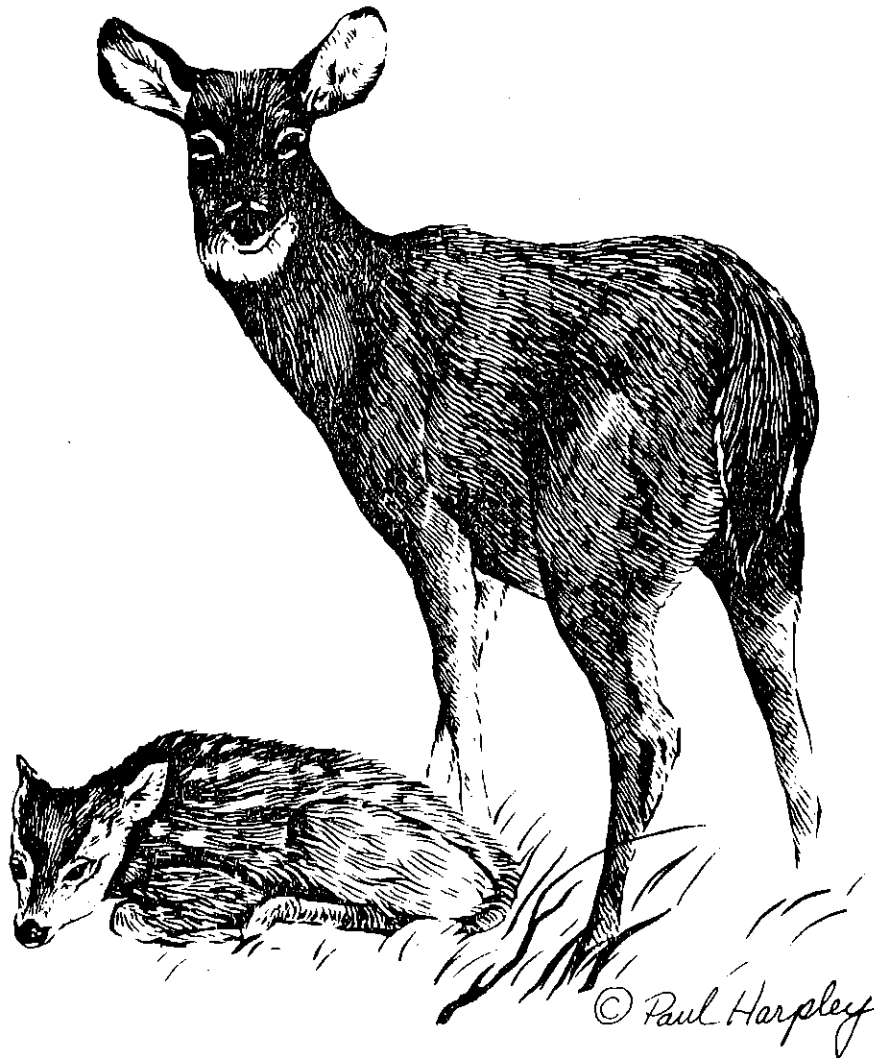


TORONTO FIELD NATURALISTS' RAVINE SURVEY

STUDY NO. TWO

BROOKBANKS RAVINE

by Bruce Cruickshank and Bruce Parker



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BROOKBANKS RAVINE

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THE TORONTO RAVINE SURVEY : AN INTRODUCTION

Urban biology is, unfortunately, a neglected study in our time. Only rarely do professional botanists, ornithologists, or ecologists treat the city as anything other than lost, and yet the urban environment desperately needs the preservation, and often the restoration, of any natural areas that remain within its boundaries. This is a task in which the informed amateur field naturalist can play an important part.

To a considerable degree natural areas still survive within Metro Toronto because of a fortunate natural legacy -- a series of steep-sided, deep ravines running from north to south across the city into Lake Ontario. To understand this legacy of ravines, it is necessary to go back a long way in time, to the last glacial period in Eastern Canada, about 10,000 years ago. All of Southern Ontario was then covered by ice. Later, as the ice retreated northward, the basic structure of the present surface landscape was left behind, including the numerous ravines which are a unique feature of Metro Toronto.

The first survey in this series, that of Chatsworth Ravine, was printed in October 1973, at the time of the Toronto Field Naturalists' Golden Jubilee. It was well received by the local residents' association and by the City of Toronto Parks Department, which undertook certain remedial work in the ravine, including the planting of more trees. Thus encouraged we have moved on to survey other areas. We believe that basic biological and ecological information on ravines is needed if the case for their preservation in a sound natural state is to be made clear to the public and to political bodies. The survey which follows is another in what we hope will be a continuing series of reports on Metropolitan Toronto's ravines.

