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AN ANNOTATED LIST OF THE HYDROADEPHAGA (COLEOPTERA: INSECTA) OF
MANITOBA AND MINNESOTA

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This paper is based on a manuscript written by the late J. B. Wallis during the 1920's and 1930's. One hundred and sixty-seven species of beetles belonging to the families Haliplidae, Dytiscidae, and Gyrinidae are recorded from Manitoba and Minnesota. One hundred and forty-one species are recorded from Manitoba and one hundred and six from Minnesota with eighty species common to both areas. Notes on collection records and descriptions of the habitat in which certain species are found are given.

Quaestiones entomologicae
9: 99-114 1973

Introduction by D. J. Larson²

This list of species of Hydroadephaga of Manitoba and Minnesota is a brief condensation of a large manuscript written by the late J. B. Wallis. The original manuscript contains descriptions of all of the following taxa, keys to aid in their identification, and collecting and distribution notes. To a large extent, Wallis' keys and descriptions are summaries of previously published works such as H. C. Fall's revisions of *Coelambus* (= *Hygrotus*) (1919), *Agabus* (1922a), *Gyrinus* (1922b), and *Hydroporus* (1923). Almost all of Wallis' original research on water beetles has been published elsewhere, for example in his papers on *Haliphus* (1933a), *Hydaticus* (1939a), *Graphoderus* (1939b), *Ilybius* (1939c) and in other papers which contain descriptions of new taxa (1924, 1926a, 1926b, 1933a, 1933b, 1933c). Because of this, I consider the most important material in the manuscript to be the extensive list of reliably identified species along with the collecting and distribution records. Fall's papers contain many references to specimens which were sent to him by Wallis. Also Wallis' collection contains specimens identified by Fall. The result of this appears to be very close agreement between Fall and Wallis in their species concepts.

The history of this manuscript has not been fully traced. R. D. Bird (1958; pers. com. 1971) stated that Wallis developed an interest in insects through contact with the Criddle family in Manitoba, with Norman Criddle especially encouraging him to specialize in aquatic Coleoptera. H. B. Leech visited Wallis in 1946 or early 1947. At this time Wallis spoke about his manuscript on the water beetles of Minnesota and Manitoba. Leech (*in litt.*, 1971) states: "he wrote it in the late twenties at the request of the Minnesota people who supplied a large collection to be identified and who were to publish it. Then came the depression and with no likelihood of getting it into print he lost heart." Wallis' interest in this work continued at least to 1933, for citations of the literature to that date have been included. However, papers published by W. J. Brown (1937) and Leech (1938, 1939), although directly relevant to the Manitoba fauna, were not cited by Wallis. The original copy of Wallis' manuscript has been deposited in the Department of Entomology, University of Alberta. Copies of it are located in the California Academy of Sciences (H. B. Leech); Saint Cloud State College, Minnesota (R. Gunderson) and the University of Calgary (D. Larson). Most of Wallis' water beetle collection has been deposited in the Canadian National Collection, Ottawa; however some specimens are housed in the insect collection of the Riveredge Foundation, Calgary, Alberta and in the Strickland Museum, University of Alberta.

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In compiling the following list, I have followed Wallis' manuscript as closely as possible. Wallis' names are used consistently, although changes in status are indicated in parentheses. Also, all editorial comments that I have inserted are placed between square brackets. For each included species, the following information is given: name, Leng catalogue number, list of localities arranged alphabetically, and collecting notes. A few taxonomic notes are also included. For the sake of completeness, addenda have been included of names of water beetle species recorded from Manitoba in the literature since 1937 and therefore not given in Wallis' list.

FAMILY HALIPLIDAE
Genus *Haliphus* Latreille

Haliphus (s. str.) strigatus Roberts. (2321)

Localities: MANITOBA - common west of the Laurentian Highland, and as far north as Le Pas.

Haliphus (s. str.) longulus LeConte. (2322)

Localities: MANITOBA - throughout the southern part, moderately abundant. MINNESOTA - St. Anthony's Park, rare.

Haliphus (s. str.) immaculicollis Harris.

Localities: MANITOBA - abundant throughout. MINNESOTA - abundant throughout.

Haliphus (s. str.) blanchardi Roberts (2319)

Localities: MINNESOTA - Itasca State Park, Ramsey Co., St. Anthony, St. Paul.

Haliphus (Paraliaphlus) borealis LeConte. (2317)

Localities: MANITOBA - Selkirk, Winnipeg. MINNESOTA - Pine City, St. Peter, not abundant.

Haliphus (Paraliaphlus) triopsis Say. (2301)

Localities: MINNESOTA - Le Sueur Co., Ramsey Co., Red Wing.

Haliphus (Paraliaphlus) pantherinus Aubé.

Localities: MINNESOTA - Ramsey Co., St. Paul, St. Peter.

Haliphus (Liaphlus) connexus Matheson. (2300)

Localities: MINNESOTA - St. Paul, one specimen only.

Haliphus (Liaphlus) apostolicus Wallis.

Localities: MINNESOTA - Bussey's Pond (University of Minnesota Campus), Green Lake, Itasca State Park, St. Paul.

Haliphus (Liaphlus) subguttatus Roberts. (2306)

Localities: MANITOBA - generally distributed in southern half. MINNESOTA - Cramer, Hubbard Co., Ramsey Co., St. Paul; abundant.

