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Key to lady beetles (Coleoptera: Coccinellidae) of Saskatchewan

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Introduction

The larger orange and black lady beetles (also called lady bird beetles, ladybugs) are among the most familiar of insects. However, the family contains a large number of small, often over looked, species. Some of these small species are as strikingly colored as the larger forms, but many are unremarkable black, or sometimes brown, round to oval beetles. Lady beetles, due to their attractive appearance and their importance as predators on various plant-feeding insects and mites, have received much taxonomic attention. Thus the Coccinellidae is one of the best known families of beetles in the North American fauna, and all species known from Canada and the United States have been described, keyed and illustrated in a comprehensive review by Gordon (1985).

The fact that the family is relatively well known does not mean that the group is easy to master. The large number of species (475 species in 57 genera in North America), great similarity between many of the species, and the fact that some species exhibit color variation between individuals, sexes, and populations, make identifications difficult. The task of identifying species is simplified by focusing on a geographical area with a limited number of species, and Gordon (1985) used this approach for some of the more speciose genera where he used regional keys for the North American species.

Several years ago I set for myself the project of learning the species within the area that I live, and through extension expanded this to the fauna of my province of residence, Saskatchewan. Besides Gordon's work, a detailed study by Belicek (1976) of the western Canadian lady beetles, and a popular account of the Alberta fauna by Acorn (2007) provided a good base to work from. A Canadian and provincial checklist of species has been compiled by J. McNamara (Family Coccinellidae, pp. 229 - 237 in Bousquet 1991. Cited below as Bousquet 1991). The outcome of my investigations has been my greatly enhanced appreciation of these insects for their diversity of both form and habits. In addition, several new provincial records have been discovered and more detail on local range patterns and habitats have been learnt (Hooper and Larson 2012). My objective in writing this paper is to share what I have learnt in the course of this project and to add to the material that others wishing to take the same voyage can build upon. This is very much a work in progress and it is hoped that the electronic format will make future revision and update easy. To that end, comments regarding the regional fauna are most welcome.

Material and Methods

Keys are adapted from Belicek (1976) and Gordon (1985), and augmented with information from Acorn (2007). This work is based primarily on specimens in my own collection, which is focused on the southwest portion of the province. I have not seen Saskatchewan specimens of some species reported only from eastern or northern areas of the province but generally have examined

representatives of such species from other areas. Keys have been written for the known Saskatchewan fauna although allowance has been made for species and species variants not seen from the province but which are known or likely to occur in adjacent regions and thus are possible future additions to the fauna. At each couplet where a species is keyed, a table is included that gives the species name, the ecoregions from which specimens have been seen or recorded, and brief notes on habits and habitat (H:) where known and sometimes a discussion on species characteristics or recognition.

The order of genera and species in the keys does not reflect classification, the objective is to make the identification of Saskatchewan species as easy as possible. Length (L= a single measurement from the front of the head to the apex of the elytra) is used extensively and it is recommended that L be determined for all specimens before starting the key. The L values are mainly from Gordon (1985) but have been checked against local specimens and have been modified in cases where the size range of Saskatchewan specimens differs from, or is less than, the range given by Gordon. Illustrations are not to scale.

The number of segments in the antenna is a useful character but is very difficult to ascertain on intact specimens. Generally it requires the antenna be removed and examined under a compound microscope. Also, there may be ambiguity in the number of segments as there may be only partial division between segments. Belicek (1976) and Gordon (1985) disagree in the number of segments in the antenna of certain taxa. For these reasons, the value given by Gordon (1985) is accepted but the character is used only as a secondary character in the keys. The term sternum is used in a descriptive sense, for example sternum 1 in the keys refers to the first visible sternum of the abdomen behind the thorax, although to be anatomically correct this is the fused sterna of abdominal segments 1 to 3.

Two characters of great importance in coccinellid identification are the presence and shape of the metasternal and postcoxal lines. The metasternal line is a fine ridge that runs across the metasternum from the inner-posterior region of the mesocoxal cavity to a point on the metasternum-metepisternal suture. The presence or absence of this line and whether the lateral area of the metasternum anterior to the line is impressed or not is useful in the recognition of a few genera. Of much greater value is the postcoxal line of sternum 1. This line is described as starting at the inner posterior margin of the metacoxal cavity and running posteriorly and laterally. This line may form a more or less even arc and curve forwards to contact the base of sternum 1 near its outer extremity. At the other extreme the line runs posteriorly and slightly laterally to contact the hind margin of sternum 1 at a mediolateral point. Intermediate conditions exist, such as: the arc is incomplete as the line is not completely recurved to the base of sternum 1; or the line may stop short of the hind margin of sternum 1 and run parallel to its hind margin towards the side, reaching the side margin of the sternum or not. The area within the arc defined by the postcoxal line is referred to as the postcoxal space, within which in some species is an oblique line that contacts the postcoxal line at right angles at about its midpoint. A few species lack postcoxal lines.

Sexual characters, especially the male genitalia, provide definitive characters for most species. Sexes may be very similar but generally the last sternite of the male has the hind margin medially emarginate or impressed whereas the female has the margin broadly and evenly rounded. In some species color differs between the sexes, generally with pale markings of the head and pronotum

more extensively developed on the male. The general structure of the genitalia has been described by Vandenberg (2002) and illustrated by Gordon (1985 Fig. 2). The male genitalia consists of two main pieces, an elongate J-shaped (sometimes more elongate and coiled) tube called the sipho (= penis) and a shorter, broader structure called the phallobase. The phallobase has three distal projections, a medial basal lobe and on each side a setae tipped paramere; these three pieces are united basally into a basal piece which in turn is connected to the base of the sipho by a narrow strap (trabes). The phallobase embraces the sipho on its ventral side and in many species the basal lobe has a pair of longitudinal ventral flaps or auricles which clasp the shaft of the sipho and act as guides. Because Gordon (1985) provides good drawings of the genitalia of all species, genitalic structures have only been described in these keys where they are necessary for certain identification. Descriptions of the genitalia are based on the phallobase being examined in dorsal aspect with the tips of the parameres pointing upwards, the orientation of Gordon's drawings.

Distribution

The distribution of Saskatchewan species is indicated on the basis of their occurrence within the provincial ecoregions. Characteristics of Saskatchewan ecoregions are given in Ecological Stratification Working Group (1995) and the extent of the provincial ecoregions indicated in Fig. 1. Most Saskatchewan species are known from a small number of collection records and it is felt that an indication of the ecoregions within which these collections lie gives the best estimate of the potential range of the species. Details on collections can be obtained from me.

