EXPLANATION



db

Diabase dike

A steeply-dipping diabase dike, fine to medium grained, containing from 3 to 5 percent magnetite, is about 200 feet wide at its only known outcrop in Dark Cove in the Danforth quadrangle. This occurrence, normally under water but visible, crops out on the east side of the island in Dark Cove and on the west shore of the nearby peninsula to the east when the Lake is abnormally low (Larrabee and Spencer, 1963). The dike cuts quartz monzonite of Devonian age, and has been traced by aeromagnetic methods for about 100 miles, chiefly west-southwest, (Allingham, 1960; Grisson, Andrew, written communication, April 12, 1961). It was traced in the Trout Brook area of the Danforth quadrangle by ground magnetometer in July, 1957 by R. W. Bromery. It is similar to rock is an outcrop about 4 miles east of South Dover, and in a quarry near Route 23 about one mile north of Lake Wassookeag, near Dexter (Espenshade, G. H., oral communication, April 1961).

Sk

Kellyland Formation

Gray metasiltstone, metasandstone, and slate

The Kellyland Formation of Silurian(?) age, named for the village closest to its largest and most representative outcrop at Grand Falls of the St. Croix River, in the Kellyland quadrangle, Maine, where it was mapped by the author and S. S. Svenson, is interbedded sericitic pale gray metasiltstone, arenaceous metasiltstone, argillaceous metasandstone and quartzite, and thin beds of darker gray slate. Most beds contain iron carbonates; the metasiltstone and coarser beds contain more carbonate than does the slate. Some of the coarser beds are tuffaceous. Slate commonly occurs in beds from 1 to 8 inches thick and locally from 1/8 inch to 3 or 4 feet thick. In the Mattawamkeag quadrangle, the dark gray slate in places has poorly developed cleavage or is phyllitic. Iron carbonate-bearing metasiltstone and slate are well-exposed along the road northwest from Molunkus. Grayish-purple slate crops out along a road about 3.5 miles north-northwest of Macwahoc north of Lower Henderson Brook. It is not certain if this is part of the Kellyland Formation or is an older rock. The metasiltstone and metasandstone beds commonly range from 4 inches to 4 feet in thickness, ranging locally to 20 feet. Rarely, beds of metasiltstone contain thin laminae of light and dark metasandstone. Thin beds of quartz granule metaconglomerate are associated with metasandstone and quartzite beds in places. The metasiltstone beds in many places have good gradation in texture, and cross-bedding. The average content of slate in the formation is about 20 percent, and the thickness of the formation has not been ascertained because of the lack of good key beds, continuous outcrops, and much isoclinal folding; however, it appears to exceed 1,000 feet. The Kellyland Formation is the stratigraphic equivalent of at least part of the Pale Argillite Division of the Charlotte Group in New Brunswick (Alcock, 1946), and is believed to be the stratigraphic equivalent of map unit Sas in the Danforth and adjacent quadrangles in Maine. Many large boulders, and a questionable outcrop of conglomerate occur along the road 0.5 mile northeast of South Woodville School, in the southwestern corner of Mattawamkeag quadrangle. The rock contains rounded pebbles up to 1 1/2 by 2 inches in diameter; these are chiefly light gray-green chert, black chert, green and gray quartzite, quartz, and rarely limonitic siltstone. The source(and age)of the boulders is unknown, but presumed nearby. No similar conglomerate has been observed in the area to the east, studied by the writer. It is not part of the Kellyland Formation, and is mentioned here only for the record.

POST—DEVONIAN

SILURIAN (?)

Outcrop or group of outcrops

70 70

Strike and dip of beds

Dot indicates top of beds known from sedimentary textures or structures

+ +

Strike of vertical beds

Dot indicates top of beds known from sedimentary textures or structures

+
70

Strike and dip of overturned beds

Dot indicates top of beds known from sedimentary textures or structures

70

Strike and dip of slaty cleavage

Strike of vertical slaty cleavage

70 70

Strike and dip of slaty cleavage and beds where parallel. Dot indicates top of bed known from sedimentary textures or structures

Strike of vertical slaty cleavage and beds where parallel. Dot indicates top of beds known from sedimentary textures or structures

Diabase dike

Located by aeromagnetic survey

Short dashed where inferred between areas of aeromagnetic control

References

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