NOTE OF ACKNOWLEDGEMENT

The Toronto Field Naturalists' Club appreciates the permission of the North Rosedale Ratepayers' Association to include this study of the Park Drive Ravine in its series of ravine surveys. A study which the authors originally prepared for the North Rosedale Ratepayers' Association. Close cooperation between the Club and local residents' associations is one of the most effective ways of preserving Toronto's ravines in a sound ecological state, both now and in the future.

Stewart Hilts,

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Toronto Field Naturalists' Club

TORONTO FIELD NATURALISTS' CLUB

RAVINE SURVEY

STUDY # 2 -- BROOKBANKS RAVINE

Prepared by Bruce Cruickshank and Bruce Parker

LOCATION: The area under survey is outlined in green in the map in Appendix #1. The section east of the Don Valley Parkway is part of what is designated by the North York Parks Department as "Brookbanks Greenbelt": it is roughly 40-50 acres in extent. The section west of the Parkway has no official name: It borders on the Donalda Golf Course and is approximately 6 acres. The whole area is approximately $\frac{1}{4}$ miles long.

This composite area was chosen for study because it follows the entire length of a single branch of the East Don River. It also offers a wide variety of habitats. The name "Brookbanks Ravine" has been chosen for it links the whole area with an identifiable public park. The study was conducted from October 1973 through October 1974.

STATUS: Brookbanks Greenbelt is public property and is maintained by North York Parks Department. The northern and western boundary of this section abuts on streets (York Mills Road, Fenside Drive, Valley Woods Road, Brookbanks Drive), on town houses (Valley Woods, Citadel Village) and on high-rise apartments (Top of the Valley). The southern and eastern boundary abuts on private houses.

The western section belongs to the Donalda Club. The western boundary abuts on private houses: the eastern side runs alongside the 11th and 12th holes of the golf course.

ACCESS: Public access to the Greenbelt area is from the roads on the northern and western boundary and by two narrow lanes from Brookbanks Drive and Cassandra Boulevard. Parking at weekends is available at Brookbanks Public School and Three Valleys Public School.

Access to the western area is shown on Parks Departments maps by two narrow gaps between houses in Groveland and Lacewood crescents. Entry is also possible from the short dead end opening near the south end of Three Valleys Drive.

TOPOGRAPHY: Four distinct sections are easily recognized (see map):

- A. From the northeastern corner at York Mills Road and Fenside Drive to the 90° turn at Valley Woods Road. This is an open, grassed region, 100-200 feet wide, with relatively gentle slopes on both sides. Much of the floor of the ravine here has been filled with poor quality soil. There is no formal pathway

along the area but a gravel path crosses it from the lane off Brookbanks Drive to the Valley Woods Townhouses. Trees are sparse except on the southern side.

An area of erosion on the south side opposite the townhouses is leading to a steady loss of trees. A second area of erosion is on the south side just before the bend in the river. The side of the ravine just above this is badly worn with many exposed tree roots: there is quite heavy foot traffic in this area.

- B. From Valley Woods Road to Brookbanks Drive. Here the floor of the valley is not more than 50 feet wide, the sides are steeper and both sides are thickly covered with trees. A gravel path traverses the length of this section. The floor of the ravine is grassy with small marshy patches.
- A large area of erosion is present on the west side behind the townhouses of Citadel Village: this is a favourite spot for Tarzan rope activity.
- C. From Brookbanks Drive, behind the Top of the Valley apartments to the Don Valley Parkway. Most of this section is less than 100 feet wide and is on top of a steep bank between the river and the gardens on its south side. It is well covered with trees.
- This is a problem area for preservation of the river bank and the steeply sloping side against the river. There are several major washaways.
- D. West of the Parkway. This is a wild section, little affected by the human activities in the vicinity or in the floor of the valley. The sides are steep. Both sides and the floor have a dense vegetation.

WATERCOURSE: The stream which traverses the whole area was called the "Deerlick" by the Maginn family who farmed (1841) the lot immediately north of Lawrence Avenue between Woodbine and Victoria Park Avenues, just to the east of where the stream joins the East Don River. Deer were frequently seen in this area up to the end of last century. Salmon were known in the stream at one time.

For the most part the stream has a shallow bed of rather sandy soil and loose stones, but, in the last few hundred yards the soil is clay and the river has gouged out a bed 6-8 feet deep in a series of hairpin bends. The portion of the stream in the most northerly section was filled in during the winter 1971-72, the water being

carried in an underground storm drain. Since that time the ground in this region has taken much longer to dry out after the spring thaw and tends to remain wet and marshy until mid-June. The rest of the stream flows above ground except for culverts under Brookbanks Drive and the Parkway.