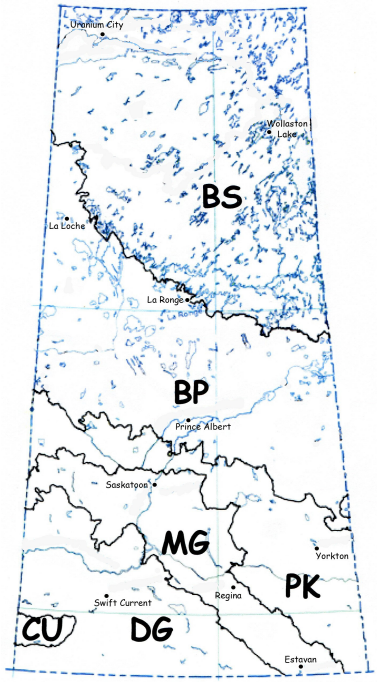

Fig. 1. Ecoregions of Saskatchewan: CU - Cypress Upland; DG- Dry (mixed) Grasslands; MG - Moist Mixed Grasslands; PK - aspen parklands; BP - Boreal Plain; BS - Boreal Shield (after Ecological Stratification Working Group 1996).

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Keys to Saskatchewan Lady Beetles (Coccinellidae)

(common names given only for those species listed in Entomological Society of Canada Common Names List)

KEY TO GENERA

1. Minute, L = 1.0 to 1.5 mm; pronotum with anterolateral angle delimited from disc by an oblique line; prosternum anteromedially with a reflexed lobe; maxillary palpus with apical palpomere conical or elongate-oval and pointed apically; postcoxal line short, divided and not forming an arc. ……... Subfamily Sticholotidinae, 2

1'. L 1.0 mm or more but usually greater than 1.5 mm; pronotum with anterolateral angle not separated from disc by a line; prosternum with anterior margin truncate or lobed; maxillary palpus with apical palpomere various, usually broader and apically truncate; postcoxal line various. ……..….. 3

2(1). Color piceous to black; head smooth between eyes, without a pair of evident depressions; pronotum with very faint reticulate microsculpture; elytra distinctly punctate with sparse, short, inconspicuous setae, antenna 10-segmented with a 3-segmented club; L = 1.0 to 1.5 mm. ……...……..... *Microweisea misella*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Microweisea	*misella*	(LeConte)	1	1	1	1	1	0

H: On the bark of various deciduous trees. Reported to be predators on scale insects.

2'. Color light brown; head with a pair of depressions on frons between eyes; pronotum with microsculpture indistinct, surface polished; elytra finely punctate, apparently glabrous; antenna 9-segmented with a 2-segmented club; L = 1.2 to 1.3 mm.
……..…...……..…… *Coccidophilus marginatus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccidophilus	*marginatus*	(LeConte)	0	1	1	0	0	0

H: Reported from coniferous forest and parkland, on pines infested with *Phenacaspis pinifoliae*. Saskatchewan collection details not recorded.

3(1). Color testaceous to reddish brown, some specimens with lateral, basal and sutural margins of elytra diffusely darker; dorsal surface setose; L = 1.0 to 2.35 mm; postcoxal line incomplete, either ending on hind margin of sternum 1 or extending laterally parallel to its hind margin but not attaining lateral margin. …….. 4

3’. Color various, if largely pale then with distinct darker markings; dorsal surface setose or glabrous; L various, often larger; postcoxal line various. …… 6

4(3). Postcoxal line joining hind margin of sternum; antenna 10 segmented; male genitalia with sipho short and j-shaped; L = 1.0 to 1.5 mm. ……..……. *Diomus debilis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Diomus	*debilis*	(LeConte)	1	1	0	0	0	0

H: Two specimens collected on a dry, south-facing slope in mixed grassland, one under a rock and the other running along dry grass stalks, which it matched closely in color. Other specimens were collected from lake wash.
Acorn 2007 stated that the Alberta records for *D. debilis* actually refer to *Selvadius nunenmacheri*. The same may apply to some Saskatchewan records as all of these have not been checked. However, specimens of *D. debilis* have been collected from several localities in SW Saskatchewan and have been recorded from North Dakota. I have seen two specimens of this species from Alberta (Nanton – since destroyed; Calgary – damaged) so the species does occur in Alberta.

4’. Postcoxal line not reaching hind margin of sternum 1, apically more or less parallel with hind margin of sternum; antenna 10 or 11 segmented; male genitalia with sipho short and j-shaped or very elongate. ……. 5

5(4). Body elongate-oval, dorsally convex; sterna 1 and 2 separated by a distinct suture across width; dorsal surface setose with setae arising from both coarse and fine punctures; antenna 10-segmented; color reddish brown, elytra usually darkest with a diffuse apicomedial paler area; male genitalia with sipho j-shaped; L = 1.40 to 1.80 mm.
……..…… *Nephus sordidus* (see key E)

5’. Body elongate, oblong and dorsoventrally flattened; sterna 1 and 2 fused medially, suture indistinct; dorsal surface setose but setae arising from similar sized punctures; antenna 11 segmented; male genitalia with sipho very long and whip-like; L = 1.55 to 2.35.
…… *Selvadius nunenmacheri*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Selvadius	*nunenmacheri*	Gordon	0	0	0	0	0	0

H: Probably does not occur in Saskatchewan. See comments under *Diomus debilis* above.

6(3). Clypeus broadly expanded laterally with anterolateral angle rounded, in anterior aspect covering base of antenna and deeply dividing anteroventral margin of eye; dorsal surface glabrous. ……..……... Chilocorinae, Key A

6'. Clypeus narrower, its anterolateral angle right angled to acute before notched antennal insertions; eye with anterior margin more shallowly and broadly emarginated; dorsal surface setose or glabrous ……..... 7

7(6). Pronotum and elytra pubescent (setae may be rubbed off in places but usually visible laterally); distal maxillary palpomere various, usually barrel-shaped, oblong, oval or conical (tapered apically), but may be securiform. 8

7'. Pronotum and elytra glabrous (minute setae may be present but only visible at high magnification, 50X or more); apical maxillary palpomere broadly securiform (hatchet-shaped) with sides strongly divergent apically and apex obliquely truncate, base narrowly articulated with preceding segment 12

8(7). Body elongate, pronotum with sides strongly rounded, constricted basally and usually slightly sinuate before right angled posterolateral angle, base narrower than elytra across shoulders; front coxal cavities open posteriorly; head black, pronotum yellow, elytra basally and along basal 2/3 of suture and lateral margin black, apex and a medial anterior extension on disc yellow; postcoxal line forming a complete arc; L = 2.7 to 3.5 mm. ..... *Coccidula lepida*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccidula	*lepida*	LeCongte	1	1	1	1	1	0

H: Occurs in mashes and wet meadows. Prey not known.

