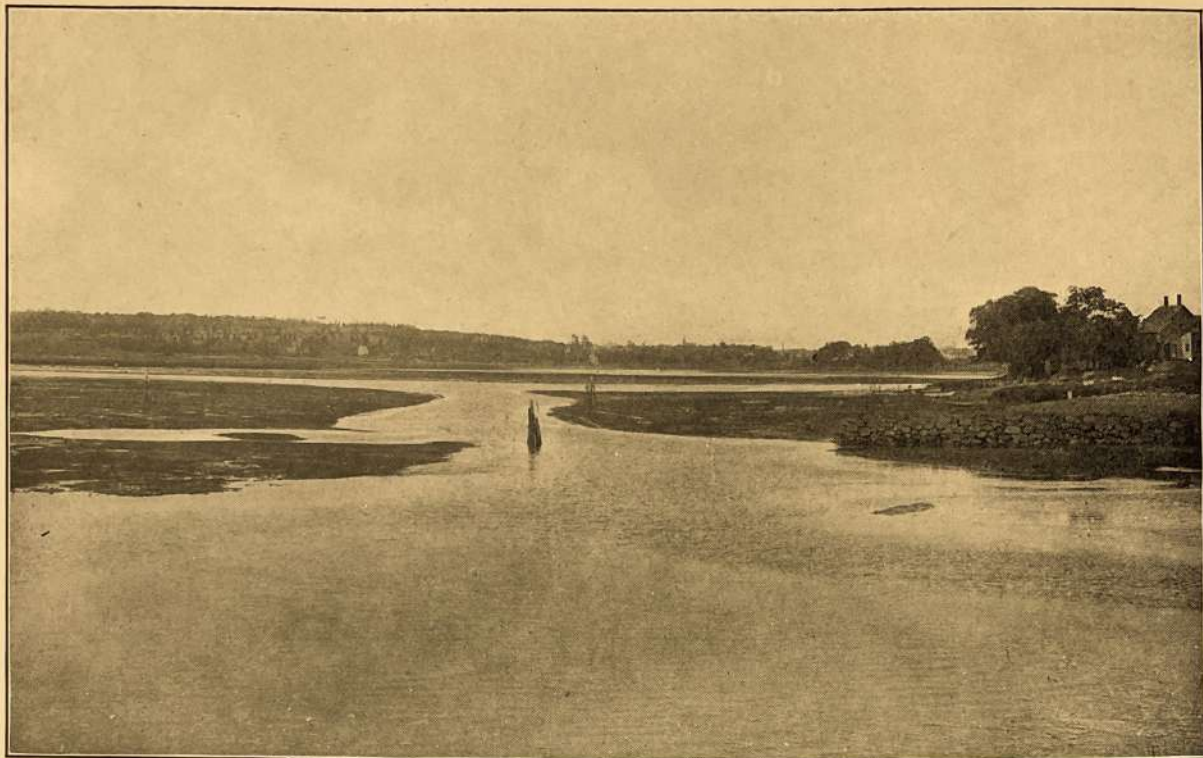


Fig. 22.—WATERS RIVER, DANVERSPORT, AT LOW TIDE
Beverly shore in the distance.



Fig. 23.—CRANE RIVER, DANVERSPORT, AT NEARLY LOW TIDE.
Showing the meandering of the stream.

