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An Unusual Shoreline Flora Along the Mississippi River, Lanark County

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Although close to Ottawa, Lanark County has not been thoroughly explored botanically. In particular, the Mississippi River Valley seems to offer opportunities for further investigation. This would provide a better foundation for the recognition and protection of unique habitats. Recent work in this area includes documentation of the Carleton Place Hackberry (*Celtis occidentalis*) (Brunton 1971).

Here we describe an unusual flora and vegetation found along the Mississippi River between Sheridans Rapids and Playfairville Rapids. This area is located 95 km southwest of Ottawa, just west of the Ottawa District (Figure 1). We report both a species not yet recorded from the District and several species considered rare in the District.

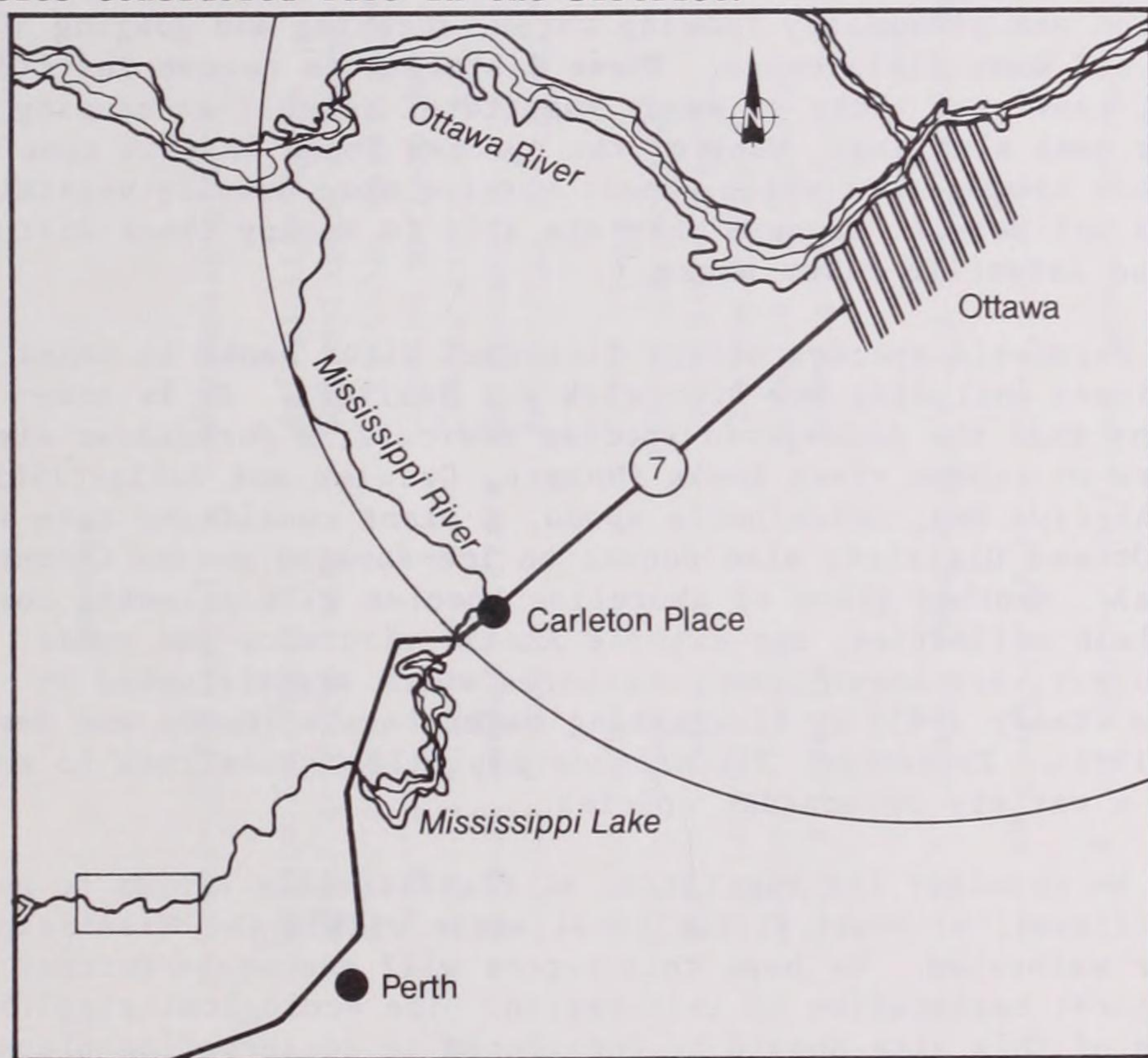


Figure 1. Location of the study site (box). Part of the boundary of the Ottawa District is also shown (circle).