8'. Body less elongate, usually round to broadly oval, pronotum base as wide as or only slightly narrower than elytra across shoulders, or if narrower not sinuate before hind angle; front coxal cavities closed posteriorly; color various; postcoxal line forming a complete arc or not. 9

9(8). Prosternum produced and broadly rounded anteriorly, at least partly concealing mouthparts and antennae when head in repose; distal maxillary palpomere oblong and obliquely truncate apically; prosternum medially without a pair of longitudinal carinae; postcoxal line forming a short but complete arc; color black with legs at least partly yellow to brownish-yellow; L = 1.3 to 1.6 mm. ..... *Stethorus*, key B

9'. Prosternum with anterior margin truncate and not produced into a ventral lobe; other characters various. 10

10(9). Prosternum with two longitudinal carinae on intercoxal process which extend anteriorly and converge towards the anterior margin of the prosternum, carinae may attain margin or meet and fuse short of margin; body round to broadly oval with outline of pronotum more or less continuous with that of elytra. ..... *Scymnus*, Key C
[The prosternal carinae are sometimes distorted or obscured in part by coarse prosternal punctation, especially in members of the subgenus *Scymnus* s. str. in which the postcoxal arc is incomplete]

10'. Prosternum lacking carinae or with only abbreviated ridges adjacent to coxal cavities; body of more elongate form with a more pronounced discontinuity of curvature between pronotum and elytra. ……..……..……..... 11

11(10). Postcoxal line complete, recurved to base of first abdominal sternum; forebody narrow, pronotum with lateral margins more or less straight and parallel in at least basal half; elytral punctation of more or less similar sized punctures. …….. *Didon*, Key D

11'. Postcoxal line incomplete, not reaching base of sternum, apex slightly recurved or parallel to posterior margin of sternum; pronotum with lateral margins broadly and evenly arcuate; elytral punctation dual with intermixed coarse and fine setiferous punctures. ……..... *Nephus*, Key E

12(7). Anterior tibia with external tooth or spine at about basal third .... *Brachiacantha*, Key F

12'. Anterior tibia without an external tooth or spine. .....……... 13

13(12). Small species, L = 4.0 mm or less; pronotum usually entirely black or with lateral and apical margins variously yellow, rarely disc largely reddish with diffuse basomedial darker markings, disc never with distinct pale spots. .....……..…….. 14

13'. Larger species, L = 4.0 mm or more, or if less than 4 mm, pronotum largely pale with darker spots or dark with basal and medial pale spots …….…….……..…… 15

14(13). Epipleuron not excavated for reception of middle and hind femoral apices; mentum with anterior margin straight; body more elongate, in dorsal aspect elytral margins subparallel basally, dorsally somewhat depressed; tarsal claws simple. …..... *Hyperaspidius*, Key G

14'. Epipleuron excavated for reception of middle and hind femoral apices; mentum with anterior margin emarginate and concave medially; body more oval, lateral margins of elytra more evenly rounded, dorsally more convex; tarsal claws with or without a basal tooth. .....…….....….... *Hyperaspis*, Key H

15 (13). Tarsal claw not toothed or cleft, simply widened basally; smaller species, L = 3.0 to 4.0 mm. .....…….…..... 16

15'. Tarsal claw toothed or cleft, with a right-angled or acute ventral projection; L = 1.7 mm or more but most species greater than 4.0 mm. .....…..... 17

16(15). Apex of middle and hind tibia each with 2 small spurs; elytron with straight, regular longitudinal vittae; body elongate; L = 3.2 to 4.0 mm
..... *Macronaemia episcopalis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Macronaemia	*episcopalis*	(Kirby)	1	1	1	1	1	1

H: Usually in sedge marshes. This species has been reported as an aphid predator but Gordon (1985) had not seen any specific records.

16'. Apex of middle and hind tibia each with a single small spur; elytron spotted or spots joined to form irregular and sinuous vittae; body more ovate; L = 3.0 to 4.0 mm .. *Anisosticta*

16A. Abdomen with lateral margin pale; meso- and metepimeron pale
..... *Anisosticta bitriangularis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Anisosticta	*bitriangularis*	(Say)	1	0	0	1	1	1

H: Occurs among sedges and grasses in eutrophic marshes and wetland areas.

16A'. Abdomen entirely black; meso- and metepimeron partially darkened to black. ..... *Anisosticta borealis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Anisosticta	*borealis*	Timberlake	0	0	0	0	0	1

H: Similar to *A. bitriangularis* but more northerly, in taiga and low arctic. Collected at Patterson Lake by R. Hooper.

17(15). Tarsal claw cleft with an acute tooth arising from ventral margin near or beyond middle
…….. 18

17'. Tarsal claw with a basal tooth, tooth usually subquadrate but in some species may be acute with a sharp apex extending not beyond middle of ventral margin of claw. ……..... 19

18(17). Large, L = 6.5 to 8.0 mm, and broadly oval; sternum 1 with postcoxal line contacting or almost contacting hind margin of sternum 1 and following it to lateral margin; metasternum with mesocoxal line strong and contacting metepisternal suture about the middle of its length, area anterior of line strongly impressed for reception of middle leg; tarsal claw with a very small, acute median tooth; elytron maculations various but tending to form longitudinal stripes or blotches; pronotum black medially, lacking basomedial pale spots.
……..…… *Myzia*, Key I

18'. Size various, L = 3.5 to 7.5 mm, but generally smaller and distinctly elongate; sternum 1 with postcoxal line obsolete or if present not extending posteriorly beyond middle of segment before becoming recurved towards anterolateral angle of sternum; metasternum with mesocoxal line obsolete or only faintly traceable in transverse sculpture, area in front of line not evidently impressed; tarsal claws with ventral tooth larger, medial to subapical; elytron maculations various, usually spotted but some with longitudinal vittae, pronotum with disc black or spotted basomedially. ……. *Hippodamia*, Key J

19(17). Prosternum strongly convex and thickened along midline, with anterior edge broadly triangularly projecting at middle; mesosternum with anterior margin broadly emarginated for reception of apex of prosternal process; metasternum with area anterior to metacoxal line strongly impressed for reception of middle leg; pronotum black medially with a pair of pale basomedial spots which may be narrowly united; large to very large, L = 7.0 to 10.5 mm. ……..…..... *Anatis*, Key K

19'. Prosternum lowly and evenly convex, its anterior margin truncate and not triangularly produced medially; meso- and metasterna various; pronotum color various; size various but generally smaller. ……..…. 20

20(19). Apex of middle and hind tibia without spurs .....…..…… 21

20'. Apex of middle and hind tibia each with pair of spurs (spurs, located on inner side near tarsal articulation, may be small and inconspicuous but are darker and at least slightly longer than marginal setae). …….....……..……... 23

21(20). L = 1.7 to 3.0 mm; pale yellow, pronotum with four brown spots (some specimens with a fifth basomedial spot) and elytron with nine spots but these spots variously confluent and pattern various. …..... *Psyllobora vigintimaculata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Psyllobora	*vigintimaculata*	(Say)	1	0	1	1	0	0

H: On fungus-covered leaves of various trees; also on crowns and roots of dandelions infested with ant-tended aphids (*Trama troglodytes*). Members of the genus apparently feed on fungi, especially mildews which frequently occur with aphids.