Haliphus (Liaphlus) canadensis Wallis

Localities: MANITOBA - Victoria Beach, Winnipeg, Winnipeg Beach.

Haliphus (Liaphlus) cribrarius LeConte. (2305)

Localities: MANITOBA - generally distributed as far north as Mile 256, Hudson's Bay Railway. MINNESOTA - Cook Co., Grand Rapids, Hibbing, Itasca State Park.

Genus *Peltodytes* Regimbart

Peltodytes edentulus LeConte. (2337)

Localities: MANITOBA - generally distributed in southern half; abundant. MINNESOTA - generally distributed; abundant.

Peltodytes tortulosus Roberts. (2324)

Localities: MANITOBA - Winnipeg Beach (type locality); generally distributed in southern third, though not abundant. MINNESOTA - Ely, Minneapolis, Pelican Rapids, Ramsey Co., St. Paul (Track Pond).

It is interesting to note that this species seems to be extending its range for one can scarcely suppose that it could have been overlooked in such a well hunted place as Toronto, Canada, from which locality I recently received a number of specimens, and in 1931 it was taken at Quebec City.

FAMILY DYTISCIDAE
SUBFAMILY LACCOPHILINAE

Genus *Laccophilus* Leach

Laccophilus maculosus (Germar). (2351)

Localities: MANITOBA - moderately common in the southern part of the province; not as yet taken north of about 100 miles from the International Boundary. MINNESOTA - generally distributed and common.

Collecting notes: Overwintering is apparently in rivers as specimens were taken by Mr. E. Criddle in the Assiniboine River at Aweme, Manitoba, on January 9, 1928.

Laccophilus inconspicuus Fall (2354) (= *biguttatus* Kirby)

Localities: MANITOBA - common throughout as far north as Le Pas; probably extends much farther north. MINNESOTA - two records only - a single specimen from Benson (23.viii.22) and one from Ramsey Co. (11.iv.22) - both taken by W. E. Hoffman; doubtless occurs all through the northwestern part of the state.

SUBFAMILY HYDROPORINAE

Genus *Hydrovatus* Motschoulsky

Hydrovatus pustulatus Melsheimer.

Localities: MINNESOTA - Hennepin, Le Sueur Co., Mora, St. Paul.

Genus *Desmopachria* Babington

Desmopachria convexa Aubé (2374)

Localities: MANITOBA - Selkirk, Victoria Beach, Winnipeg. MINNESOTA - Hennepin Co., Benson, Ramsey Co., St. Paul.

Collecting notes: Occurs in very shallow water among debris and roots.

Genus *Bidessus* Sharp

Bidessus flavicollis LeConte. (2385). [placed in genus *Liodessus* Guignot by Young, 1969.]

Localities: MINNESOTA - Lake Emily, Lake Jefferson, St. Peter; rare.

Bidessus affinis Say. (2390). [Placed in genus *Liodessus* Guignot by Young 1969.]

Localities: MANITOBA - common everywhere, as far north as Mile 214, Hudson's Bay Railway. MINNESOTA - Hennepin Co., Le Sueur Co., Minneapolis, St. Paul.

Collecting notes: Found in shallow waters with muddy bottoms.

Bidessus granarius Aubé. (2398). [Placed in genus *Urarus* Guignot by Young, 1969.]

Localities: MINNESOTA - Bussey's Pond, "Minn.", St. Paul.

Genus *Hygrotus* Stephens

Hygrotus acaroides LeConte. (2407)

Localities: MANITOBA - Winnipeg (type locality of race *winnipeg* Wallis), Rosebank, Thornhill. MINNESOTA - Benson, St. Paul.

Hygrotus farctus LeConte. (2405)

Localities: MANITOBA - Winnipeg.

Collecting notes: The single Winnipeg specimen was found in a little pool in the bed of a partially dried up rivulet in the woods (24.v.1922).

Hygrotus punctatus Say (= *sayi* Balfour-Browne, 1944)

Localities: MANITOBA - abundant everywhere. MINNESOTA - abundant everywhere

Hygrotus turbidus LeConte. (2408)

Localities: MANITOBA - not uncommon southward. MINNESOTA - Booker Co., St. Paul, St. Peter; apparently rare.

Hygrotus dispar LeConte. (2409)

Localities: MANITOBA - Le Pas, Winnipeg; uncommon. MINNESOTA - Hennepin Co., Owatonna, Rochester; uncommon.

Hygrotus compar Fall. (19174)

Localities: MANITOBA - Aweme, Winnipeg; rare.

Hygrotus suturalis LeConte. (2413)

Localities: MANITOBA - Generally distributed, not common in the south, rather plentiful northward. MINNESOTA - Warroad.

Collecting notes: Found usually in clear water.

Hygrotus sellatus LeConte. (2414)

Localities: MANITOBA - in southern third; not common. MINNESOTA - Nicollet Co.

Collecting notes: In weedy ponds.

Hygrotus canadensis Fall. (19178)

Localities: MANITOBA - Winnipeg (type locality); common in southern half of province. MINNESOTA - Hennepin Co., Hibbing, Ramsey Co., St. Anthony's Park; probably all through the northern half of the state.

Collecting notes: Prefers clear water.