There is a fairly steady flow of water during the year, with a spring peak. After storms there is a very heavy flow in sections C and D.

Considerable maintenance has been carried out by the Parks Department at three points where the banks are liable to erosion. This erosion has been successfully controlled by gabion walls at the 90° bend below Valley Woods Road and along the stretch immediately north of Brookbanks Drive. Similar work just south of Brookbanks Drive has been much less successful: the gabion walls have been undermined and are falling into the river bed and erosion of the bank continues at a disturbing rate. Some portions of the path here are dangerous, even when dry.

An attempt to halt erosion of the golf course with a gabion wall near the lower end has failed. Heavy storm water has undermined the wall and the erosion increases with each run-off.

There are three collections of stagnant water in Section D, one of which dries up in a long dry spell, the other two remain wet all year long. Flooding occurs in the flatter part of this section after a storm.

Water pollution. Chemical samples taken in November, 1974 indicated that the stream contained high nutrient and mineral concentrations although this is not unusual for streams draining urban areas. The mineral content, however, was particularly high.

Items of garbage, eg., motor tires, plastic or metal objects, are occasionally seen in the Greenbelt sections. From time to time beer bottles are thrown into the water in these sections, either intact or with intent to break them.

**FACILITIES
AND USES:**

The only facilities currently provided are natural log seats in Section B. These blend harmoniously with the surroundings and will be very difficult to damage or remove. Some years ago picnic tables were set out in Sections A and B but were little used and often finished up in the stream.

The Parks Department cuts the grass in Sections A and B; this is being done approximately once per month at present. In dry weather the grass in Section A tends to discolour rather badly, probably due to the poor condition of the soil. Trees have been planted in Sections A and B; some have been destroyed maliciously but most are surviving. The flower bed on the corner of Fenside and Brookbanks Drives has been particularly well cared for in 1974.

The most extensively used portions of the ravine are Sections A and B, from the northern end to Brookbanks Drive. There are a variety of activities:

1. Walking. There is frequent use by considerable numbers of children going from the Valley Woods Townhouses to and from Brookbanks Public School and by adults and children from the Townhouses to and from Parkwoods Plaza. Adults walk their dogs. Joggers are occasionally seen. Organized groups from the School (Brookbanks Public), and local Cub/Brownie Packs and the Toronto Field Naturalists' Club use the area. These sections have also been included in the Co-operative Warbler Migration Study undertaken by the Toronto Ornithological Club in the Spring of 1973 and 1974.
2. Sports and Games. There are no facilities but small groups play football. Occasional golfers practise, despite notices to the contrary. Ice-rinks form or are created in the winter and are used for skating and hockey. Cross-country skiers and tobogganers use the area in the winter.
3. Vehicles. There is no official trail but children on bicycles are frequently seen. Occasional motor cyclists use Section A as a short cut. Police cruisers occasionally visit Section A. These motorized vehicles cause considerable damage to the grass in the marshy parts.

**TREES AND
UNDERGROWTH:**

The slopes of the ravine are well-wooded with Sugar Maple-Beech woods and a few small stands of Hemlock. Some of the more numerous of the remaining 29 species of trees which are found are Poplars, Blue Beech, Yellow Birch, Basswood and White Ash. White Pines appear to be disappearing because the seedlings are unable to grow in the shade of the deciduous trees. Smaller trees, such as Manitoba Maple, Hawthorns and Apple cover much of the valley floor in Section D. The natural variety throughout the ravine increases the scenic attractiveness of the area as well as providing a more diversified habitat for wildlife.

The understorey consists mainly of young trees (mostly Sugar Maple) showing that the wood is reproducing itself and that the area is in a state of natural succession. The value of a dense undergrowth of small shrubs, such as Raspberry, Red-berried Elder and Buckthorn, is apparent in Section D where the ravine is least disturbed. This undergrowth provides a good habitat for wildlife, particularly birds, by offering shelter and food (berries and insects).

The most interesting group of herbaceous plants is the spring wildflowers. Patches of Trilliums, Dog-tooth Violets and Marsh Marigolds, with other flowers mixed in, make attractive displays during May when public interest

in the natural condition of the area is at a peak. A few plants flower during the summer and the early fall display of asters and other flowers rivals that of the spring time. The brilliance of the autumn tree colour in the ravine must be seen to be appreciated.