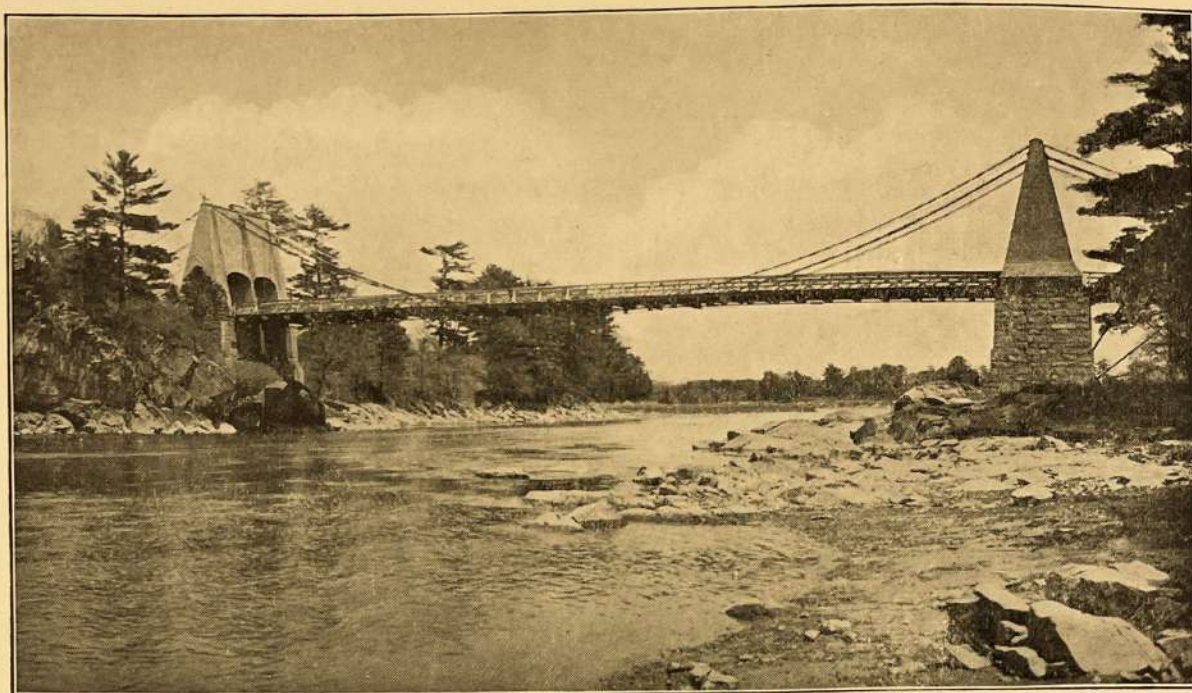


Fig. 49. — MERRIMAC RIVER FLOWING UNDER THE CHAIN BRIDGE AT NEWBURYPORT.
Quartz diorite rock on both sides of the river.

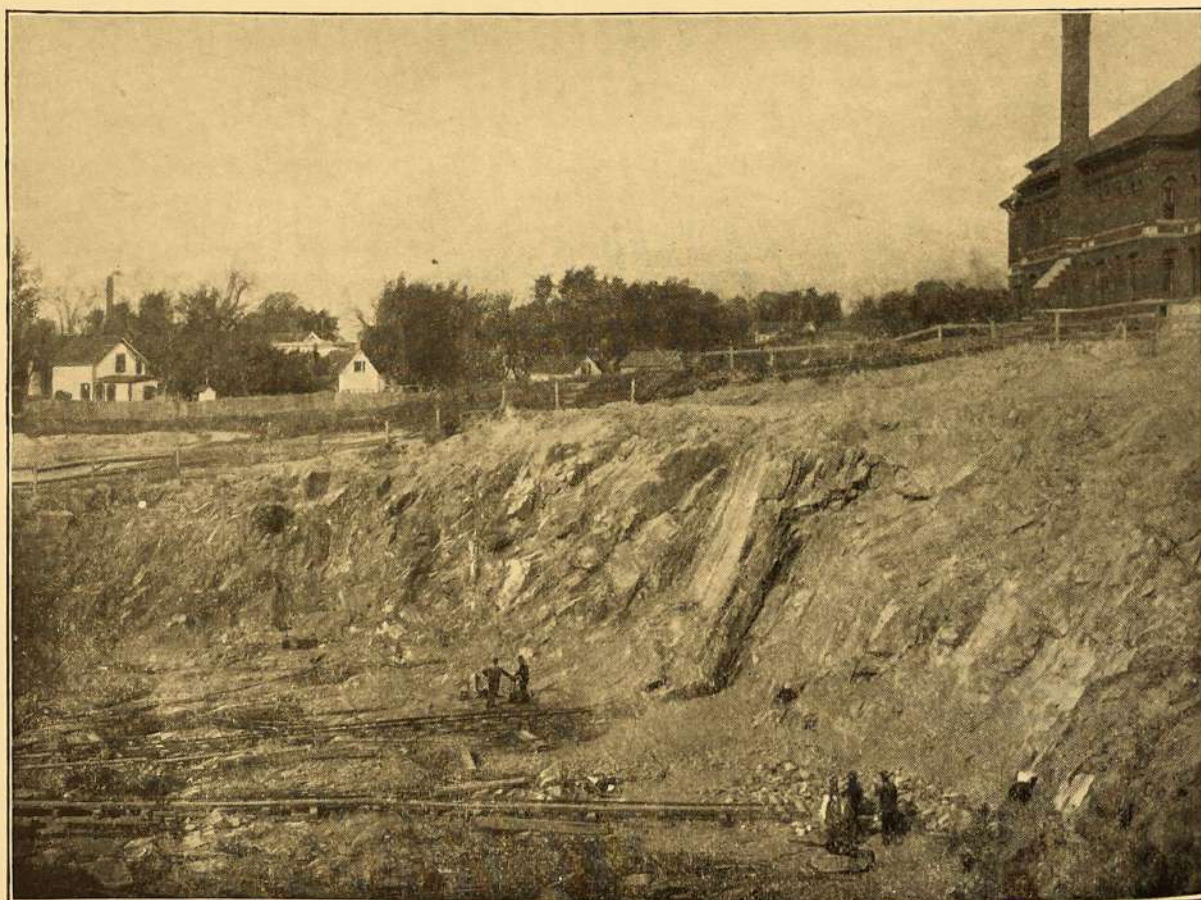


Fig. 50. — CAMBRIAN SLATY SANDSTONE LEDGE AT SOUTH LAWRENCE.
Used (1901) for road material.



