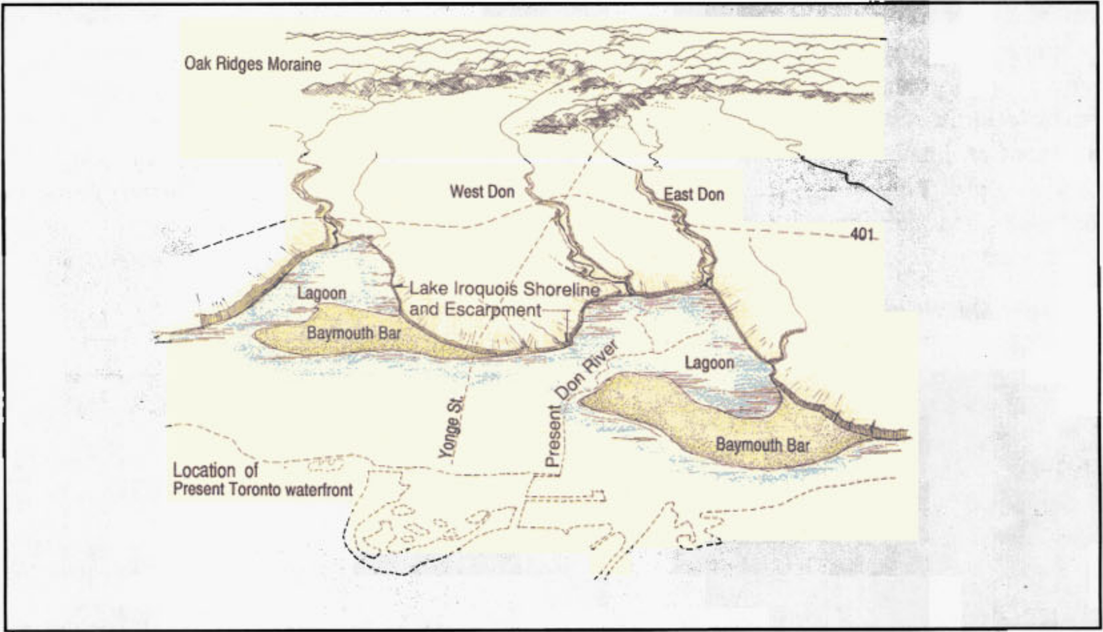


Figure 4 Lake Iroquois shoreline

shrank to become Lake Ontario, leaving behind its old delta at the river's sharp westward bend south of the forks, which was quarried for sand thousands of years later. The old shoreline is the distinct escarpment that extends across Toronto, forming the hill at Yonge Street and St. Clair Avenue and the ridge on which Casa Loma sits.

Now the Don flowed as one river out of its old lagoon and south across the flat sediments of what had been Lake Iroquois. As it entered Lake Ontario, the process of building a baymouth bar and backshore lagoon was repeated, forming the harbour islands spit and a protected lagoon known as Ashbridge's Marsh (Figure 5).

Just as global climate change drove glaciation, the changes in local temperature and precipitation determined which plants and animals could live here. During the three glaciations of the Pleistocene epoch, temperatures ranged from six degrees celsius lower to three degrees celsius higher than our present temperatures.

Perhaps the most renowned Pleistocene geological site in North America is in the Don Valley. The north face of the old brickworks quarry (Figure 6) exposes a rich fossil