For a list of the 117 species of plants which have been identified during 1974 see Appendix 2.

BIRDS:

The most numerous and conspicuous animals in the ravine are the birds. Most of the 105 species (see Appendix 3) which have been identified are migrants. There is not enough information available to determine accurately how many species and individuals spend either the winter or summer in the area, but the winter and summer populations are much smaller than the migrating population. Censuses of bird numbers over a period of years would show changes in these resident populations and could serve as an indication of the overall health of the ravine. Detailed information is also required about the species which nest in the area.

During migration, particularly May and September, hundreds of birds of as many as 55 to 60 species a day may be found. Some birds pass through rapidly whereas others may linger for as long as two to three weeks.

MAMMALS:

At present the most conspicuous mammal is the Grey (or Black) Squirrel, of which 10 to 15 may be seen in one day. The smaller Red Squirrel has not been recorded for 2 to 3 years. Other mammals which were identified during 1974 were Groundhog, Raccoon, Striped Skunk, Muskrat and Little Brown Bat: no Chipmunks or Mice were identified during 1974. Smaller mammals, such as Jumping Mice, White-footed Mice and Short-tailed Shrew were found in the area during the late 1940's. The absence of these small mammals gives an indication of how the habitat, particularly the filled-in parts of the valley floor in Section A, has changed since the surrounding area became urbanized.

During heavy movements of migrating birds domestic cats frequently become numerous. At least 15 to 20 cats have been seen in one hour in Section A. The effect of these animals on the local population of birds and small mammals is not known.

**REPTILES AND
AMPHIBIANS:**

No frogs were found during 1974 and American Toads were only occasionally seen. Likewise snakes are scarce -- a few DeHay's and Garter Snakes were seen. The Red-backed Salamander has been reported from Section A, but the presence has not been confirmed by the writers.

Frogs, snakes and salamanders are under heavy pressure from children -- and some adults -- who treat them as animals which must be destroyed, or as animals which are

so interesting that they are taken home as pets, usually unsuccessfully.

FISH: No fish were seen in the watercourse.

RECOMMENDATIONS:

1. Not all dead trees should be removed as they form part of the natural community. Dead trees provide nesting sites for some birds, such as Woodpeckers, American Kestrel, Screech Owl, Chickadees, House Wren, as well as housing insects which are an important part of the food web of the ravine. Dead trees which are not dangerous should be left alone.
2. Fallen trees should be allowed to decay and contribute to a natural formation of humus. Fallen leaves and trees provide an essential link in the natural cycle of foodstuffs.
3. Wild flowers should be "enjoyed, not destroyed". It may be possible to designate some ravines, or parts such as Section D of this ravine, as Wildflower Sanctuaries.
4. Breeding bird censuses are required.
5. A more detailed study is required of small mammals.
6. Frogs, snakes and salamanders appear to require special protection if they are to survive as part of the natural community.
7. The effects of domestic cats should be determined with a view to restricting their activity if necessary.

NOTE: Nearly 120 colour transparencies showing the topography of different Sections of this Ravine, wildflowers, etc., are in the possession of Bruce Cruickshank. Limited use of these is available to illustrate talks on this and other ravines.

ACKNOWLEDGMENTS:

Mrs. Patricia W. Hart, author of Pioneering in North York, supplied historical information. Mr. Gordon Hutchinson, Deputy Commissioner of Parks for the Borough of North York and Mr. Henry Janeba, Manager of the Donalds Club supplied information about different parts of the ravine.

Toronto

November, 1974

CHECK-LIST OF THE PLANTS FOUND IN BROOKBANKS RAVINE, 1973-1974

A. TREES, SHRUBS and WOODY VINES

YEW FAMILY (TAXACEAE)

Ground Hemlock *Taxus canadensis*

PINE FAMILY (PINACEAE)

Red Cedar *Juniperus virginiana*

White Pine *Pinus strobus*

White Cedar *Thuja occidentalis*

Eastern Hemlock *Tsuga canadensis*

WILLOW FAMILY (SALICACEAE)

Sandbar Willow *Salix interior*

Black Willow *S. nigra*

Balsam Poplar *Populus balsamifera*

Large-toothed Aspen *P. grandidentata*

Trembling Aspen *P. tremuloides*

WALNUT FAMILY (JUGLANDACEAE)

Black Walnut *Juglans nigra*

HAZEL FAMILY (CORYLAGEAE)

Yellow Birch *Betula lutea*

White Birch *B. papyrifera*

Blue Beech *Carpinus caroliniana*

Ironwood *Ostrya virginiana*

BEECH FAMILY (FAGACEAE)

Beech *Fagus grandiflora*

White Oak *Quercus alba*

Swamp White Oak *Q. bicolor*

Red Oak *Q. rubra*

ELM FAMILY (ULMACEAE)

Red Elm *Ulmus rubra*

ROSE FAMILY (ROSACEAE)

Hawthorn *Crataegus* sp.