Fig. 57. — HORNBLENDE DIORITE OUTCROP.
In the "Nubble Squid," Groveland.

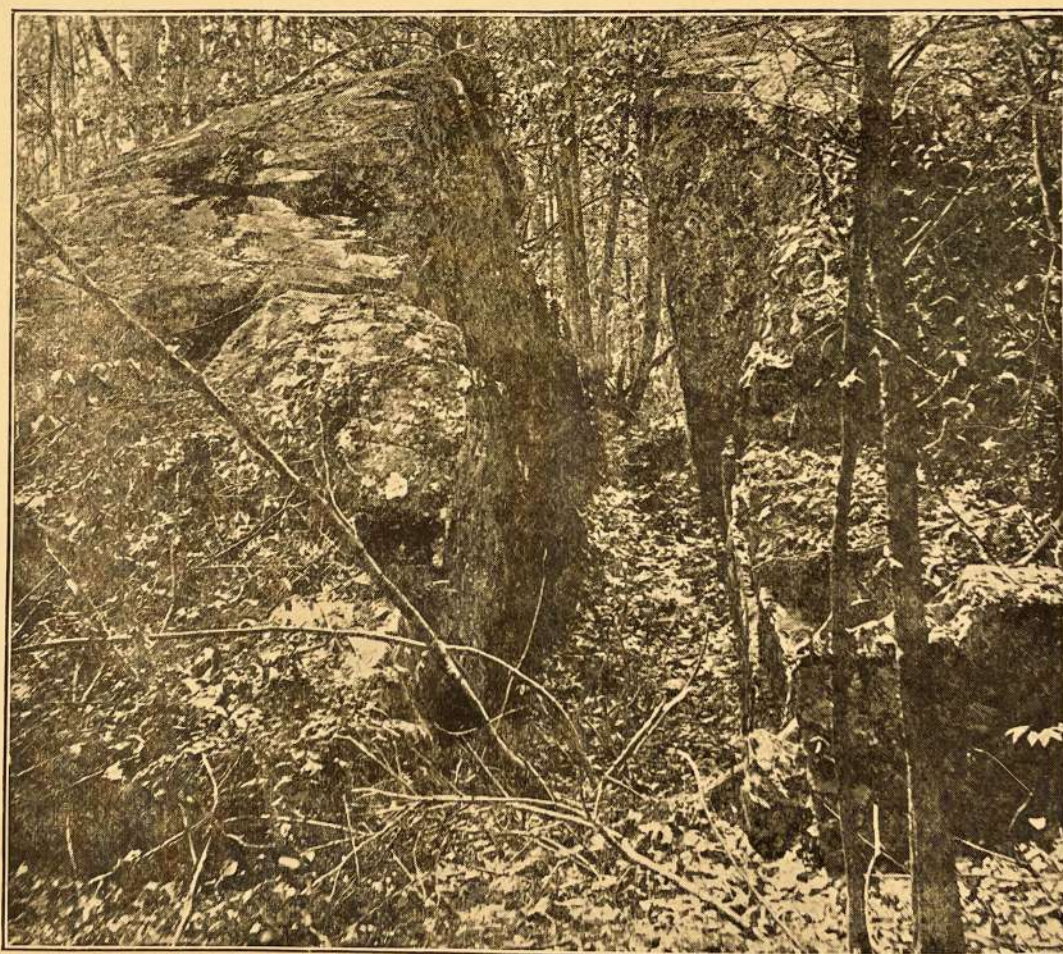


Fig. 58. — SPLIT BOULDER OF HORNBLENDE DIORITE.
Near the "Nubble Squid," Groveland.