Hygrotus patruelis LeConte. (2412)

Localities: MANITOBA - common in southern third, not yet taken in the northern two thirds. MINNESOTA - Grand Rapids, Hennepin, Ottertail Co., St. Anthony's Park.

Collecting notes: Prefers clear water.

Hygrotus nubilus LeConte. (2420)

Localities: MINNESOTA - St. Paul (one specimen).

Hygrotus punctilineatus Fall. (19183)

Localities: MANITOBA - occasional throughout southern part.

Collecting notes: This species is occasionally found in normal (fresh water) situations but the only station where I have taken it commonly is in a small pond only a hundred yards or so from the saline Cobb's Lake near Baldur, Manitoba. I have not had the water of this pond analysed but judging from the vegetation, its chemical contents, while clearly saline or alkaline, differ greatly from the near-by Cobb's Lake.

Hygrotus tumidiventris Fall. (19182)

Localities: MANITOBA - distributed in waters of a certain type of alkalinity, occasionally taken elsewhere.

Collecting notes: Specimens of *tumidiventris* were common in the locality described above under *punctilineatus* but this species is apt to be found in situations where the water is more usual.

Hygrotus masculinus Crotch. (2419)

Localities: MANITOBA - abundant in Shoal Lake, 35 miles or so northwest of Winnipeg; only accidental elsewhere.

Collecting notes: *masculinus* adults prefer water containing a high percentage of magnesium salts. The only place in Manitoba where I have taken *masculinus* is in Shoal Lake, which appears to be quite rapidly drying up. Much of its bed is now dry, and its water is strongly reminiscent of epsom salts. While covering a number of square miles, it is everywhere very shallow and contains no vegetation except algae, even the edges almost everywhere being without rushes or grass. Naturally, being so shallow and extensive, it is subject to rapid fluctuations of level according to the direction and strength of the wind, often fifteen or twenty minutes making a difference between a dry area and six or eight inches of water. The bottom is slimy mud plentifully sprinkled with stones. Specimens of *masculinus* appear to prefer water five or six inches deep and to hide under and around stones.

Hygrotus salinarius Wallis. (19188)

Localities: MANITOBA - Baldur (Cobb's Lake, type locality), Salt Lake near Strathclair, southern end of Lake Winnipegosis.

Collecting notes: *salinarius* adults prefer water strongly impregnated with common salt.

Hygrotus unguicularis Crotch. (2421)

Localities: MANITOBA - probably throughout the province; rare southward but moderately common at points on the Hudson's Bay Railway, increasingly so northward to Mile 474.

Hygrotus dentiger Fall. (20764)

Localities: MANITOBA - Thornhill (one specimen).

Collecting notes: This species was taken by Mr. F. S. Carr in saline lakes in Alberta, and I took it quite commonly in a pond of moderate salinity or alkalinity near Roche Percee, Saskatchewan. In this pond were specimens of many species found also in fresh water so that its saline content could not have been very great.

Hygrotus impressopunctatus Schaller. (2424)

Localities: MANITOBA - throughout the province except perhaps in the extreme north; abundant. MINNESOTA - throughout the state, abundant.

Genus *Hydroporus* Clairville

Hydroporus (Heterosternus) undulatus Say. (2447)

Localities: MANITOBA - Aweme, Husavick, Mile 214 Hudson's Bay Railway, Rosebank, Winnipeg. MINNESOTA - apparently fairly generally distributed. [Note. - Wallis treated *consimilis* LeConte as a valid species. However, he states that "extremes of these two species (*undulatus* and *consimilis*) are easy to separate but I must confess after examining hundreds of specimens from one locality ...that most of these could just as well be called one as the other." Here, the names *consimilis* and *undulatus* are treated as synonyms]

Hydroporus (Heterosternus) clypealis Sharp. (2452)

Localities: MINNESOTA - one female, Red Wing (30.ix. 1923, W. E. Hoffmann).

Hydroporus (Heterosternus) vittatus LeConte. (2465)

Localities: MANITOBA - Fork River, Winnipeg (several stations). MINNESOTA - Grand

Marais (one female doubtfully placed here).

Collecting notes: Only occasionally and locally being not rare. On one occasion I took several dozen adults in little pools in the bed of a partially dried up creek in East Kildonan just north of Winnipeg.

Hydroporus (Heterosternus) sericeus LeConte (2466) (= *superioris* Balfour-Browne).

Localities: MANITOBA - generally distributed, except possibly in the extreme north. MINNESOTA - generally distributed.

Collecting notes: Locally very abundant in clear but weedy water.

Hydroporus (Heterosternus) solitarius Sharp. (2467)

Localities: MANITOBA - Mile 214 Hudson's Bay Railway.

Collecting notes: Specimens of this species were quite common in July 1917 in deep water in the Piquetenay River, swimming close to the almost perpendicular surface of the rock to which they frequently clung.

Hydroporus (Heterosternus) paugus Fall. (19220)

Localities: MANITOBA - 16 miles e. Aweme; Township 6, Range 9 East.

Collecting notes: Adults inhabit larch or spruce swamps, where the water is cold.

Hydroporus (Heterosternus) stagnalis Gemminger and Harold. (2521)

Localities: MANITOBA - Stonewall

Collecting notes: Taken only in an old quarry test hole in a limestone formation.