21'. L = 3.3 to 10.0 mm; color pattern various. …….. 22

22(21). Postcoxal area of first abdominal sternum without an oblique dividing line; elytron without a subapical transverse raised or ridged area; elytron with a median longitudinal vitta; smaller, L = 3.3 to 5.5 mm. .....…….... *Mulsantina*, Key L

22'. Postcoxal area of first abdominal sternum with an oblique dividing line; elytron subapically with a transverse ridge or raised area; elytron without longitudinal markings, basically with 10 spots arranged in transverse series as follows, scutellar and two subbasal, three medial, three postmedial and one subapical but size of spots varied and spots may be absent on some specimens; large, L = 7 to 10 mm. ..... *Harmonia axyridis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Harmonia	*axyridis*	(Pallas)	1	0	0	0	0	0

H: An introduced species, first found in SK in 2011 (16 km S Maple Creek, Sept.-Oct.). Specimens were on aphid-infested golden willow as well as on sides of buildings. Specimens were found again in the spring of 2012 but not subsequently

23(20). Sternum 1 lacking postcoxal line; metasternal line absent; dorsal surface with strong reticulate sculpture; pronotum pale with a large black spot on each side; elytron pink to red with a scutellar and five large black spots; body elongate, femur visible beyond lateral margin of elytron; L = 4.2 to 6.6 mm. ……..……. *Coleomegilla maculata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coleomegilla	*maculata*	Mulsant	0	0	0	0	0	0

H: Widely distributed in eastern North America, north to southern Ontario and Quebec and west to South Dakota. There are no prairie records but it is a possible species in extreme SE SK.

23'. Sternum 1 with postcoxal line; metasternal line present; dorsal surface usually shiny with sculpture obsolete or lightly impressed; color and body form various. ……...… 24

24(23). Postcoxal line forming a complete arc, recurved and directed towards base of sternum; mesepimeron black. ..……..… 25

24'. Postcoxal line not forming a complete arc, either paralleling hind margin of sternum or if recurved apically, not reaching base of sternum; mesepimeron usually white but black in some specimens. .....……..…….... 26

25(24). Body broadly oval; pronotum basomedially with a bilobed white spot and each lateral area white and usually with a black spot (pronotum except for lateral margin may be black in melanic forms), elytral pattern highly varied, typically orange with a single large black spot but some with multiple spots or even black with a humeral and a discal red spot; male antenna not modified; L = 3.5 to 5.5 mm. ……..... *Adalia bipunctata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Adalia	*bipunctata*	(Linnaeus)	1	1	1	1	1	1

H: Twospoted Lady Beetle. Widespread, occurring in North and South America and Eurasia. Usually on trees and shrubs where it is a predator on aphids and adelgids, often abundant on Manitoba maple; overwintering beetles are frequent in buildings.

25'. Form more elongate; pronotum black with a narrow lateral pale margin; male antennomere 3 strongly triangular, wider than antennomeres 2 and 4 and with anterior apical angle setose; L = 3.7 to 4.7 mm. ……..…… *Ceratomegilla ulkei*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Ceratomegilla	*ulkei*	Crotch	0	0	0	0	0	0

H: Species of low arctic and taiga zones, recorded from AK to NWT, BC, AB and ON. No SK record but possible in extreme north..

26(24). Pronotum black with a large white spot on each anterolateral angle which on some specimens are connected by white anterior margin; elytral ground color yellow to red with black bands or spots ..... *Coccinella*, Key M

26'. Pronotum color pattern not as above 27

27(26). Elytra orange without black markings; pronotum black with white lateral border within which is a discal spot in each lateral third, this spot may be connected anteriorly and laterally to dark area of disc to form a complete or broken ring-shaped white mark; L = 3.5 to 6.2 mm. ..... *Cycloneda polita*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Cycloneda	*polita*	Casey	0	1	0	0	0	0

H: Specimens have been found only in lake drift. Members of the genus are primarily aphid predators.

27'. Elytra spotted, usually yellow to orange with black spots but some specimens mainly black with pale spots; pronotum color various but generally with a pale median longitudinal stripe separating lateral black spots, or variously spotted (spots may be fused on some specimens). ……..…… 28

28(27). Pronotum with a median pale line separating a pair of quadrate discal spots, each of which usually has a bite taken out of posterolateral corner; pronotum very shiny, lacking all trace of alutaceous sculpture; L = 4.0 to 5.5 mm.
..... *Calvia quatuordecimguttata*


Genus	Species	Author	CU	DG	MG	PL	BP	BS
Calvia	*quatuordecimguttata*	(Linnaeus)	1	1	1	1	1	1

H: Fourteenspotted Lady Beetle. Occurs on deciduous trees; feeds on psyllids and aphids. Color highly varied.

28'. Pronotum usually yellow with darker spots which may be variously connected; pronotum with fine alutaceous sculpture; L = 3.7 to 6.1 mm. ……. *Olla v-nigrum*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Olla	*v-nigrum*	(Mulsant)	0	0	0	0	0	0

H: SK status unknown. Gordon (1985) indicates southern SK in the range but there are no specific records. Apparently an aphid predator. Color highly varied, some specimens largely black but these mainly in southern US.

Key A. Species of Subfamily Chilocorinae

1. Postcoxal line of sternum 1 merging with posterior margin of sternum; elytron black with a red discal spot; L = 3.7 to 5.0 mm. ...……...……..…….... *Chilocorus*, 2

1'. Postcoxal line of sternum 1 not merging with posterior margin of sternum, line recurved laterally towards base of sternum; elytron either entirely black or reddish with black markings; L = 2.9 to 4.2 mm. …….....…….. 3

2(1). Karyotype: 2n = 14; known from southern SK and Alberta foothills ….. *C. hexacyclus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Chilocorus	*hexacyclus*	Smith	0	1	1	0	0	0

H: Unknown

2'. Karyotype: males 2n = 19-25; females 2n = 20-26; widespread in eastern North America.
……..……*C. stigma*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Chilocorus	*stigma*	(Say)	1	0	1	1	1	0

H: Twicestabbed Lady Beetle. Most frequently found on the bark of various deciduous trees. where they apparently feed on scale insects (Acorn 2007).

3(1). Elytron black; tarsal claw with basal tooth; antenna with 10 antennomeres; pronotum finely margined at base; L = 3.0 to 4.2 mm. ..... *Exochomus aethiops*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Exochomus	*aethiops*	(Bland)	1	0	0	0	0	0

H: On the bark of various deciduous trees. Most SK specimens collected from lake wash.

3'. Elytron reddish with black sutural margin and two discal spots (may be expanded and joined); tarsal claw simple, without a basal tooth; antenna with 8 antennomeres; pronotum not margined at base; L = 2.9 to 3.0 mm. ..... *Brumoides septentrionis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Brumoides	*septentrionis*	(Weise)	1	1	1	1	1	1

H: On the bark of various deciduous trees as well as on sagebrush and other shrubs. Often common in lake wash of prairie reservoirs. Probably preys on scale insects.