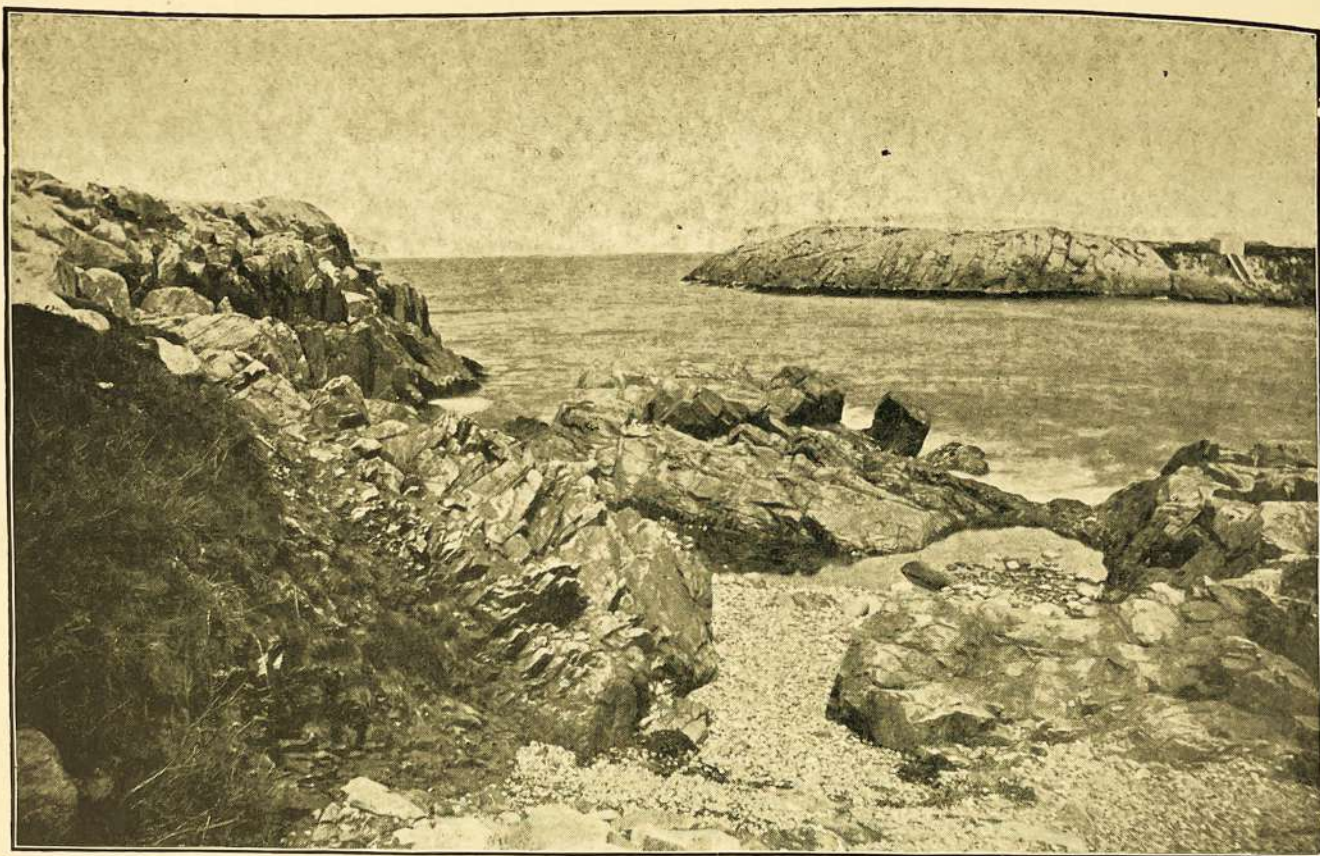


Fig. 14.—GAP HEAD AND STRAITSMOUTH ISLAND, ROCKPORT.
Showing an augite syenite contact with hornblende granite.