Figure 5 The Don Valley before European settlement

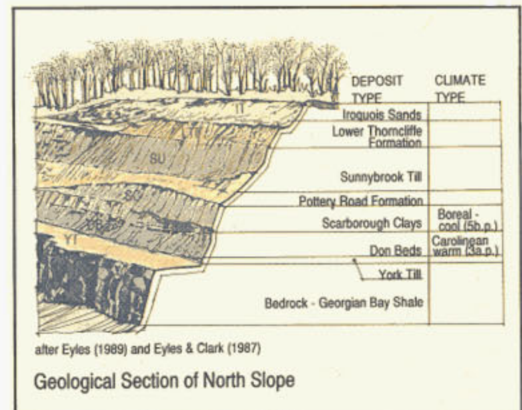
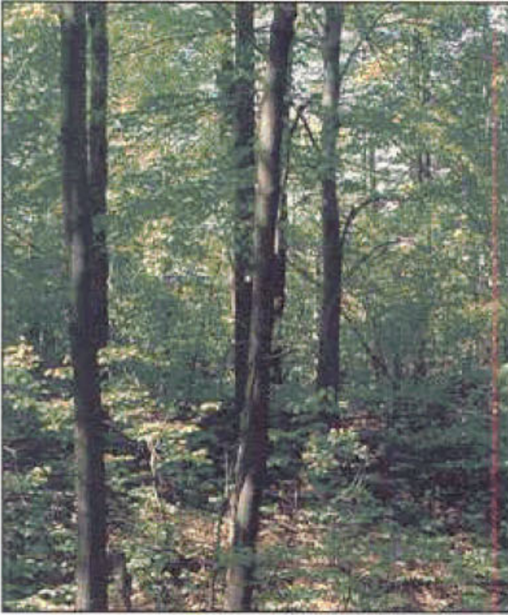


Figure 6 Glacial deposits at the Don Valley Brickworks

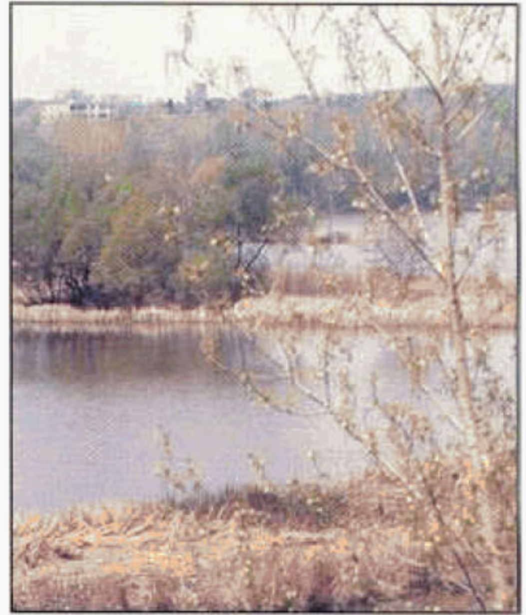
sandwich that records astonishing swings in habitat long before the Don's birth. It took only a few thousand years for a cool, northern boreal forest habitat to give way to a warmer Carolinian forest with more southerly plants including sycamore, holly, and grape, and such animals as giant beaver and bison.

But climate does not account entirely for habitat: a snapshot taken of the Don watershed just a few hundred years ago, before European colonization, would reveal healthy, varied, interconnected habitats created by local microclimates, soil types, and the river's action. On the slopes of the moraine, sugar maples and oaks shaded headwater tributaries, an

Natural Habitats of the Don Valley



Upland forest



Marshes along the river

River valley woods

inviting habitat for brook trout. Downstream, one would have found a lowland forest of willow and Manitoba maple in the floodplain, and oak, beech, basswood, maple, and almost pure stands of white pine on the valley slopes, attracting birds and mammals. The northern limits of the oak-dominated Carolinian forest reached the old Lake Iroquois shoreline, and the vast, fertile marshes near the river's mouth connected land and lake, sheltered nurseries for fish and other wildlife, and were home and stopping place to many kinds of fish, amphibians, and birds — including ducks, waders, geese, and mergansers.

Archaeological and early historical records show that natives who inhabited the region almost from the Don's inception lived gently on the land. They harvested wild rice, caught fish and turtles from the marshes, speared salmon from canoes in the river, planted corn on the tableland, trapped animals for food and clothing, and traversed the area on narrow walking trails for hunting, seasonal migrations, and trading. Although life was often hard for the people, the natural system was robust and healthy then, when so few people lived in the watershed, compared to today.

EARLY COLONIAL HISTORY

When Europeans came to the New World, they brought with them an attitude toward nature radically different from that of the native peoples. To the newcomers, nature was less a home than a resource for commerce and, later, an unruly force to be controlled.