Key B. Species of Genus *Stethorus*

1. Postcoxal arc short, posterior edge of arc not reaching middle of sternum 1; punctures on base of elytron larger than adjacent pronotal punctures; pronotum with lateral margin broadly and evenly arcuate; male genitalia with paramere slender and evenly tapering apically, basal lobe with apex slightly broadened and arrow-head shaped; L = 1.3 to 1.6 mm..... *S. punctillum*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Microweisea	misella	(LeConte)	1	1	0	0	0	0

H: On the bark of various deciduous trees.
The two species of *Stethorus* can be separated with certainty only on the basis of the male genitalia. However all SK specimens examined have been females. Specimens from the SW best fit the description of the introduced *S. punctillum* whereas specimens from eastern and parkland localities agree better with the native species *S. punctum*.

1'. Postcoxal arc larger, posterior edge of arc reaching middle of sternum 1; punctures on base of elytron and adjacent pronotum of similar size; pronotum with lateral margin more strongly arcuate on anterior angle then becoming straighter basally; male genitalia with paramere more rod-like, not so strongly tapered and more bluntly pointed apically, basal lobe with apex evenly narrowed and pointed; L = 1.3 to 1.6 mm. ….....……. *S. punctum*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Microweisea	misella	(LeConte)	0	0	1	1	0	0

H: On the bark of various deciduous trees.

Key C. Subgenera of Genus *Scymnus*.

1. Postcoxal line incomplete, apical end shortly recurved then disappearing well before reaching base of sternum; male sternum 5 with bevelled area along posteromedial emargination with dense, fine setae. ……..…… subgenus *Scymnus*, Key C-1

1'. Postcoxal line complete, recurved and extending to base of sternum; male sternum 5 with edge of posteromedial emargination bare or setose (*S. postpictus*). ……. subgenus *Pullus*, Key C-2

Key C-1. Species of *Scymnus* s. str.

1. Pronotum alutaceous, with punctures usually finer than those on head; L = 1.8 to 2.4 mm. ……..…. 2

1'. Pronotum smooth and shiny between punctures, punctures usually larger than those on head …… 3

2(1). Elytron with apical third or more yellowish red; postcoxal line distinctly separated from hind margin of sternum; male genitalia with basal lobe longer than paramere, paramere triangular, widest basally and narrowing apically; L = 2.4 to 2.7 mm. ……..…. *Scymnus opaculus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*opaculus*	Horn	0	0	1	1	0	0

H: Not recorded. Occurs in both grasslands and parklands.

2'. Elytron entirely black; postcoxal line reaching or very closely approaching hind margin of sternum; male genitalia with basal lobe slightly shorter than paramere, paramere narrow and subparallel in lateral aspect; L = 1.8 to 2.4 mm. ……. S*cymnus caurinus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*caurinus*	Horn	0	1	0	0	0	0

H: Specimens collected by sweeping sagebrush (Altawan Reservoir).

3(1). Surface of elytron smooth, punctures coarser than on pronotum; male genitalia with basal lobe slightly longer than paramere, paramere in lateral aspect subparallel to bluntly rounded apex; L = 2.4 to 3.0 mm. ……..……. …. ..... *Scymnus apicanus pseudapicanus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus apicanus pseudapicanus		Gordon	1	1	1	1	0	0

H: Collected by sweeping grasses and forbes.

3'. Surface of elytron distinctly microreticulate, punctures not or barely larger than on pronotum; male genitalia with basal lobe distinctly longer than paramere, paramere in lateral aspect wide basally and triangularly narrowed towards narrowly rounded apex; L = 2.4 to 2.7 mm. …….. ……..…. *Scymnus paracanus linearis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	paracanus linearis	Gordon	1	1	1	0	0	0

H: Not known, generally collected by sweeping grasslands.

Key C-2. Species of *Scymnus*, subgenus *Pullus*.

It is recommended that the male genitalia be examined for identification of species within this subgenus. Some species are distinctively colored but others are similar in color or their color varies, whereas the male genitalia are of varied form and distinctive. The color of the phallobase is lightly or darkly pigmented. The basal lobe on its ventral side has a median channel flanked on each side by a lobe or ala, these alae may be low and rounded in species with pale genitalia, or may be greatly enlarged and modified in species with pigmented genitalia and in some species are longer and broader than the tip of the basal lobe. The shape of the tip of the basal lobe is also a useful character. An attempt has been made to give a simple description of the salient characters of the genitalia but the illustrations provided by Gordon (1976, also repeated in Gordon 1985) should be examined.

1. Pronotum entirely pale red or orange; male genitalia piceous; alae broad, outer angle projecting beyond level of apex of basal lobe, alae mesally fused to dorsal projection of basal lobe near its apex, free part of apex of basal lobe more or less straight in lateral aspect (Gordon 1976: 200. Figs. 295-298); L = 1.7 to 2.3 mm. …….....….....….*Scymnus carri*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	carri	Gordon	0	1	0	0	0	0

H: Specimens were collected by sweeping sagebrush on mixed prairie and in lake wash..

1'. Pronotum with at least basomedial area of disc dark, usually much or all of pronotum black. ……. 2

2(1). Pronotum largely orange to reddish but with a sharply delimited subquadrate to parabolic basomedial black spot which does not extend anteriorly beyond middle of disc; male genitalia piceous, alae subequal in length to apex of basal lobe, outer angle free and rectangular, distal edge broadly emarginated before fusing to basal lobe at the base of its downwardly hooked apex (Gordon 1976: 233. Figs. 347-350). L = 2.2 to 2.4 mm. …..... *Scymnus uncus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*uncus*	Wingo	0	0	0	0	0	0

H: Recorded from SK by Bousquet (1991) but without specific localities. Recorded by Gordon (1985) from Medicine Hat and I have collected specimens on sagebrush on Pinhorn Ranch (Lower Milk R., AB), and Montana.

2'. Pronotum with dark area larger, extending from base anteriorly to beyond middle, on many specimens contacting anterior margin and much or all of disc dark. ……..……... 3

3(2). Elytron with at least apical quarter pale yellow to red. …….. 4

3'. Elytron with apical pale area at most consisting of a narrow yellow band mesad to lateral margin. ……..…. 5

4(3). Male sternum 1 basomedially with a small acute tubercle which is hidden by easily visible dense erect setae; sternum 1 without a smooth impunctate area; elytron usually with apical third to half pale; male sternum with margin of posteromedial emargination with fringe of setae; male genitalia lightly sclerotized, yellow, basal lobe broadly triangular in ventral aspect, alae rounded and non-projecting (Gordon 1976: 131. Figs. 195-197); L = 1.7 to 2.3 mm. ……..…….....…… *Scymnus postpictus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*postpictus*	Casey	1	1	1	0	0	0

H: Most specimens collected by sweeping prairie vegetation.

4’. Male sternum 1 medially finely and densely punctate, medioapically with a small shining, impunctate somewhat triangular area, without a medial tubercle or tuft of setae; elytron with extent of pale area various ; male sternum 5 with margin of posteromedial emargination glabrous; male genitalia piceous, alae slightly shorter than basal lobe, fused to it about one third of its length from its apex, basal lobe narrow, its apex beyond alae more or less straight in lateral aspect (Gordon 1976: 272. Figs. 419-422); L 2.1 to 2.7 mm. ..……..……. *Scymnus brullei*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*brullei*	Mulsant	0	1	1	1	0	0

H: Not recorded. Specimens from eastern Canada with apical spot absent to one quarter length of elytron, specimens from Dakotas with elytra almost entirely pale.