Hydroporus (Heterosternus) planiusculus Fall. (19224)

Localities: MANITOBA - 16 miles e. Aweme. MINNESOTA - Chester, Olmsted Co., St. Peter.

Collecting notes: Adults are moderately abundant in the water of a cold rivulet fed by a spring issuing from the sand hills near the banks of the Assiniboine River about 16 miles east of Aweme. There is a peculiar formation here known locally as the "Devil's Punch-bowl", and at the bottom of this is the spring and rivulet mentioned above. Where the rivulet expands and becomes more or less choked with specimens of *Chara*, adults of *planiusculus* may usually be found in some numbers.

Hydroporus (s. str.) dichrous Melsheimer. (2510)

Localities: MINNESOTA - Le Sueur Co., Rochester, St. Anthony Park, St. Paul, St. Peter.

Hydroporus (s. str.) melsheimeri Fall. (2511)

[Note. - The description of this species and the list of localities is missing from Wallis' manuscript. The species almost certainly occurs in Manitoba.]

Hydroporus (s. str.) dentellus Fall. (2506)

[Note. - This species is treated in Wallis' key to the Minnesota-Manitoba species of *Hydroporus*, and is not in the text of the manuscript, probably because inserted page which also contained the discussion of *H. melsheimeri* was lost. I have seen Manitoba specimens of *dentellus* collected by Wallis (Aweme, Strickland Museum, University of Alberta.)

Hydroporus (s. str.) notabilis LeConte. (2518)

Localities: MANITOBA - fairly generally distributed throughout, at least as far north as Mile 332 Hudson's Bay Railway. MINNESOTA - Mendota

Hydroporus (s. str.) arcticus Thomson. (2519)

Localities: MANITOBA - Churchill (2 specimens, 5 & 11.ix. 30, F. Neave). Fall (1923) pointed out that this species may well prove to be but a race of *notabilis* LeConte.

Hydroporus (s. str.) niger Say. (2514)

Localities: MINNESOTA - Le Sueur Co., St. Paul, St. Peter.

Hydroporus (s. str.) columbianus Fall. (19215)

Localities: MANITOBA - not common, but widely distributed in the south.

Hydroporus (s. str.) rectus Fall. (19209)

Localities: MANITOBA - Aweme, Mile 256 Hudson's Bay Railway, Township 7 Range 11E.

Hydroporus (s. str.) despectus Sharp. (2495)

Localities: MANITOBA - Aweme, Winnipeg. MINNESOTA - one female from Itasca Park appears to belong here.

Hydroporus (s. str.) tenebrosus LeConte. (2493)

Localities: MANITOBA - generally distributed well to the north, abundant. MINNESOTA - Le Sueur Co. (1 specimen).

Hydroporus (s. str.) pervicinus Fall. (19207)

Localities: MANITOBA - Aweme, Onah, Township 7 Range 11E, Transcona. MINNESOTA - Bengall, Hibbing, St. Paul.

Hydroporus (s. str.) tartaricus LeConte. (2491)

Localities: MANITOBA - Aweme, Hudson's Bay Territory, Winnipeg.

Hydroporus (s. str.) signatus Mannerheim. (2508)

Localities: MANITOBA - Mile 332 Hudson's Bay Railway. MINNESOTA - Hibbing, Ramsey Co., St. Anthony Park, St. Paul.

Hydroporus (s. str.) obscurus Stürm. (2492)

Localities: MANITOBA - Mile 214 and Mile 332 Hudson's Bay Railway, Township 7 Range 11E.

Hydroporus (s. str.) badiellus Fall. (19206)

Localities: MANITOBA - Mile 214 and Mile 332 Hudson's Bay Railway, Township 7 Range 11E.

[Note. - Wallis states that *obscurus* and *badiellus* at least as far as the species are understood here, are very similar and appear to always occur together. Perhaps, at least in Manitoba, these should be treated as only one species.]

Hydroporus (s. str.) appalachius Sherman. (2498)

Localities: MANITOBA - Aweme, Mile 332 Hudson's Bay Railway, Thornhill, Winnipeg. MINNESOTA - Hennepin Co.

Collecting notes: This species is sometimes not uncommon in shallow pools in woodland streams.

[Note. - Wallis lists *occidentalis* Sharp as occurring in Manitoba and Minnesota. This species appears to be western in distribution and probably does not occur in this area. The records for *occidentalis* probably refer to dark specimens of *appalachius*.]

Hydroporus (s. str.) melanocephalus Gyllenhal. (19205)

Localities: MANITOBA - Churchill, Mile 256 and 332 Hudson's Bay Railway, Township 7 Range 11E.

Collecting notes: A species occurring in the colder waters, commoner northward, quite rare southward where it has been taken only in the cold sphagnum moss bogs east of Winnipeg.

Hydroporus (s. str.) fuscipennis Kies. (2509)

Localities: MANITOBA - universally distributed so far as known; our commonest species. MINNESOTA - St. Anthony's Park.

Hydroporus (s. str.) striola Gyllenhal.

Localities: MANITOBA - generally distributed and abundant. MINNESOTA - Hennepin Co., Hubbard Co., Mora Co.

Hydroporus (s. str.) glabriusculus Aubé. (2500)

Localities: MANITOBA - Aweme, Mile 256 and 332 Hudson's Bay Railway, Winnipeg.