Sweet Cherry *Prunus avium*

Red Cherry *P. pensylvanica*

Black Cherry *P. serotina*

Choke Cherry *P. virginiana*

Ninebark *Physocarpus apulfolius*

European Mountain-Ash *Pyrus acuparia*

Domestic Apple *P. malus*

Rose *Rosa* sp.

Purple-flowering Raspberry *Rubus odoratus*

Black Raspberry *R. occidentalis*

Red Raspberry *R. strigosus*

CASHEW FAMILY (ANACARDIACEAE)

Poison Ivy *Rhus radicans*

Staghorn Sumac *R. typhina*

MAPLE FAMILY (ACERACEAE)

Manitoba Maple	Acer negundo
Red Maple	A. rubrum
Silver Maple	A. saccharinum
Sugar Maple	A. saccharum

BUCKTHORN FAMILY (RHAMNACEAE)

Common Buckthorn	Rhamnus cathartica
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VINE FAMILY (VITACEAE)

Virginia Creeper	Parthenocissus quinquefolia
Riverbank Grape	Vitis riparia

LINDEN FAMILY (TILIACEAE)

Basswood	Tilia americana
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DOGWOOD FAMILY (CORNACEAE)

Alternate-leaved Dogwood	Cornus alternifolia
Red-osier Dogwood	C. stolonifera

OLIVE FAMILY (OLEACEAE)

White Ash	Fraxinus americana
Lilac	Syringa vulgaris

NIGHTSHADE FAMILY (SOLANACEAE)

Bittersweet Nightshade	Solanum dulcamara
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HONEYSUCKLE FAMILY (CAPRIFOLIACEAE)

Canada Honeysuckle	Lonicera canadensis
Tartarian Honeysuckle	L. tatarica
Red-berried Elder	Sambucus pubens
Highbush Cranberry	Viburnum trilobum

B. FERNS and ALLIES

HORSETAIL FAMILY (EQUISETACEAE)

Field Horsetail	Equisetum arvense
Scouring Rush	E. hyemale

FERN FAMILY (POLYPODIACEAE)

Lady Fern	Athyrium felix-femina
Bulblet Bladder Fern	Cystopteris bulbifera
Marginal Shield Fern	Dryopteris marginalis
Spinulose Shield Fern	D. spinulosa
Sensitive Fern	Onoclea sensibilis
Christmas Fern	Polystichum acrostichoides
Ostrich Fern	Pteretis pensylvanica

C. HERBACEOUS PLANTS

CAT-TAIL FAMILY (TYPHACEAE)

Broad-leaved Cat-tail	Typha latifolia
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ARUM FAMILY (ARACEAE)

Jack-in-the-pulpit	Arisaema atrorubens
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LILY FAMILY (LILIACEAE)

Wild Leek	<i>Allium tricoccum</i>
Yellow Trout-lily	<i>Erythronium americanum</i>
Michigan Lily	<i>Lilium michiganense</i>
Canada Mayflower	<i>Maianthemum canadense</i>
Hairy Solomon's-seal	<i>Polygonatum pubescens</i>
Red Trillium	<i>Trillium erectum</i>
White Trillium	<i>T. grandiflorum</i>

ORCHID FAMILY (ORCHIDACEAE)

Helleborine	<i>Epipactis helleborine</i>
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NETTLE FAMILY (URTICACEAE)

Stinging Nettle	<i>Urtica dioica</i>
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BIRTHWORT FAMILY (ARISTOLOCHIACEAE)

Wild Ginger	<i>Asarum canadense</i>
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BUCKWHEAT FAMILY (POLYGONACEAE)

Prostrate Knotweed	<i>Polygonum aviculare</i>
Pale Smartweed	<i>P. lapathifolium</i>
Lady's-thumb	<i>P. persicaria</i>
Curled Dock	<i>Rumex crispus</i>

GOOSEFOOT FAMILY (CHENOPODIACEAE)

Lamb's quarters	<i>Chenopodium album</i>
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AMARANTH FAMILY (AMARANTHACEAE)

Prostrate Pigweed	<i>Amaranthus graecizans</i>
Red-root Pigweed	<i>A. retroflexus</i>

PURSLANE FAMILY (PORTULACACEAE)