5(3). Body almost entirely black dorsally except head may be partly or entirely pale and anterolateral angle of pronotum and apex of elytron may be obscurely paler. …… 6

5’. Body with pale areas more extensive, pronotum with anterolateral angle and lateral margin broadly yellow to orange, its front margin also pale on some specimens. ……..……..……7

6(5). Smaller, L = 1.9 to 2.2 mm; male genitalia piceous, apex of basal piece sharply pointed in lateral aspect (Gordon 1976: 138. Figs. 204-208) ……... *Scymnus tenebrosus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*tenebrosus*	Mulsant	1	1	1	1	0	0

H: Swept from shrubby vegetation. See comments under *S. lacustris* for separation of the two species.

6’. Larger, L = 2.1 to 2.4 mm; male genitalia piceous, apex of basal piece broadly rounded and spatulate in lateral aspect (Gordon 1976: 251. Figs. 379-382). . …….. ..... *Scymnus lacustris*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*lacustris*	LeConte	1	1	1	1	1	0

H: Swept from shrubs in mesic grassland sites, e.g. riparian areas, coulee draws; also many in lake wash. There are no external characters that are reliable for separation of *S. tenebrosus* and *S. lacustris* so dissection of genitalia is required. Once separated by genitalia (and females identified by association with males), the size difference becomes apparent. Also, specimens of *tenebrosus* tend to have the pale areas of brighter color than *lacustris*. Gordon (1975) gives lengths as: *tenebrosus* – 1.95 to 2.53 mm; *lacustris* – 1.10 to 1.51 (probably an error and should read 2.10 to 2.51 mm).

7(5). Pronotum with dark spot parabolic, extending anteriorly past middle but still broadly separated from anterior margin; male sternum 1 basomedially with a large ovate slightly impressed glabrous area within which is a faint longitudinal median ridge; male genitalia piceous, alae much longer than basal lobe, broadly rounded to subtruncate apically (Gordon 1976:157 Fig. 234-8); L = 2.2 to 2.4 mm. ……. *Scymnus iowensis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*iowensis*	Casey	0	1	0	0	0	0

H: Swept from shrubs in Great Sand Hills.

7'. Pronotum with dark area continuous to front margin (females) or narrowly separated from it by an orange to piceous area (males); male sternum 1 basomedially with an anteriorly narrowing glabrous, flat triangular area which is bordered by dense setae. ……..……. 8

8(7). Male genitalia piceous, alae slightly shorter than basal piece, broadly rounded apically, free apex of basal piece narrow and evenly narrowed to a point in lateral aspect; paramere short, about two-thirds length of ala (Gordon 1976: 241. Figs. 359-362); L = 2.0 mm. ……..…… *Scymnus aquilonarius*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	aquilonarius	Gordon	1	1	0	0	0	0

H: Swept from sagebrush on mixed prairie, several collections in sandhills areas.

8'. Male genitalia piceous, alae slightly shorter than basal piece, attached to basal piece subapically, apex of basal piece bluntly pointed in lateral aspect, in dorsal aspect narrowly truncate with a distally widening triangular flattened area (Gordon 1976: 257. Figs. 391-394); L = 2.1to 2.5 mm. …….. *Scymnus caudalis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Scymnus	*caudalis*	LeConte	0	0	0	0	0	0

H: Gordon (1985) gives the range as sw MBV to PQ and s to TX. Bousquet (1991) lists SK without specific localities.

Key D. Species of Genus *Didion*.

The habitus of members of this genus is very characteristic; the body is elongate-oval with the pronotum distinctly narrower than the base of the elytra and subparallel in lateral outline in at least its basal half.

1. Elytron with punctures large, deep, distinct; color mainly piceous to black but some specimens with reddish orange spot on disc of elytron; postcoxal line less evenly rounded with hind margin somewhat angulate and well separated from hind margin of sternum; body more elongate, elytral length (base of scutellum to apex)/ elytra maximum width = 1.21 to 1.28; L = 1.4 to 1.8 mm. ……..…….……. *Didion punctatum*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Didion	*punctatum*	(Melsheimer)	1	1	1	0	0	0

H: On the bark of various deciduous trees, especially on the sunny side of the lower trunk of mature aspen about the time of leaf flush. Gordon (1985) and Acorn (2007) both use the reddish spot on the elytral disc as a distinguishing feature of the species. However, only 1 specimen of 20 examined from the Cypress Hills had reddish elytral spots, the others were uniformly black.

1’. Elytron with punctures fine and shallow; color piceous to black, elytron immaculate; postcoxal line evenly rounded and forming a semicircular arch behind, more closely approaching hind margin of sternum; body more ovate, elytal length/ width = 1.13 to 1.20; L = 1.4 to 1.8 mm. ……..…….... *Didion longulum*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Didion	longulum	Casey	1	1	0	0	0	0

H: On the bark of various deciduous trees.

Key E. Species of *Nephus*

1. Color reddish-brown with apex of elytron and its lateral and sutural margins diffusely darker; sternum 1 with postcoxal line parallel to hind margin of sternum laterally, at most with only extreme apex curved forward; L = 1.4 to 1.8 mm. ……..…. *Nephus sordidus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Nephus	sordidus	(Horn)	1	1	1	0	0	0

H: Collected in wash at Bitter Lake, in a region of sandy soil and dry mixed grassland.

1’. Body mainly black with a pale spot of various extent on each elytron; sternum 1 with postcoxal line definitely curved forward laterally. …….. 2

2(1). Elytron with a large elongate, usually slightly medially pinched (sometimes completely divided), yellow to reddish spot; antenna 11 segmented; L = 1.7 to 2.1 mm. ….....…. *Nephus ornatus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Nephus	*ornatus naviculatus*	(Casey)	0	1	1	0	1	0

H: On the bark of various deciduous trees but also in grasslands. SK specimens are assigned to ssp. *naviculatus* which occurs from MB to BC and AK; *N.o. ornatus* occurs in the east.

2’. Elytron with a triangular reddish-yellow spot on apical third; antenna 10-segmented; L = 1.5 to 2.0 mm. …… *Nephus georgei*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Nephus	*georgei*	(Weise)	0	0	0	0	0	0

H: No SK records but reported from several widely separated Canadian localities. Occurs on the bark of various deciduous trees.

Key F. Species of *Brachiacantha*

1 Elytron black with five yellow spots, humeral spot may be continuous with basal and mid-lateral spot on some specimens; L = 3.0 to 4.0 mm. …… *Brachiacantha ursina*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Brachiacantha	*ursina*	(Fabricius)	1	1	1	1	0	0

H: In moist grasslands and parklands. Larvae live in ants nests.