Hydroporus (s. str.) rufinasus Mannerheim. (2504)

Localities: MANITOBA - Mile 332 Hudson's Bay Railway, Township 7 Range 11E., Victoria Beach, Winnipeg.

Hydroporus (s. str.) tristis Paykull. (2501)

Localities: MANITOBA - quite generally distributed.

Hydroporus (Deronectes) striatellus LeConte. (2431)

Localities: MANITOBA - second Cranberry Lake (near Cranberry Portage, Hudson's Bay Railway) - two specimens (27.viii. 1930), F. Neave.

Collecting notes: Second Cranberry Lake is of a different formation from most of our northern lakes, being in limestone, whereas most of the others are in granite.

Hydroporus (Deronectes) griseostriatus DeGeer. (2430)

[Note. - In the manuscript, this species is included in the key to Minnesota-Manitoba species of *Hydroporus*, however the text page dealing with it is missing. The species is no doubt widely distributed in the area.]

Hydroporus (Deronectes) rotundatus LeConte [= *elegans* Panzer].

Localities: MANITOBA - moderately common throughout. MINNESOTA - Brandon.

Collecting notes: in clear weedy streams.

Hydroporus (Oreodytes) duodecimlineatus LeConte (probably a synonym of *laevis* Kirby.) (2482)

Localities: Mile 474 Hudson's Bay Railway.

Hydroporus (Oreodytes) scitulus LeConte.

Localities: MANITOBA - Mile 332 Hudson's Bay Railway.

Genus *Laccornis* des G^ozis

Laccornis conoideus LeConte. (2532)

Localities: MANITOBA - generally distributed in the southern part of the province. MINNESOTA - Owatonna (one specimen).

Collecting notes: It is not uncommon in spring in ditches and in temporary ponds. Later it is found in places where the water keeps fairly cold.

SUBFAMILY COLYMBETINAE

Genus *Agabus* Leach

Agabus seriatus Say. (2539)

Localities: MANITOBA - Aweme, Mile 474 Hudson's Bay Railway, Thornhill. MINNESOTA - Hennepin Co., Le Sueur Co., St. Anthony's Park, St. Paul, St. Peter.

Collecting notes: Specimens are found chiefly in waters flowing from cold springs, though the species does not seem to be a denizen of the cold larch swamps.

Agabus triton Fall. (19232)

Localities: MANITOBA - Winnipeg.

Collecting notes: This species is not uncommon in ditches and ponds near Winnipeg in early spring.

Agabus punctulatus Aubé. (2551)

Localities: MANITOBA - everywhere, even being recorded from Nelson River. MINNESOTA - "Minnesota", Ottertail Co., St. Anthony's Park.

[Note.- The specimens recorded from Nelson River Manitoba could represent *colymbus* Leech 1938; I have not examined them.]

Agabus semipunctatus Kirby. (2553)

Localities: MANITOBA - rather generally distributed as far north as Mile 24 [typing error; should perhaps read mile 214, a frequently mentioned locality]. Hudson's Bay Railway. MINNESOTA - "Minnesota", Ramsey Co.

Agabus sharpi Fall (19234) (= *falli* Guignot)

Localities: MANITOBA - Winnipeg and vicinity.

Agabus disintegratus Crotch. (2557)

Localities: MINNESOTA - Rochester.

Agabus ambiguus Say.

Localities: MANITOBA - widely distributed in southern half and quite abundant. MINNESOTA - Le Sueur Co.

Collecting notes: This species remains active throughout the winter, specimens having been taken through a hole cut in the ice of the Assiniboine River near Aweme on January 9th, 1928, by Mr. E. Criddle.

Agabus congener Paykull. (2560)

Localities: MANITOBA - Churchill, Winnipeg.

Agabus discolor Harris. (2564)

Localities: MANITOBA - Aweme, Mile 332 Hudson's Bay Railway, Onah, Winnipeg; rather abundant. MINNESOTA - Duluth.

Agabus inscriptus Crotch. (2559)

Localities: MANITOBA - Bird's Hill, Mile 332 Hudson's Bay Railway, Riding Mountain. MINNESOTA - Lake Superior, White Fish Point.

Agabus canadensis Fall. (19237)

Localities: MANITOBA - abundant in southern half.

Collecting notes: In savannah and prairie associations.

Agabus subfuscatus Sharp.

Localities: MANITOBA - Aweme, Winnipeg. MINNESOTA - Ottertail Co. One female should probably be referred here.

Agabus phaeopterus Kirby. (2566)

Localities: MANITOBA - quite generally distributed at least as far north as Mile 332, Hudson's Bay Railway. MINNESOTA - Duluth.

Agabus bicolor Kirby (2567)

Localities: MANITOBA - Aweme, Mile 214 Hudson's Bay Railway Township 1 Range 14E., Township 7 Range 11E.

Agabus confinis Gyllenhal. (2563)

Localities: MANITOBA - Bird's Hill, Hudson's Bay, Mile 214 Hudson's Bay Railway, Riding Mts., Thornhill, Township 7 Range 11E., Township 14 Range 10E. MINNESOTA-Duluth.

Collecting notes: quite rare but widely distributed in cold water, usually in larch swamps.

