

## An Unusual Lacustrine Delta

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There are several possible approaches to the problem of land form classification. One of the most popular methods involves the genetic classification of forms that will be representative of types actually developed in the rocks and materials of the earth's surface. An attempt is made to establish the particular conditions which operate to produce similar land form types. Nature, however, is a great nonconformist and new types or variations of an old theme are not unusual in the field. Occasionally a particular land form expresses a contrary mood of nature, resulting in a truly unusual set of con-

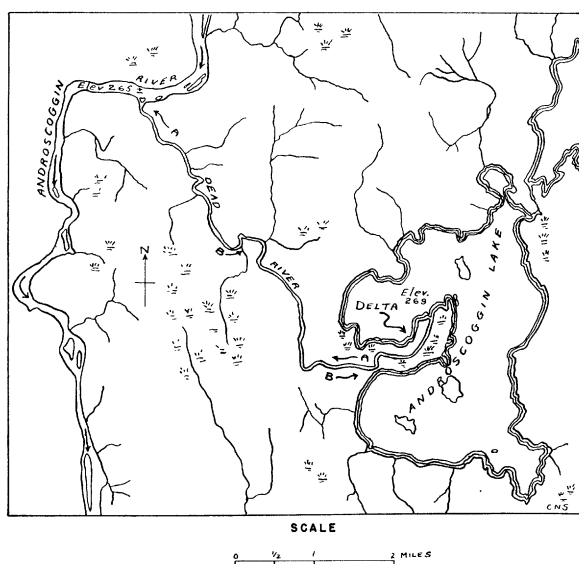


FIG. 1.

ditions. It is still possible to classify the type in most cases, but genesis may lie in violation of the usual explanation of origin.

One such unique case is found in Androscoggin Lake near Leeds, Maine, about 2 miles southeast of Wayne. A lacustrine delta nearly 1.5 miles long and 0.25 of a mile wide is being built at the head waters of a stream called Dead River. Usually, one expects to find a delta at the mouth or outlet of a stream; at this locality, however, a delta is forming at the opposite end or source of the river.

Throughout much of the year the Androscoggin, one of the larger rivers in Maine, flows south to the Atlantic Ocean. Dead River, tributary and outlet of Androscoggin Lake, flows northwest and empties into the Androscoggin River. On the sketch (Fig. 1), arrows indicate the direction of flow in the large river and similar arrows marked *A*, show normal direction of flow in Dead River. The difference in elevation between the water in Androscoggin Lake and the Androscoggin River is probably not more than 4-5 ft, and Dead River flows very

sluggishly. In time of flood and high water on Androscoggin River, a considerable volume of water moves into the outlet of Dead River and the direction of flow is reversed, as indicated on the sketch map by arrows marked *B*. Water from the larger river then moves into Androscoggin Lake.

Reversal of flow on Dead River occurs generally in the spring months, when runoff is high, and large quantities of sand and silt are being carried by Androscoggin River. This load is obtained partly from the quantities of sand in the region through which the river flows. Surplus water spilling into Dead River—water laden with rock material—moves into the lake, where velocity is checked by the standing lake water and the load is dropped. This deposition normally occurs in similar fashion at the mouths of most streams where deltas are being built. In the case of the lacustrine delta at Androscoggin Lake, however, nature has played one of her pranks and heavy deposition takes place at the head or source of Dead River.

## Thermostable Inhibition of Bacterial Hyaluronidases by the Serum of Normal Human Beings<sup>1</sup>

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Hyaluronidase, a mucolytic enzyme, and its substrate hyaluronic acid, a complex polysaccharide which is present in the intercellular substance of connective tissue, compose an enzyme system which appears to be involved in the pathogenesis of various infectious and rheumatic diseases (2, 6). Hyaluronidase is elaborated by various bacteria, and is present in spermatic fluid and aqueous extract of testicle. Since hyaluronidases are antigenic, there is current interest in the investigation of hyaluronidase inhibition by the serum of normal human beings and of patients with infectious disease and rheumatic fever. Specific inhibition of pneumococcus hyaluronidase by the immune serum of patients with bacteremic pneumococcus infections has been reported to be thermostable (7), whereas the inhibition of testicular hyaluronidase by the serum of normal, nonimmune human beings has been reported to be thermolabile (1, 3, 4). In contrast to the thermolability of the inhibitor of testicular hyaluronidase, this report indicates that the inhibitor of pneumococcus hyaluronidase in normal human serum is almost always thermostable, the inhibitor of staphylococcus hyaluronidase is usually thermostable, and the inhibitors of *Cl. perfringens* and streptococcus hyaluronidases may be either thermolabile or thermostable.

This study investigated the inhibition of similar test strengths of five hyaluronidases by the serum of 50 nor-

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