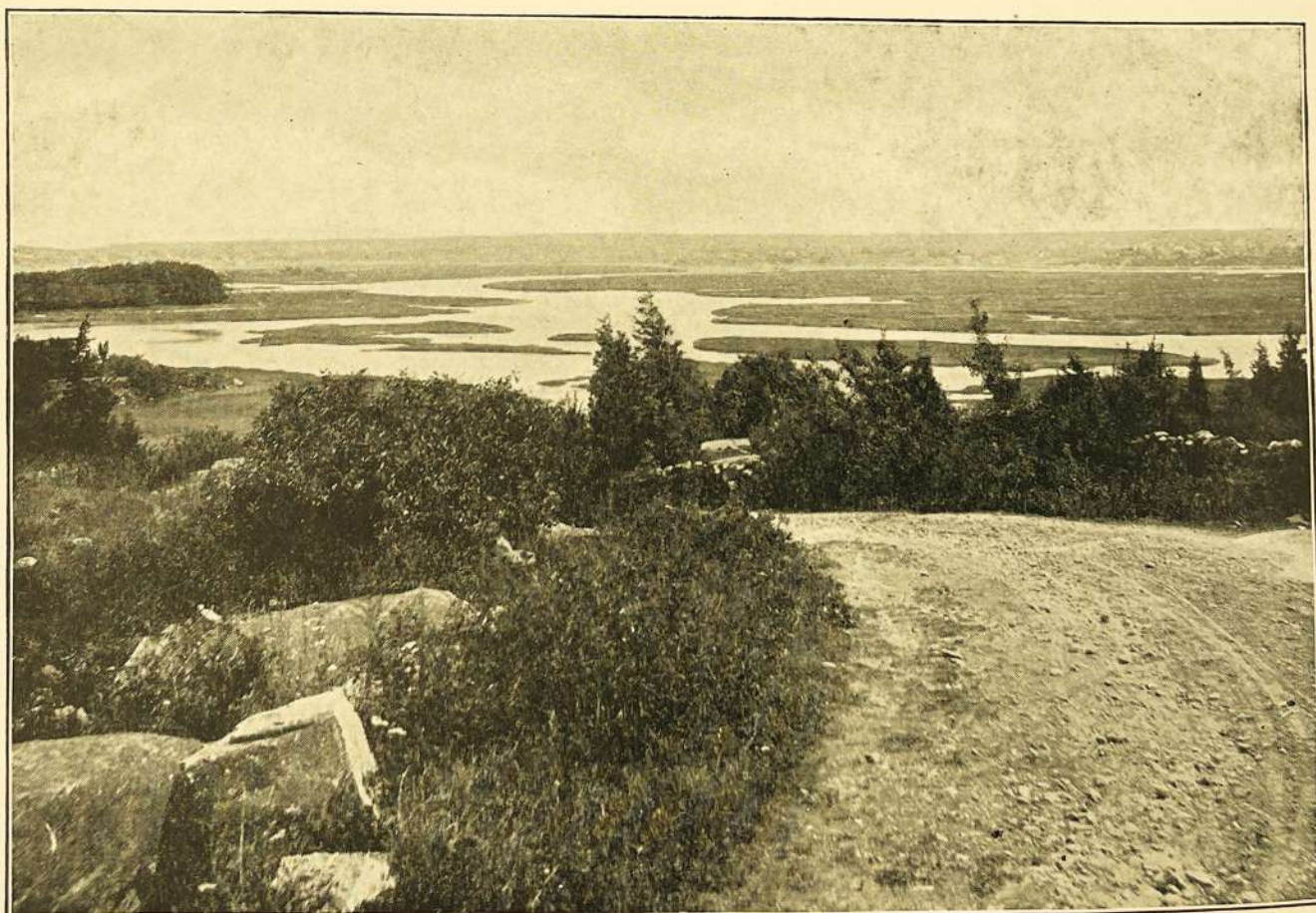


Fig. 15.—SQUAM RIVER FROM WEST GLOUCESTER.
Showing tidal marshes.

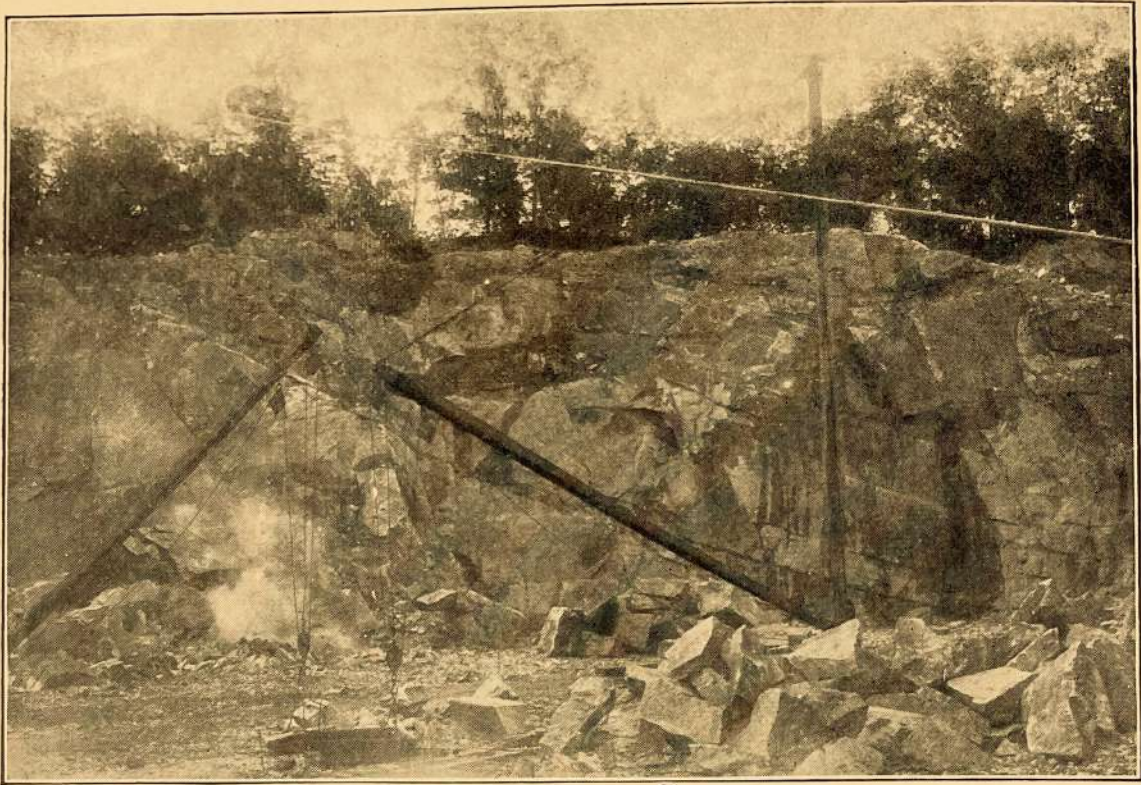


Fig. 83.—MUSCOVITE BIOTITE GRANITE, FOLIATED.
Jones Quarry, South Lawrence.