Agabus infuscatus Aubé. (2571)

Localities: MANITOBA - Churchill, Mile 332 Hudson's Bay Railway.

Collecting notes: Just west of the railway bridge at Kettle Rapids in mid July an outcropping of rock was exposed in the bed of the Nelson River owing to the lowering of the water. On the surface of this rock were several small puddles two or three feet wide and a foot or so deep. Considerable amounts of slimy algae were floating on the surface of the water in these pot holes, and formed several inches of sediment at the bottom. From three or four of these unlikely looking puddles several dozen specimens of *infuscatus* were taken. Specimens were not found elsewhere.

Agabus arcticus Paykull. (2576)

Localities: MANITOBA - Mile 214 Hudson's Bay Railway and northward to Churchill.

Collecting notes: Specimens of this species were common in shallow grassy water in an expansion of the Piquitenay River at Mile 214 Hudson's Bay Railway.

Agabus ontarionis Fall. (19238)

Localities: MANITOBA - Aweme, Charleswood, Makinak.

Agabus ajax Fall. (19239)

Localities: MANITOBA - 16 miles east Aweme, Fort Churchill.

Agabus anthracinus Mannerheim. (2575)

Localities: MANITOBA - generally distributed probably into the far north, quite common.

Agabus nigroaeneus Erichson (2579) (= *erichsonii* Gemminger and Harold).

Localities: MANITOBA - generally distributed; quite abundant. MINNESOTA - state locality only.

Agabus pseudoconfertus Wallis. (20782)

Localities: MANITOBA - Bird's Hill, Mile 17 Hudson's Bay Railway, Township 7 Range 11E., Winnipeg.

Collecting notes: This species is an inhabitant of the true sphagnum bogs, being found in the small holes in the swamps where a little clear water shows. It is an early spring species and I have taken specimens by breaking an inch or so of ice from the surface and then dredging among the moss which is itself largely imbedded in ice.

Agabus kenaiensis Fall. (20778)

Localities: MANITOBA - Bird's Hill, Onah, Township 7 Range 11E.

Collecting notes: Like *pseudoconfertus*, this species is also an inhabitant of sphagnum bogs.

Agabus minnesotensis Wallis.

Localities: MINNESOTA - Hennepin Co., (single type).

[Note. - Perhaps the type specimen was erroneously labeled as the species has since been found in the west only (Anderson, 1962).]

Agabus verus Brown [= *clavicornis* Sharp (J. Balfour-Browne, 1947)] (21729)

Localities: MANITOBA - Churchill.

Agabus clavatus LeConte (2577) (= *antennatus* Leech)

Localities: MANITOBA - Mile 214 Hudson's Bay Railway, Stonewall, Thornhill, Winnipeg. MINNESOTA - Le Sueur Co., Ramsey Co., St. Paul, St. Peter.

Collecting notes: Adults are somewhat local and not usually at all common but I took many specimens in company with *arcticus* specimens in shallow water among grass in a widening of the river at mile 214 Hudson's Bay Railway.

Aptator (= *Agabus*) *bifarius* Kirby. (2587)

Localities: MANITOBA - common throughout the province. MINNESOTA - Owatanna, Ramsey Co., St. Anthony's Park, St. Paul.

Genus *Ilybius* Erichson

Ilybius pleuriticus LeConte. (2590)

Localities: MANITOBA - generally distributed in southern half but rather uncommon; more abundant at Mile 214 Hudson's Bay Railway. MINNESOTA - Beaver Dam near Ely.

Ilybius angustior Gyllenhal. (2595)

Localities: MANITOBA - generally distributed and moderately abundant as far north as the limit of trees. MINNESOTA - Olivia.

Ilybius subaeneus Erichson. (2589)

Localities: MANITOBA - throughout the province at least as far north as within 90 miles of Hudson's Bay. More abundant northward. MINNESOTA - Duluth, Grand Marais, "Minnesota".

Ilybius biguttulus Germar (2598)

Localities: MINNESOTA - Hibbing, Le Sueur, Two Harbors.

Ilybius fraterculus LeConte.

Localities: MANITOBA - abundant in southern half. MINNESOTA - throughout the northern half of the state at least.

Ilybius discedens Sharp. (2597)

Localities: MANITOBA - on the Canadian Shield to Hudson's Bay.

Collecting notes - In cold sphagnum bogs.

Genus *Coptotomus* Say

Coptotomus interrogatus Fabricius. (2610)

Localities: MANITOBA - everywhere as far north at least as Le Pas; very abundant. MINNESOTA - apparently widely distributed and abundant.

Genus *Scutopterus* Crotch (= *Neoscutopterus* F. Balfour-Browne)

Neoscutopterus angustus LeConte. (2612)

Localities: MANITOBA - Thornhill, Township 7 Range 11E., Winnipeg

Collecting notes: Usually found in small mossy pools in larch swamps.

Neoscutopterus horni Crotch. (2613)

Localities: Aweme, Riding Mts., Township 7 Range 11E.

Collecting notes: Found in the same type of habitat as the preceding species.

Genus *Rhantus* Boisduval and Lacordaire

Rhantus sinuatus LeConte. (2620)

Localities: MINNESOTA - Le Sueur Co., St. Paul.

Rhantus plebeius Sharp (= *binotatus* Harris). (2616)

Localities: MANITOBA - generally distributed in southern half. MINNESOTA - Hibbing, Grand Marais.