Narrow-leaved Spring Beauty	<i>Claytonia virginia</i>
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PINK FAMILY (CARYOPHYLLACEAE)

White Champion	<i>Lychnis alba</i>
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BUTTERCUP FAMILY (RANUNCULACEAE)

White Baneberry	<i>Actea pachypoda</i>
Wood Anemone	<i>Anemone quinquefolia</i>
Canada Columbine	<i>Aquilegia canadensis</i>
Marsh Marigold	<i>Caltha palustris</i>
Acute-lobed Hepatica	<i>Hepatica acutiloba</i>
Kidney-leaf Buttercup	<i>Ranunculus abortivus</i>
Tall Buttercup	<i>R. acris</i>
Early Meadow-rue	<i>Thalictrum dioicum</i>
Tall Meadow-rue	<i>T. polygamum</i>

BARBERRY FAMILY (BERBERIDACEAE)

Blue Cohosh	<i>Caulophyllum thalictroides</i>
May-apple	<i>Podophyllum peltatum</i>

POPPY FAMILY (PAPAVERACEAE)

Bloodroot	<i>Sanguinaria canadensis</i>
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MUSTARD FAMILY (CRUCIFERAE)

Yellow Rocket
Two-leaved Toothwort
Intermediate Toothwort
Three-leaved Toothwort
Wormseed Mustard

Barbarea vulgaris
Dentaria diphylla
D. intermedia
D. laciniata
Erysimum cheiranthoides

SAXIFRAGE FAMILY (SAXIFRAGACEAE)

Mitrewort
Foamflower

Mitella diphylla
Tiarella cardifolia

ROSE FAMILY (ROSACEAE)

Agrimony
Field Strawberry
Canada Avens
Silverweed
Rough-fruited Cinquefoil

Agrimonia gryposepala
Fragaria virginiana
Geum canadense
Potentilla anserina
P. recta

LEGUME FAMILY (LEGUMINOSAE)

Hog-peanut
Black Medick
White Sweet Clover
Yellow Sweet Clover
Red Clover
White Clover

Amphicarpa bracteata
Medicago lupulina
Melilotus alba
M. officinalis
Trifolium pratense
T. repens

WOOD-SORREL FAMILY (OXALIDACEAE)

Yellow Wood-sorrel

Oxalis europaea

GERANIUM FAMILY (GERANIACEAE)

Herb Robert

Geranium robertianum

TOUCH-ME-NOT FAMILY (BALSAMINACEAE)

Orange Jewel-weed

Impatiens capensis

ST. JOHN'S-WORT FAMILY (GUTTIFERAE)

Common St. John's-wort

Hypericum perforatum

VIOLET FAMILY (VIOLACEAE)

American Dog Violet
Common Blue Violet
Smooth Blue Violet
Downy Yellow Violet

Viola conspersa
V. papilionacea
V. pennsylvanica
V. pubescens

EVENING PRIMROSE FAMILY (ONAGRACEAE)

Enchanter's Nightshade
Hairy Willowherb
Common Evening Primrose

Circaea quadrisulcata
Epilobium hirsutum
Oenothera biennis

PARSLEY FAMILY (UMBELLIFERAE)

Queen Anne's Lace

Daucus carota

MILKWEED FAMILY (ASCLEPIADACEAE)