A section of the north shore of the river near Playfairville Rapids was studied. Although at one time this particular site was under water due to a sawmill dam (Brown 1976), a similar flora occurs in other parts of the river which would not have been inundated by the dam.

Three distinct habitats and vegetation types exist: an alluvial terrace, an eroded bank, and an aquatic zone. In the first week of June, the alluvial terrace is covered by *Ophioglossum vulgatum*. In late June, *Eupatorium maculatum*, *Onoclea sensibilis* and *Phalaris arundinacea* are the dominant species. The aquatic zone contains species such as *Carex flava*, *Carex lasiocarpa*, *Carex retrorsa*, *Sagittaria latifolia*, *Scirpus cyperinus* and *Sium suave*. The eroded zone is of most interest. In early July, *Selaginella apoda*, *Iris versicolor*, *Spiranthes lucida*, *Thalictrum polygamum* and *Campanula aparinoides* are apparent. At the end of July and in early August, *Carex aurea*, *Cladium mariscoides*, *Lobelia cardinalis*, *Lobelia kalmii*, *Lythrum salicaria* and *Parnassia glauca* are the most noticeable species.

The list of noteworthy species at this site includes those shown in Table 1 (opposite).

The largest number of rare, sparse and uncommon species was located in the eroded zone. The mechanisms responsible for the erosion are presumably flowing water, scraping and gouging by ice, and wave disturbance. These disturbances remove fertile soil, leaving a rocky or sandy substrate, as well as causing river bank slumping. Many of the species found in this zone may be poor competitors which cannot survive more heavily vegetated sites but persist because they are able to occupy these disturbed and infertile river banks.

Parnassia species occupy disturbed river banks in other provinces including New Brunswick and Manitoba. It is noteworthy that the endangered species *Pedicularis furbishiae* also occurs on eroded river banks (Menges, Grawler and Waller 1985). At Shirleys Bay, *Selaginella apoda*, a plant considered rare in the Ottawa District, also occurs on ice-scoured shores (Brunton 1985a). Another group of shoreline species with Atlantic coastal plain affinities, for example *Rhexia virginica* and *Xyris difformis*, are known from lakeshores which are disturbed by waves (Keddy 1985) or fluctuating water levels (Keddy and Reznicek 1982). Therefore, disturbance may allow shorelines to support a variety of unusual species.

We consider the vegetation at Playfairville Rapids to be significant, at least at the local scale within the Mississippi River watershed. We hope this report will encourage further botanical exploration of this region. The ecological significance of this site should be considered in conservation planning by the Mississippi Valley Conservation Authority.

Table 1

Species		Status in the Ottawa District *	Status in Lanark County **
Grass-of-Parnassus	<i>Parnassia glauca</i>	not recorded	rare
Meadow Spikemoss	<i>Selaginella apoda</i>	rare	uncommon
Adder's-tongue Fern	<i>Ophioglossum vulgatum</i>	sparse	rare
Arrow-grass	<i>Triglochin maritima</i> **	rare	rare
Twig-rush	<i>Cladium mariscoides</i>	sparse	rare
Jointed Rush	<i>Juncus articulatus</i>	rare	rare
Shining Ladies'-tresses	<i>Spiranthes lucida</i>	rare	rare
Shrubby Cinquefoil	<i>Potentilla fruticosa</i> **	sparse	uncommon
Golden Sedge	<i>Carex aurea</i>	uncommon	uncommon
Woolly Sedge	<i>Carex lasiocarpa</i>	uncommon	uncommon
Bottle Gentian	<i>Gentiana andrewsii</i>	uncommon	uncommon
Turtlehead	<i>Chelone glabra</i> #	uncommon	uncommon
Cardinal-flower	<i>Lobelia cardinalis</i>	uncommon	uncommon
Kalm's Lobelia	<i>Lobelia kalmii</i>	uncommon	uncommon

* Status from Gillett and White (1978) and Brunton (1985a, 1985b, 1985c).

** Courtesy of D.J. White.

No voucher collected because of its rarity at the site.

Acknowledgements

We thank D.J. White and T. Mosquin for helpful comments on the manuscript. We particularly thank David White for allowing us to use his information on status in Lanark County and for providing the records of *Triglochin maritima* and *Potentilla fruticosa*. We also thank S.J. Darbyshire and G. Baillargeon for checking our vouchers. The vouchers are deposited in the herbarium of the Department of Agriculture (DAO).

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