Rhantus notatus Fabricius. (2622)

Localities: MANITOBA - abundant throughout the southern portion; may be found well towards Hudson's Bay. MINNESOTA - Le Sueur Co., St. Anthony Park; probably generally distributed.

Rhantus suturellus Harris [= *wallisii* Hatch cf. Hatch 1953]

Localities: MANITOBA - univally distributed at least as far north as Mile 214 Hudson's Bay Railway. MINNESOTA - Beaver Dam, Hennepin Co., Lake Co., Olivia, Ramsey Co., St. Peter.

Rhantus zimmermanni Wallis (= *suturellus* Harris cf. Hatch 1953)

[Locality list missing from manuscript.]

Rhantus tostus LeConte. (2624)

Localities: MANITOBA - abundant everywhere, at least south of Mile 214 Hudson's Bay Railway. MINNESOTA - probably generally distributed and abundant.

Genus *Colymbetes* Clairville

Colymbetes longulus LeConte. (2627)

Localities: MANITOBA - found sparingly on the western edge of the coniferous forests and very rarely further west.

Collecting notes: Most specimens have been collected from ponds in larch swamps. A few have been found elsewhere.

Colymbetes dahuricus Aubé

[Note. - A single female collected at Mile 214 Hudson's Bay Railway was assigned to this species; it probably belongs to the species *longulus* LeConte.]

Colymbetes sculptilis Harris complex. (2632)

[Note. - Wallis separates the Manitoba specimens into three species: *dolobratulus* Paykull (Mile 474, Hudson's Bay Railway); *rugipennis* Sharp (widely distributed), and *sculptilis* Harris (widely distributed). According to Young and Severin (1956), the names *rugipennis* and *sculptilis* are synonyms. Also, Wallis' specimens of *dolobratulus* probably represent a northern form of *sculptilis*.]

Localities: MANITOBA - widely distributed. MINNESOTA - widely distributed.

Genus *Dytiscus* Linnaeus

Dytiscus fasciventris Say. (2636)

Localities: MANITOBA - throughout the southeast portion of the province. MINNESOTA - throughout the state.

Dytiscus hybridus Aubé. (2637)

Localities: MANITOBA - Southern portion. MINNESOTA - throughout the state.

Dytiscus verticalis Say. (2638)

Localities: MINNESOTA - common southward and eastward.

Dytiscus sublimbatus LeConte. (2640) (= *cordieri* Aubé)

Localities: MANITOBA - generally distributed in southern half, west of Canadian Shield. MINNESOTA - Hubbard Co., Norman Co., Ottertail Co., Pine City; St. Peter.

Dytiscus anxius Mannerheim.

Localities: MANITOBA - fairly common in southern portion.

Dytiscus parvulus Mannerheim. (2642)

Localities: MANITOBA - southward only, rather rare. MINNESOTA - Hubbard Co., Ramsey Co., St. Peter.

Dytiscus dauricus Gebler. (2645)

Localities: MANITOBA - Husavick, and southeastward; Winnipeg.

Dytiscus harrisi Kirby. (2646)

Localities: MANITOBA - in the southeast portion of the province. MINNESOTA - Isanti Co., Le Sueur Co., St. Anthony Park.

SUBFAMILY HYDATICINAE

Genus *Hydaticus* Leach

Hydaticus modestus Sharp.

Localities: MANITOBA - generally distributed. I have one specimen labelled H. B., but the species is not common north of Le Pas. MINNESOTA - generally distributed.

Hydaticus piceus LeConte. (2649)

Localities: MANITOBA - Victoria Beach and southeastward, Winnipeg. MINNESOTA - Albert Lea, Le Sueur Co., Ramsey Co., St. Paul.

Genus *Acilius* Leach

Acilius semisulcatus Aubé. (2651)

Localities: MANITOBA - abundant in southern half. MINNESOTA - abundant throughout.

Acilius fraternus Harris. (2652)

Localities: MINNESOTA - Anoka Co., Becker Co., Grand Marais, Hibbing.

Acilius mediatulus Say. (2653)

Localities: MINNESOTA - Ramsey Co.

Genus *Thermonectes* Crotch*Thermonectes ornatocollis* Aubé. (2654)

Localities: MINNESOTA - Le Sueur Co. (Fish Hatchery).

Genus *Graphoderus* Aubé .*Graphoderus liberus* Say. (2659)

Localities: MANITOBA - in the southern half; local, not common. MINNESOTA - probably universally distributed.

Graphoderus perplexus Sharp. (2661)

Localities: MANITOBA - throughout southern half. MINNESOTA - Grand Marais, Ramsey Co., St. Louis Co., St. Paul.

Graphoderus fasciatocollis Harris (=fascicollis Harris)

Localities: MINNESOTA - Anoka Co., Beaver Dam, Hubbard Co., Le Sueur Co., Owatonna, Ramsey Co., Stillwater, St. Paul.

Graphoderus manitobensis Wallis.

Localities: MANITOBA - Winnipeg (single male type).

Graphoderus occidentalis Horn. (2663)

Localities: MANITOBA - abundant in southern portion. MINNESOTA - Grand Marais, Hubbard Co., Le Sueur Co., Ramsey Co., St. Anthony Park, St. Paul.

