

## 3.5 Flora

In-stream vegetation, riparian vegetation and canopy vegetation make up the flora along and within the Ottawa River. Please also refer to Chapter 3.7: Ecosystems for a discussion of flora along the river.

### 3.5.1 In-stream Vegetation

In general, in-stream vegetation includes algae and macrophytes (larger aquatic plants.) Because the Ottawa River is alternately a fast-moving river and a series of deep lakes, in-stream vegetation is relatively rare along its course, and is mostly associated with its wetlands. In-stream vegetation in the Ottawa can be divided into three categories: submerged plants, floating plants, and emergent plants.

**Figure 3.28 Instream Vegetation**



Source: Francis Lavigne

More visible than submerged plants, floating plants can have a positive impact on river ecology by partly shading the river floor and therefore helping to reduce algal blooms. Certain floating plant species may spread rapidly, often taking over a given area. For instance, the European Frog-bit, a free-floating aquatic plant with small white flowers, was intentionally introduced in 1932 at Ottawa's Experimental Farm. It soon found its way onto many connected tributaries and wetlands. By 1939, the species had spread to nearby sections of the Rideau Canal, and by 1952, it had been collected from the Ottawa River near Montreal Island. By 1960, it

**Figure 3.27 Orchid**



Source: Ottawa River Legacy Landmark Network

Submerged plants are either rooted to the soil or floating on the water's surface, and benefit from shallow water conditions to capture available light for photosynthesis. Common submerged plants along the Ottawa River include Hornwort (*Ceratophylla* sp.), and tape grasses (*Valisneria americana*).

**Figure 3.29 European Frog-bit**



Source: Petawawa Civic Centre

had been identified at various points along the Ottawa and Rideau Rivers, and had spread up the Ottawa to near Pembroke by 1982. This plant species produces a dense floating mat of vegetation, preventing submerged aquatic plants from accessing light, dissolved gases, or nutrients. There is little doubt that the species is therefore displacing native flora and perhaps impacting also the fauna (CWS: “Invasive Plants”). Similarly, the European Water-Milfoil is an invasive species that was introduced in the 1960s. It grows in dense mats, disrupting boat traffic and swimming (Can. Museum of Nature: “Biodiversity”).

Emergent plants are those plants that are rooted in shallow water but have most of their vegetative growth above water. These plants play an important role retaining soils, in regulating current and temperature, and in purifying water. Emergent plants present along the Ottawa River include *Carex* sp., *Rush* sp., *Sagittaria* sp., and *Horsetail*.

Submerged, floating, and emergent vegetation along the Ottawa is discussed in greater detail in Chapter 3.7.1: Riverine Systems.

### 3.5.2 Riparian vegetation

The term riparian refers to plant life that is located on the bank of a natural watercourse. Riparian vegetation is essential to the health of rivers. It stabilizes riverbanks, prevents runoff, and helps with flood control. It also provides habitat for wildlife, serves as a food source, and affords other species an area for reproduction. A river’s current carries the seeds of riparian plant life, helping this vegetation to disperse.

Many riparian plant species can only be found along the floodplain of the Ottawa River. The unique habitats of the river corridor contain many plant species that are at the limit of their habitat along the floodplain forests and shores. All of these plant communities are adapted to seasonal flooding. The plant communities situated on the Petrie Islands provide an excellent example of this, and are discussed in greater detail in Chapter 3.7.4: The Riparian Zone. Riparian species along the Ottawa include the Speckled Alder, Silky Dogwood, Sweet Gale, *Viburnum* sp., *Potentilla* sp., *Solidago* sp. and numerous fern species. On inhabited islands, remnant plants that are typical of farming operations (such as grasses and legumes) can be found.

Spring flooding also creates and supports prairie-like and alvar<sup>3</sup> vegetation in narrow bands along the shorelines of the Ottawa River. These are significant because it is less well-known that these conditions can lead to this type of vegetation along rivers. Little Bluestem (a riverine prairie vegetation) grows on the south shore of Beckett Island west of Pembroke. Shirley’s Bay in Ottawa contains shrubby alvars with plants such as Shrubby Cinquefoil and prairies species such as Little Bluestem, Big Bluestem, Prairie Cord-grass and Indian Grass. Prairie and alvar-like vegetation also exist at the Norman Rapids of the Rocher Fendu. Plants characteristic of Great Lakes shorelines are also present along the Ottawa River (Bakowsky 5-8).

### 3.5.3 Canopy vegetation

The forest along the southern stretches of the Ottawa River is composed of a mix of deciduous and coniferous trees. The dominant species of this mixed forest are Maples, White Pine, Red Pine, Eastern

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<sup>3</sup> An alvar is a rare habitat created by a limestone plain with thin or no soil and sparse vegetation. The lack of drainage means that these areas flood in the spring and become very dry in the summer. This challenging habitat supports rare plants and animals (Wikipedia: “Alvar”).

White Cedar, Tamarack, White Spruce, Red Oak, Basswood, Ash, Poplar, Yellow Birch, and White Birch. The deciduous Butternut tree, which exists along the shoreline of the Ottawa River, has recently been added to Canada's list of endangered species (COSEWIC: "Species Database").

**Figure 3.30 Woods Along the River**



Source: Alexandre Baker

Along the northern stretches of the river, coniferous trees dominate, including Jack Pine, Black Spruce, White Spruce, Balsam Fir, Trembling Aspen, White Birch, and Balsam Poplar. The forest floor associated with the boreal forest is made up of lichens and mosses. The forest communities of both the northern and southern stretches of the Ottawa are discussed in greater detail in Chapter 3.7.5: Forest Ecosystems.