1'. Elytron yellow with sutural margin and two discal spots, black, sutural dark area may be expanded and contacting discal spots on some specimens; L = 3.5 to 4.4 mm. .....……..... *Branchiacantha albifrons*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Brachiacantha	*albifrons*	(Say)	0	1	1	1	0	0

H: Collected by sweeping shrubs on dry prairie, especially in sand hills; larvae feed on scale insects in ant nests.

Key G. Species of *Hyperaspidius*

I recognize four taxa amongst the SK specimens I have examined. I have tried to associate these with Gordon's (1985) species definitions but for each have found conflicting character states so this treatment presents heuristic groupings that require testing against additional specimens and comparison with reliably identified material. Identification is further complicated by sexual variation in size (females are on average significantly larger than males) and color. The male head and pronotum are yellow with darker markings (dark red to black) of various extent, varying both within and between species. The female pronotum is black with yellow lateral margins, the width and shape of which are rather constant within a species.

1. Larger species, L = 2.9 to 3.7 mm; postcoxal line complete or almost so, traceable to at least level of setal fringe of metepimeron; pronotum evidently punctate, punctures gradually smaller towards base; prosternum coarsely punctate; male pronotum yellow with a black basal band which on some specimens extends finger-like each side of middle and laterally as a rounded lobe; female dark area of pronotum somewhat trapezoidal, narrowest anteriorly and widening basally where it is usually wider than width of head. .....*Hyperaspidius hercules*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspidius	*hercules*	Belicek	1	1	0	0	0	0

H: Most specimens collected in lake drift; also sweeping mixed prairie especially where gumweed is common. Gordon 1985 gives a wider range of length, 2.1 to 4.0 mm

1’. Smaller species, L = 1.6 to 2.4 mm; other characters various. ..…….…… 2

2(1). Postcoxal line short, disappearing shortly beyond point of reflexion and ending well short of metepimeron; pronotum with punctures on disc small and of more or less similar size or gradually becoming slightly smaller posteriorly along middle of disc; prosternum with punctures small; female pronotum with dark area narrowest anteriorly, widened posteriorly to where it is wider than head width; male pronotum entirely yellow or with basal margin variously darkened with a narrow to broader band which may be expanded medially anterior to scutellum and sublaterally, width seldom if ever greater than one quarter median length of pronotum (only 4 males examined); L = 1.6 to 2.2 mm. .... ……..……... *Hyperaspidius vittigerus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspidius	*vittigerus*	(LeConte)	1	1	1	1	0	0

H: Collected by sweeping mixed prairie, frequent in sparse vegetation of over-grown sand dunes.

2’. Postcoxal line long, recurved and actually or almost reaching apex of hair fringe of metepimeron; other characters various. ……. 3

3(2). Prosternum coarsely and densely punctate; pronotum with distinct punctures anteriorly, punctures finer in basal half; female pronotum with dark area rectangular, its lateral margins subparallel to slightly arcuate and at base narrower than width of head; male pronotum yellow, its base dark (sometimes only vaguely brown) with a V-shaped medial projection and lateral area on each side broadened; L = 1.8 to 2.4 mm. (Gordon 1985 gives 2.2 to 3.2 mm) ..... *Hyperaspidius insignis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspidius	*insignis*	Casey	1	1	0	0	0	0

H: Not recorded.

3’. Prosternum finely and sparsely punctate; pronotum disc minutely punctate, punctures of similar size over disc; female pronotum largely black, anterolateral angle pale and lateral margin pale but width of margin narrowed basally to where dark area of disc reaches posterolateral angle; male disk of varied color, some specimens with a large black area on basal half or more, its lateral margins of even width, anterior margin more broadly yellow with a V-shaped medial projection, paler specimens with dark area reddish with large lateral lobes; L = 1.6 to 1.9 mm. …….. *Hyperaspidius mimus*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspidius	*mimus*	Casey	1	1	0	0	0	0

H: Most specimens collected from lake wash.

Key H. Species of *Hyperaspis*

1. Elytron with lateral margin and epipleuron black or piceous, pale spots, if present, well separated from lateral ridge. ……..…….. 2

1’. Elytron with lateral margin pale, at least at humeral angle, extent of pale margin various ……..…..…… 6

2(1). Elytron with a large apical spot, never with a medial discal spot; male head orange anteriorly, pronotum with broad pale lateral margins; female head black, pronotum with broad pale lateral margins; antenna 10-segmented; male genitalia with basal lobe about as long as paramere, slightly narrowed apically, apex in ventral aspect subtruncate with an asymmetrical lateral projection; L = 2.3 to 3.2 mm. ….....……..… *Hyperaspis postica*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*postica*	LeConte	0	1	1	0	0	0

H: Habitat not known, collected by sweeping shrubs on mesic prairie and also collected in Grasslands Park.

2’. Elytron with a medial discal spot, sometimes with one or two subapical spots; male pronotum with lateral margins and often anterior margin narrowly yellow; female pronotum entirely black or with yellow margins; antenna 11-segmented. ..…….. 3

3(2). Elytron with a medial spot and two subapical spots; male head pale, pronotum with anterior and lateral margins yellow; female head black, pronotum with anterior margin black, lateral margin yellow but narrower than on male; L = 2.0 to 3.0 mm. ……..… *Hyperaspis proba*

Genus	Species	Author	CU	DG	MG	PL	BP
Hyperaspis	*proba*	(Say)	0	0	0	1	0	0

H: Habitat not known. SK specimens not examined. The species has a wide distribution in the east, recorded from SK to PQ, and S Dakota to the Atlantic Coast and Texas.

3’. Elytron with one or no subapical spots; male pronotum with lateral margins yellow, anterior margin yellow or black; female pronotum black. ……..…… 4

4(3). Elytron with a medial spot, without subapical spot; male pronotum narrowly yellow laterally and often along anterior margin; male genitalia with basal lobe almost as long as paramere, nearly parallel-sided with apex obliquely truncated; L = 2.4 to 4.5 mm. ……..……. *Hyperaspis binotata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*binotata*	(Say)	0	0	0	0	0	0

H: Recorded from SK by Bousquet (1991). Record needs confirmation although this is a widespread eastern species that is likely to occur in the SE.

4’. Elytron with a yellow to red discal spot and sometimes a subapical spot; male pronotum with lateral and usually anterior margins yellow; male genitalia with basal lobe distinctly shorter than paramere, narrow at base and wider at apex, apex obliquely truncate. ……. 5

5(4). Form more evenly oval, elytron not or only slightly less arcuate posterior to widest point; male genitalia (dorsal aspect with parameres pointing upwards) with basal lobe truncate apically with right angle most pronounced and with a subapical projection on right side; male pronotum with anterior and lateral margins narrowly pale; L = 2.6 to 4.0 mm. ....*Hyperaspis signata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*signata*	(Olivier)	0	0	0	0	0	0

H: From Bousquet (1991), with no specific locality.