SUBFAMILY CYBISTERINAE

Genus *Cybister* Curtis*Cybister fimbriolatus* Say. (2667)

Localities: MINNESOTA - Le Sueur Co., St. Paul.

FAMILY GYRINIDAE

Genus *Dineutus* MacLeay*Dineutus discolor* Aubé. (2674)

Localities: MINNESOTA - Mora (one specimen).

Dineutus horni Roberts. (2681)

Localities: MINNESOTA - apparently throughout the state.

Dineutus nigrrior Roberts. (2679)

Localities: MANITOBA - Victoria Beach (one specimen). MINNESOTA - Ramsey Co., St. Louis Co., St. Paul.

Dineutus assimilis Kirby.

Localities: MANITOBA - southern half. MINNESOTA - universally distributed.

Genus *Gyrinus* Geoffroy*Gyrinus minutus* Fabricius. (2684)

Localities: MANITOBA - very abundant, north to Churchill. MINNESOTA - abundant throughout the state.

Gyrinus ventralis Kirby. (2691)

Localities: MINNESOTA - Ramsey Co.

Gyrinus aeneolus LeConte. (2687)

Localities: MANITOBA - Township 7 Range 11E. MINNESOTA - Anoka Co., Hennepin Co., Mora, Ramsey Co., Rochester.

Gyrinus dichrous LeConte. (2689)

Localities: MANITOBA - Berens River (east side of Lake Winnipeg). MINNESOTA - Afton, Detroit, Itasca State Park.

Gyrinus latilimbus Fall. (19250)

Localities: MINNESOTA - Bengall, Cook Co., Two Harbors.

Gyrinus bifarius Fall. (19251)

Localities: MANITOBA - not taken in southern half of the province; moderately abundant from Le Pas northward at least as far as the Kettle Rapids on the Nelson River. MINNESOTA - Mora (one specimen).

Gyrinus confinis LeConte. (2685)

Localities: MANITOBA - abundant everywhere as far north as the Kettle Rapids. MINNESOTA - Detroit, Itasca Co., Lake City, Lake Itasca.

Gyrinus aquiris LeConte. (2692)

Localities: MANITOBA - Husavick (one male). MINNESOTA - Detroit, Hennepin Co., Minneapolis, Ramsey Co., St. Paul.

Gyrinus maculiventris LeConte. (2695)

Localities: MANITOBA - extremely abundant as far north as Mile 214 Hudson's Bay Railway. MINNESOTA - apparently abundant, at least in northern half of state.

Collecting notes: This species remains active all winter, specimens having been taken at a hole in the ice on the Assiniboine River near Treesbank by E. Criddle on January 9, 1928.

Gyrinus affinis Aubé. (2696)

Localities: MANITOBA - widely distributed. MINNESOTA - Cook Co., Lake Co., Rawichami River, St. Louis.

Gyrinus borealis Aubé. (2707)

Localities: MANITOBA - recorded by Bell from the Nelson River 55° 50' N 99° 30' W, but I have no means of checking the record.

Gyrinus pugionis Fall. (19255)

Localities: MINNESOTA - Babbitt, near Ely, Itasca State Park.

Gyrinus picipes Aubé. (2704)

Localities: MANITOBA - Mile 214 Hudson's Bay Railway.

Gyrinus lugens LeConte. (2707a)

Localities: MANITOBA - widely distributed. MINNESOTA - Kawishiwi River, Lake Co.

Gyrinus analis Say. (2700)

Localities: MANITOBA - Onah (a single female det. by H.C.Fall). MINNESOTA - Fort Snelling, Minneapolis, Rochester.

Gyrinus opacus Sahlberg. (2702)

Localities: MANITOBA - Mile 214 Hudson's Bay Railway and northward.

Gyrinus wallisi Fall. (19256)

Localities: MANITOBA - Baldur, Stonewall, and northwards probably to the northern limits of the province.

Gyrinus impressicollis Kirby. (2706)

Localities: MANITOBA - Mile 214 Hudson's Bay Railway (Piquitenay River)

Collecting notes: In 1917 I took a few specimens on the Piquitenay River. These were swimming on the rough surface of the deeper water in ones or twos and were seen nowhere else. A few years later, a specimen or so turned up unexpectedly among some material taken in the evening when crossing Long Pine Lake at Ingolf, Ontario. The experience on the Piquitenay River was recalled and on my next visit to Ingolf search was made for *impressicollis* out in the deep waters some distance from shore, with such success that many were captured. This information was passed on to Mr. W. J. Brown of Ottawa who also took it in numbers on Lake Kazubazua, Quebec. Hence, it seems probable that if search be made in the rougher waters some distance from the shores, *impressicollis* will be found to inhabit most of the rocky lakes of the Laurentian Highland.

ADDENDA

- Hydroporus lapponum* Gyllenhal. (19216)
Localities: MANITOBA - Churchill (Brown, 1937).
Agabus browni Leech
Localities: MANITOBA - Churchill (Leech, 1938).
Agabus colymbus Leech
Localities: MANITOBA - Churchill (Leech, 1938).
Agabus hudsonicus Leech
Localities: MANITOBA - Churchill (Leech, 1938).
Agabus velox Leech
Localities: MANITOBA - Churchill (Leech, 1939).

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