The French came first, mapping the Don watershed as early as 1688, but largely ignoring it in their fur-trading operations. Next came the British, who established a

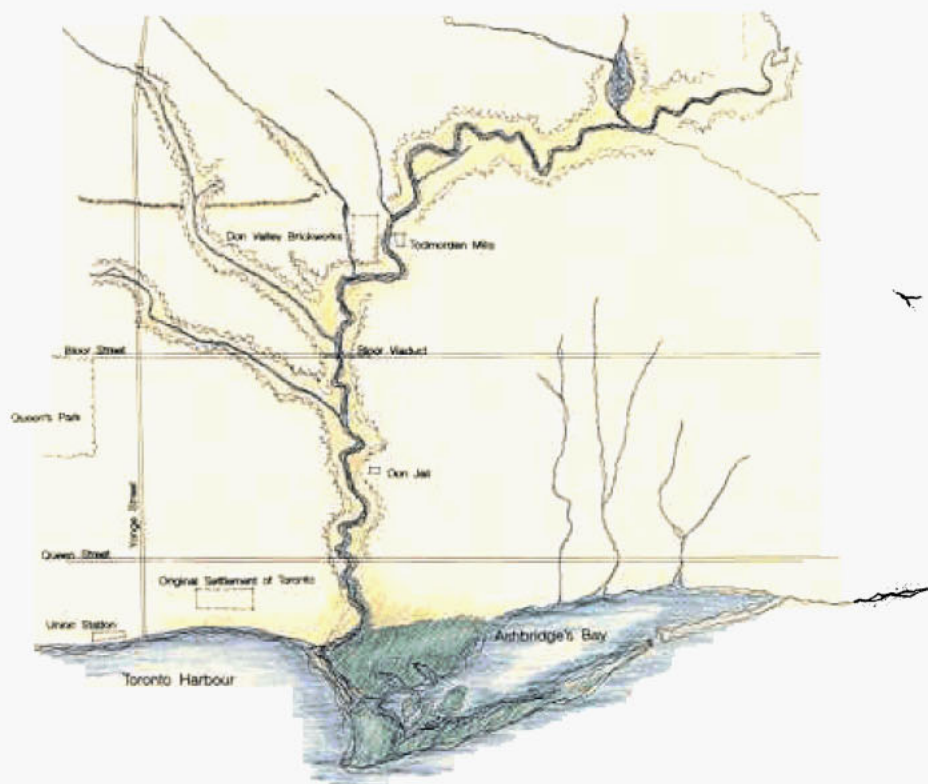


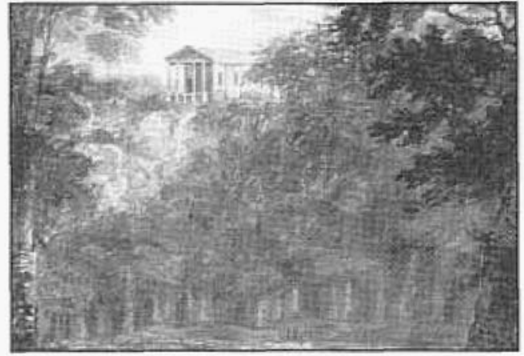
Figure 7 Early places in the valley

military garrison west of the Don, and called it York. But the Don's fate was sealed in 1787, when the British bought the "Toronto Purchase" — the Don watershed — from the Mississauga Indians for the equivalent of £1,700 in cash and goods.

Surveyors laid out a city plan for the future capital of Upper Canada with streets and lots for future homes and shops — a geometric grid branded artificially onto the landscape. City blocks were drawn on top of creeks, which were later buried. Such is the legacy of most North American cities of the 18th and 19th centuries.