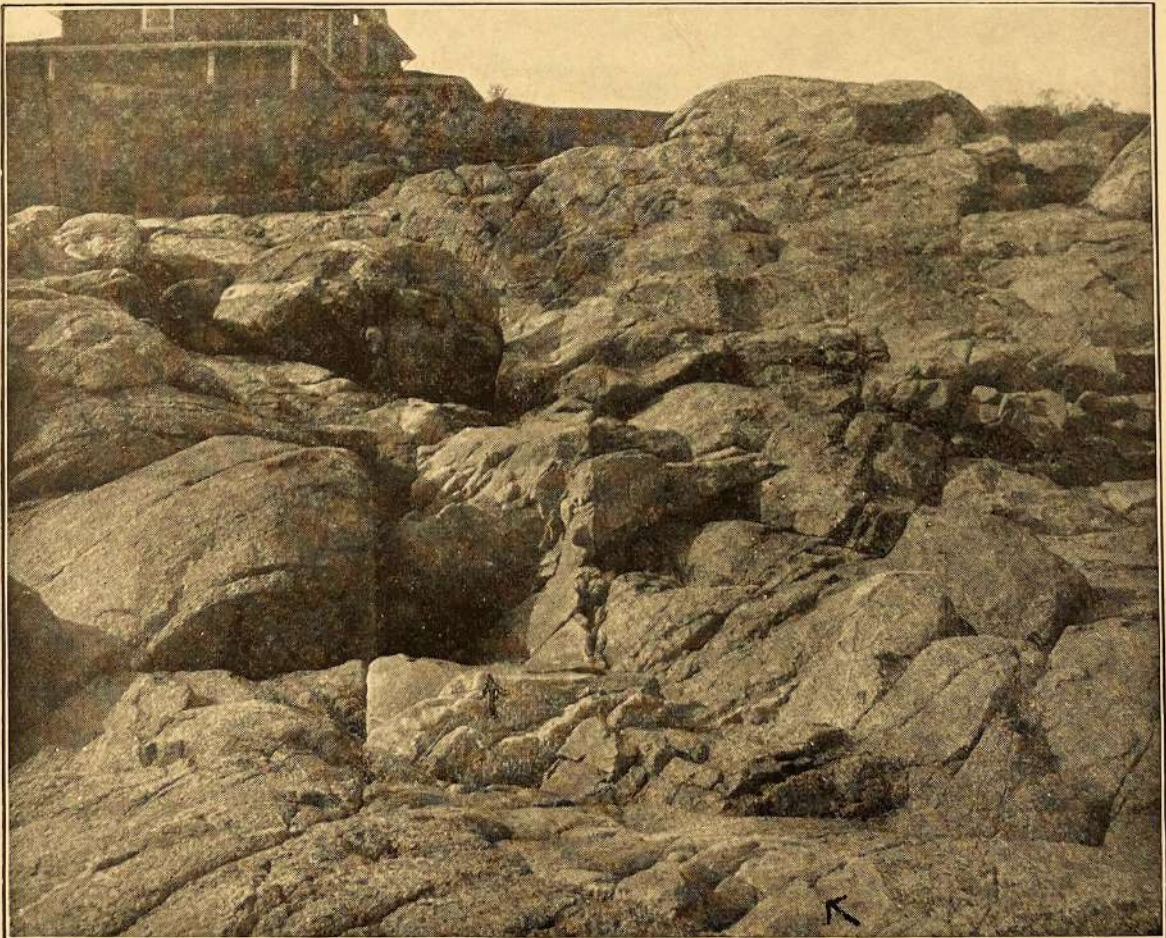


Fig. 84.—APLITIC GRANITE DIKE CUTTING QUARTZ HORNBLLENDE DIORITE, AT CLIFTON,
MARBLEHEAD. THE ARROWS INDICATE THE DIKE.