Common Milkweed
Black Swallow-wort

Asclepias syriaca
Cynanthum nigrum

WATERLEAF FAMILY (HYDROPHYLLACEAE)	
Virginia Waterleaf	<i>Hydrophyllum virginianum</i>
BORAGE FAMILY (BORAGINACEAE)	
Viper's Bugloss	<i>Echium vulgare</i>
Small-flowered Forget-me-not	<i>Myosotis laxa</i>
VERVAIN FAMILY (VERBENACEAE)	
Blue Vervain	<i>Verbena hastata</i>
White Vervain	<i>V. urticifolia</i>
MINT FAMILY (LABIATAE)	
Common Bugleweed	<i>Lycopus uniflorus</i>
Heal-all	<i>Prunella vulgaris</i>
FIGWORT FAMILY (SCROPHULARIACEAE)	
Turtlehead	<i>Chelone glabra</i>
Common Toadflax	<i>Linaria vulgaris</i>
Great Mullein	<i>Verbascum thapsus</i>
PLANTAIN FAMILY (PLANTAGINACEA)	
Broad-leaved Plantain	<i>Plantago major</i>
GOURD FAMILY (CUCURBITACEAE)	
Wild Cucumber	<i>Echinocystis lobata</i>
BELLFLOWER FAMILY (CAMPANULACEAE)	
Creeping Bellflower	<i>Campanula rapunculoides</i>
LOBELIA FAMILY (LOBELIACEAE)	
Great Blue Lobelia	<i>Lobelia siphilitica</i>
COMPOSITE FAMILY (COMPOSITAE)	
Common Yarrow	<i>Achillea millefolium</i>
Common Ragweed	<i>Ambrosia artemisiifolia</i>
Pussy-toes	<i>Antennaria</i> sp.
Common Burdock	<i>Arctium minor</i>
Heart-leaved Aster	<i>Aster cardifolius</i>
Calico Aster	<i>A. lateriflorus</i>
Large-leaved Aster	<i>A. macrophyllus</i>
New England Aster	<i>A. novae-angliae</i>
Nodding bur-marigold	<i>Bidens cernua</i>
Ox-eye Daisy	<i>Chrysanthemum leucanthemum</i>
Canada Thistle	<i>Cirsium arvense</i>
Bull Thistle	<i>C. vulgare</i>
Philadelphia Fleabane	<i>Erigeron philadelphicus</i>
Rough Fleabane	<i>E. strigosus</i>
Joe-pye-weed	<i>Eupatorium maculatum</i>
Boneset	<i>E. perfoliatum</i>
White Snakeroot	<i>E. rugosum</i>
Hawkweed	<i>Hieracium</i> sp.
Elecampane	<i>Inula helenium</i>

COMPOSITE FAMILY (COMPOSITAE) continued

Blue-stemmed Goldenrod	<i>Solidago caesia</i>
Canada Goldenrod	<i>S. canadensis</i>
Zigzag Goldenrod	<i>S. flexicaulis</i>
Grass-leaved Goldenrod	<i>S. graminifolia</i>
Perennial Sow-thistle	<i>Sonchus arvensis</i>
Dandelion	<i>Taraxacum officinale</i>
Common Yellow Goatsbeard	<i>Tragopogon pratensis</i>
Coltsfoot	<i>Tussilago farfara</i>
Cocklebur	<i>Xanthium chinense</i>

CHECK-LIST OF THE BIRDS OBSERVED IN BROOKBANKS RAVINE
1968-1974

NOTE: One of the observers (BC) has lived in a house backing on the Section A since August 1968. This list includes species seen in his yard as well as those seen by both observers in the whole ravine during the period of study.

VULTURES (CATHARTIDAE)	
Turkey Vulture	<i>Cathartes aura</i>
FALCONS (FALCONIDAE)	
Sparrow Hawk	<i>Falco sparverius</i>
PHEASANTS (PHASIANIDAE)	
Ring-necked Pheasant	<i>Phasianus colchicus</i>
PLOVERS (CHARADRIIDAE)	
Killdeer	<i>Charadrius vociferus</i>
GULLS (LARIDAE)	
Ring-billed Gull	<i>Larus delawarensis</i>
DOVES (COLUMBIDAE)	
Mourning Dove	<i>Zenaidura macroura</i>
GOATSUCKERS (CAPRIMULGIDAE)	
Common Nighthawk	<i>Chordeiles minor</i>
Whip-poor-will	<i>Caprimulgus vociferus</i>
SWIFTS (APODIDAE)	
Chimney Swift	<i>Chaetura pelagica</i>
HUMMINGBIRDS (TROCHILIDAE)	
Ruby-throated Hummingbird	<i>Archilochus colubris</i>
WOODPECKERS (PICIDAE)	
Yellow-shafted Flicker	<i>Colaptes auratus</i>
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
Hairy Woodpecker	<i>Dendrocopos villosus</i>
Downy Woodpecker	<i>D. pubescens</i>
FLYCATCHERS (TYRANNIDAE)	
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>
Eastern Phoebe	<i>Sayornis phoebe</i>
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>
Least Flycatcher	<i>E. minimus</i>
Eastern Wood Pewee	<i>Contopus virens</i>
SWALLOWS (HIRUNDINIDAE)	
Tree Swallow	<i>Iridoprocne bicolor</i>
Bank Swallow	<i>Riparia riparia</i>
Rough-winged Swallow	<i>Stelgidopteryx ruficollis</i>
Barn Swallow	<i>Hirundo rustica</i>

JAYS and CROWS (CORVIDAE)

Blue Jay
Common Crow

Cyanocitta cristata
Corvus brachyrhynchos

TITMICE (PARIDAE)

Black-capped Chickadee

Parus atricapillus

NUTHATCHES (SITTIDAE)