Elizabeth Simcoe, wife of Upper Canada's first Lieutenant Governor, loved the valley and river her husband had named the Don, after a river back home in England. (The Indians had called it Necheng-qua-kekonk, meaning perhaps "back-burnt lands" or "woods and wetlands".) When the Simcoe family boated upstream soon after their arrival in 1793, the city was so new that only one residence had been built on the planned lots. Mrs. Simcoe wrote enthusiastically of the valley's forests and grand outlooks, of the Indians spearing salmon at night. She saw to it that the family's summer home, a wooden Grecian temple, which she called Castle Frank after her ailing son, was built on a promontory a few kilometres up the river. Mrs. Simcoe's diary and watercolours of the valley have made her the patron saint of today's advocates of the Don River.

Elizabeth Simcoe



Castle Frank

FIGHTING THE RIVER

Most settlers were too busy taming the wilderness to appreciate the Don River as a place of beauty and recreation: they used it for transportation, and harnessed its energy, building mills for lumber, flour, wool, and paper along its main trunk and tributaries. They farmed its floodplain and fished it for salmon and trout. They mined the old baymouth bar for sand, and baked the clay south of the forks into the bricks that were Toronto's favourite building material for more than half a century. In less than 150 years, the settlers cleared the lower valley almost entirely of trees. The watershed was a vast resource, its apparent purpose being to provide sustenance and raw materials for the young, growing city.

The settlers also viewed the river as a nuisance, a threat, and an obstacle. Floods regularly swept away mills and bridges. The Don was a barrier to the city's eastward expansion. The huge marsh at Ashbridge's Bay — its waters fouled by human and cattle wastes — was reviled as an unhealthy swamp. Habitat destruction was well under way. In the 1860s, the salmon finally stopped spawning in the Don, and the only brook trout in the headwaters today are escapees from the Ministry of Natural Resources' hatchery.

In the late 19th century, engineers set out to tame the river and, by the end of the century, they had strapped the meandering

lower Don into a five-kilometre (3-mile) linear canal. Bridges would now be more secure and the railway north of the waterfront could be easily built along its edge. In the years after 1912, the Ashbridge's Bay marshes were filled in to create the port lands, the most massive engineering project on the continent in its time, forcing the Don into a right-angle exit into the harbour.

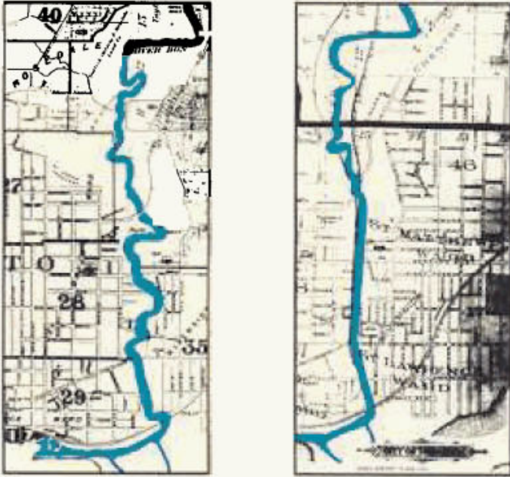


Figure 8 The lower Don before and after channelling

Filling in Ashbridge's Marsh

An early flood on the Don

Forks of the Don today

But, despite the constraints, the Don continued doing what rivers naturally do. Deprived of its delta, it dumped thousands of tonnes of silt in its lower reach — which has necessitated an expensive dredging annually ever since. With its lowland forests and most of its marshes gone and its flow swollen by urban run-off from the storm sewers, it flooded more devastatingly than ever before. In 1954, Hurricane Hazel, the worst storm on record, ripped out bridges and buildings along the Don and Humber rivers, and claimed 84 lives.

A 19th-century Torontonian would hardly recognize the Don watershed of the late 20th century. It is difficult for seniors to see in today's urbanized area the wild valley they once enjoyed for hiking, fishing, and swimming. Construction in the 1950s of the Don Valley Expressway and the Bayview Extension turned what had been a corridor for wildlife into one for cars. Not only has traffic radically changed the area's character, but pollution from road salt, lead, and oil seeping off the expressway, and snow dumps in the valley continue to degrade habitats.

Each decade of the 20th century has seen thousands more hectares of countryside paved over by development until, today, the watershed is 70-percent urbanized and houses 800,000 people. Much of the remaining countryside is owned by developers.