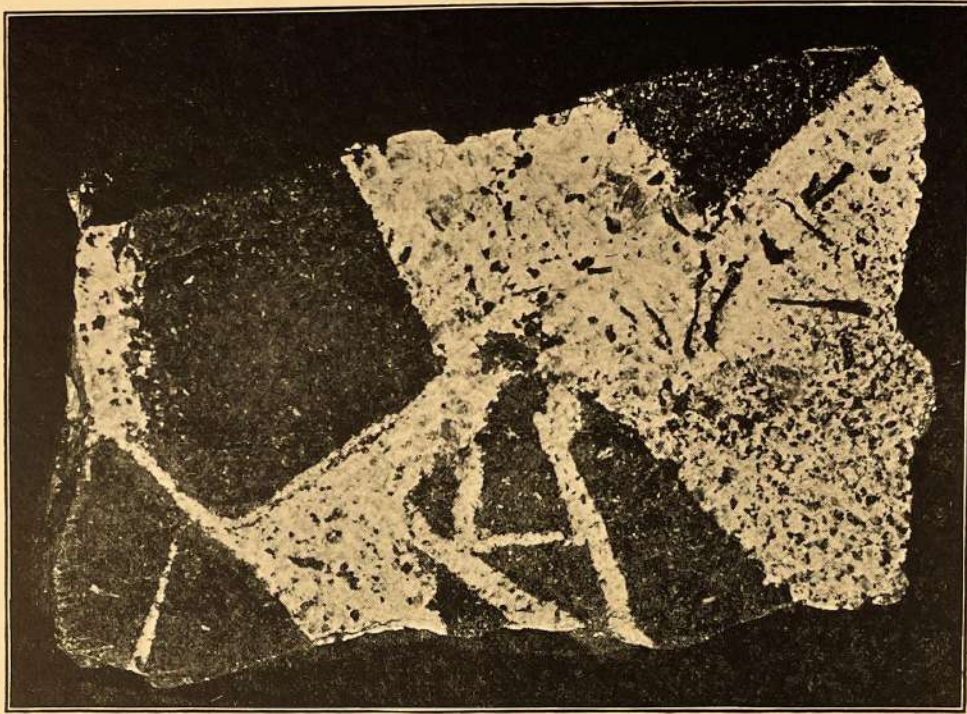


Fig. 89. — BRECCIATED HORNBLLENDE DIORITE CUT BY VEINS OF PULASKITE SYENITE.
Near Beverly Bridge, Salem.



Fig. 90. — HORNBLLENDE DIORITE CUT BY VEINS OF PULASKITE SYENITE AND DIABASE.
Near Beverly Bridge, Salem.



Fig. 119. — APORHYOLITE, SHOWING WEATHERED SURFACE.
High Rock, Marblehead Neck.