White-breasted Nuthatch
Red-breasted Nuthatch

Sitta carolinensis
S. canadensis

CREEPERS (CERTHIIDAE)

Brown Creeper

Carthia familiaris

WRENS (TROGLODYTIDAE)

House Wren
Winter Wren

Troglodytes aedon
T. troglodytes

MIMICS (MIMIDAE)

Catbird
Brown Thrasher

Dumetella carolinensis
Toxostoma rufum

THRUSHES (TURDIDAE)

Robin
Wood Thrush
Hermit Thrush
Swainson's Thrush
Gray-cheeked Thrush
Veery

Turdus migratorius
Hylocichla mustelina
H. guttata
H. ustulata
H. minima
H. fuscescens

KINGLETS (SYLVIIDAE)

Golden-crowned Kinglet
Ruby-crowned Kinglet

Regulus satrapa
R. calendula

WAXWINGS (BOMBYCILLIDAE)

Bohemian Waxwing
Cedar Waxwing

Bombycilla garrulus
B. cedrorum

SHRIKES (LANIIDAE)

Northern Shrike

Lanius excubitor

STARLINGS (STURNIDAE)

Starling

Sturnus vulgaris

VIREOS (VIREONIDAE)

White-eyed Vireo
Solitary Vireo
Red-eyed Vireo
Philadelphia Vireo
Warbling Vireo

Vireo flavifrons
V. solitarius
V. olivaceus
V. philadelphicus
V. gilvus

WOOD WARBLERS (PARULIDAE)

Black-and-white Warbler
Golden-winged Warbler
Tennessee Warbler
Nashville Warbler
Parula Warbler

Mniotilta varia
Vermivora chrysoptera
V. peregrina
V. ruficapilla
Parula americana

Yellow Warbler	<i>Dendroica petechia</i>
Magnolia Warbler	<i>D. magnolia</i>
Cape May Warbler	<i>D. tigrina</i>
Black-throated Blue Warbler	<i>D. caerulescens</i>
Myrtle Warbler	<i>D. coronata</i>
Black-throated Green Warbler	<i>D. virens</i>
Blackburnian Warbler	<i>D. fusca</i>
Chestnut-sided Warbler	<i>D. pensylvanica</i>
Bay-breasted Warbler	<i>D. castanea</i>
Blackpoll Warbler	<i>D. striata</i>
Pine Warbler	<i>D. pinus</i>
Palm Warbler	<i>D. palmarum</i>
Ovenbird	<i>Seiurus aurocapillus</i>
Northern Water-thrush	<i>S. novaboracensis</i>
Connecticut Warbler	<i>Oporornis agilis</i>
Yellowthroat	<i>Geothlypis trichas</i>
Wilson's Warbler	<i>Wilsonia pusilla</i>
Canada Warbler	<i>W. canadensis</i>
American Redstart	<i>Setophaga ruticilla</i>

WEAVER FINCHES (PLOCEIDAE)

House Sparrow	<i>Passer domesticus</i>
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MEADOWLARKS, BLACKBIRDS and ORIOLES (ICTERIDAE)

Bobolink	<i>Dolichonyx oryzivorus</i>
Eastern Meadowlark	<i>Sturnella magna</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Baltimore Oriole	<i>Icterus galbula</i>
Common Grackle	<i>Quiscalus quiscula</i>
Brown-headed Cowbird	<i>Molothrus ater</i>

TANAGERS (THRAUPIDAE)

Scarlet Tanager	<i>Piranga olivacea</i>
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GROSBEAKS, FINCHES and SPARROWS (FRINGILLIDAE)

Cardinal	<i>Richmondia cardinalis</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Indigo Bunting	<i>Passerina cyanea</i>
Evening Grosbeak	<i>Hesperiphona vespertina</i>
Purple Finch	<i>Carpodacus purpureus</i>
Common Redpoll	<i>Acanthis flammea</i>
Pine Siskin	<i>Spinus pinus</i>
American Goldfinch	<i>S. tristis</i>
Rufous-sided Towhee	<i>Pipilo erythrophthalmus</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Slate-colored Junco	<i>Junco hyemalis</i>
Oregon Junco	<i>J. oreganus</i>
Tree Sparrow	<i>Spizella arborea</i>
Chipping Sparrow	<i>S. passerina</i>
Field Sparrow	<i>S. pusilla</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
White-throated Sparrow	<i>Z. albicollis</i>
Fox Sparrow	<i>Passerella iliaca</i>
Lincoln's Sparrow	<i>Melospiza lincolni</i>
Swamp Sparrow	<i>M. georgiana</i>
Song Sparrow	<i>M. melodia</i>