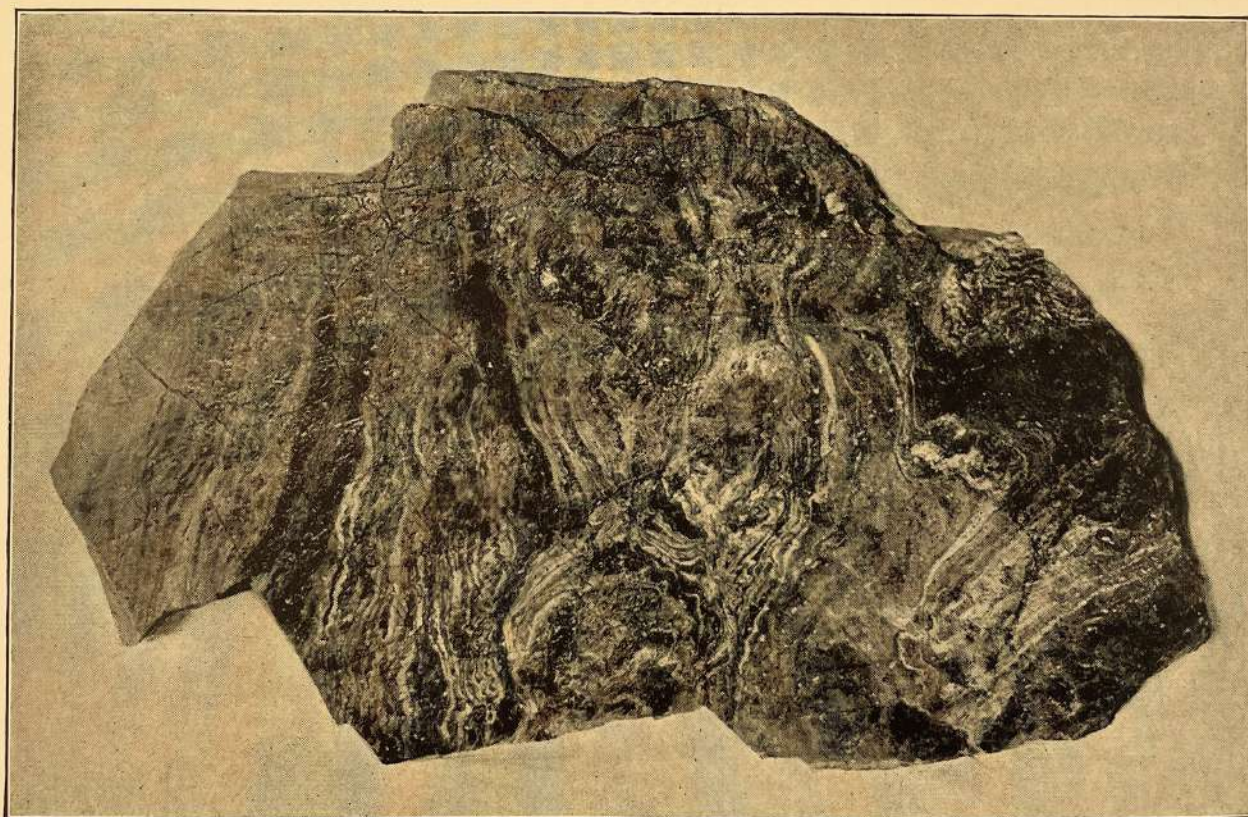


Fig. 120. — BANDED APORHYOLITE, SHOWING THE FLOW OF THE MAGMA PREVIOUS TO ITS
CONSOLIDATION. SIZE OF SPECIMEN, 14 x 20 INCHES.
Bowden's Point, Marblehead Neck.



Fig. 147.—OLD TOWN HILL, NEWBURY.
View from the southwest across the tidal marsh.

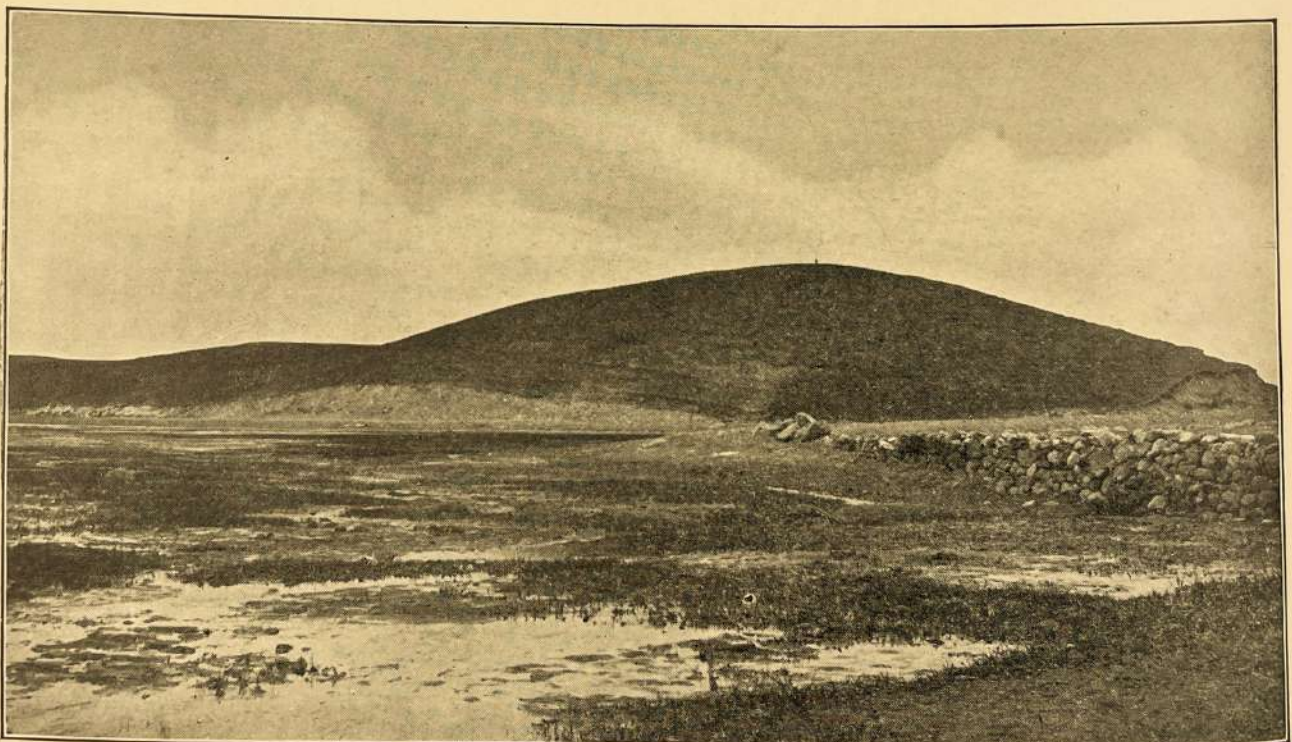


Fig. 148.—EAGLE HILL, IPSWICH.
A small drumlin, with base cut by wave-action.