5’. Form more flattened and elongate, especially in female, elytron with lateral margin evidently straighter and less evenly curved posterad widest point; male genitalia (dorsal aspect with parameres pointing upwards) with basal lobe nearly mirror image of *H. signata*, left angle of apical truncation most prominent and with a broad subapical projection on left side; male pronotum with anterior and lateral margins bordered with yellow; L = 2.7 to 3.8 mm. ..... *Hyperaspis conviva*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*conviva*	Casey	0	0	1	1	1	0

H: An eastern boreal species, reported from SK by Gordon 1985, and from AB by Acorn 2007. Acorn collected a specimen by sweeping small aspen and saskatoon bushes.

6(1). Elytron with a basal spot (near scutellum) in addition to humeral spot; typically each elytron with five rounded yellow spots but some spots may be fused, especially humeral and mediolateral and humeral and basal spots may be narrowly connected. …… 7

6’. Elytron without a basal spot, or if with a basal spot then discal spot narrow and elongate. ……..…… 8

7(6). Basal spot oblique in shape, its anterolateral angle approaching or touching humeral spot; pronotum with punctures fine; form elongate and medially convex; pronotum with lateral margin yellow but narrowing posteriorly and black area of disk actually or almost touching posterolateral angle; antenna 10-segmented; L = 2.2 to 3.0 mm. ..... *Hyperaspis disconotata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*disconotata*	Mulsant	0	0	0	0	0	0

H: An eastern boreal species, known from central and northern AB and indicated as occurring in SK by Acorn 2007. I have seen no SK specimens.

7’. Basal spot more rounded and close to scutellum; pronotum strongly punctate; form more strongly ovate and convex; pronotum with lateral margin broadly yellow throughout its length; antenna 10-segmented; L = 3.0 – 3.1 mm. ……..……. *Hyperaspis troglodytes*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*troglodytes*	Mulsant	0	1	0	1	0	0

H: Very similar to *H. disconotata* and may be conspecific. Also an eastern species but possibly more southerly in distribution. Record based on specimens from Broadview and Grasslands Pk (E Block).

8(6). Elytron without discal spots, lateral margin very broad and extending almost to apex of elytron, its inner margin sinuate and projecting onto disc at shoulder, medially and subapically; male head yellow, pronotum with anterior and lateral margins yellow; female head and pronotum black; antenna 10-segmented; L = 2.3 to 2.8 mm. ..…… *Hyperaspis inflexa*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	inflexa	Casey	1	1	0	1	0	0

H: Collected by sweeping vegetation in sand hills area and in wash of grassland reservoirs.

8’. Elytron with discal spot or vitta which may be narrowly attached to pale lateral margin in some specimens. ……..…….. 9

9(8). Discal spot usually orange to red, often connected to lateral margin which may be similarly colored or paler; lateral margin usually ending at level of epipleural impression but on some specimens extending to apical spot which is usually paler than discal spot; epipleuron yellow to red; middle and hind femora black; male head and anterior and lateral margins of pronotum pale; female head and pronotum black; antenna 11-segmented; L = 2.6 to 3.8 mm. ..... *Hyperaspis lateralis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	lateralis	Mulsant	0	1	0	0	0	0

H: On sage brush infested with aphids.

9’. Elytral spots and lateral margin of similar color, usually yellow, discal spot usually separate from lateral margin; epipleuron yellow or infuscate. ……..…… 10

10(9). Elytron with epipleuron yellow to red; femora largely yellow to reddish or at least pale apically; male and female with at least lateral margins of pronotum yellow. ……. 11

10’. Epipleuron piceous to black, middle and hind legs piceous to black; pronotum color various. ……..…….. 12

11(10). Elytron shiny between punctures; male with head and sharply defined anterior and lateral margins of pronotum yellow; female head black; antenna 10-segmented; smaller, L = 2.0 to 2.7 mm. ….....……. *Hyperaspis undulata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*undulata*	(Say)	1	1	1	1	1	0

H: Commonly collected in wash of grassland lakes; also collected by sweeping low shrubs. *Hyperaspis octavia* Casey was recorded from SK by Bousquet (1991), This is an eastern species known from ON to NB and Michigan. It is similar in color to *H. undulata* and the SK record may refer to *H. undulata* as the two species are almost indistinguishable except *H. octavia* has the lateral elytral vitta always broken into three spots (humeral, medial and subapical), usually larger (2.2 to 2.8 mm), body form less elongate, and the surface of the pronotum less strongly alutaceous (Gordon 1985: 537). For the time being I consider this record unconfirmed and do not include the species in the SK list

11’. Elytron dull, surface strongly alutaceous between punctures; male pronotum largely reddish-yellow, diffusely darkened basomedially; female head reddish, pronotum broadly reddish laterally; antenna 11-segmented; larger, L = 2.3 to 3.3 mm. ……..…. *Hyperaspis lugubris*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*lugubris*	(Randall)	1	1	0	0	0	0

H: Collected mainly on dry grasslands and in sand dune areas.

12(10). Elytron with a more or less elongated discal spot and a large rounded subapical spot; lateral margin extended to just beyond epipleural impression but usually separated from subapical spot; larger species, L = 2.1 to 3.0 mm. …… 13

12’. Elytron more or less bivittate with an elongate discal vitta and a narrow lateral vitta but these may be broken into anterior and posterior spots or dashes but vittate pattern usually evident; smaller species, L = 2.0 to 2.4 mm. .....……. 14

13(12). Male pronotum largely yellow or reddish with a blackish 4-lobed basal spot, or spot reduced to a basal band; female pronotum black with a large yellow area laterally; antenna 11-segmented; male genitalia with basal lobe shorter than parameres, broad with apex obliquely subtruncate; L = 2.1 to 2.8 mm. ..... *Hyperaspis fastidiosa*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*fastidiosa*	Casey	0	1	0	0	0	0

H: Collected by sweeping vegetation in the Great Sand Hills and in lake wash. Acorn 2007 reported specimens from sagebrush.

13’. Male pronotum black with broad more or less straight edged yellow lateral margins, anterior margin black; female head black, pronotum with lateral margin yellow; antenna 10-segmented; male genitalia with basal lobe as long as parameres, narrowing apically to a sharp right-handed hook; L = 2.4 to 3.0 mm. .... …. .....*Hyperaspis simulatrix*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*simulatrix*	Dobzhansky	0	1	1	0	0	0

H: Recorded from SK by Belicek but Gordon gives the species range as western (WA, ID to CA). Acorn (2007) suggests AB records refer to pale specimens of *H. lateralis.*, but SK specimens are distinct from *H. lateralis*. Several collections from sandy grassland areas.

14(12). Elytron with a vittate pattern that consists of a narrow lateral margin and a narrow longitudinal discal vittae, these pale stripes are either complete or may be diffusely darkened medially but if so longitudinal pattern still apparent. …… 15

14’. Elytron with discal spots more or less in form of an exclamation mark either with a long proximal dash and a round apical spot or the inverse, a proximal spot and an elongated more distal dash. …… 16

15(14). Elytron with pale marks sharply delimited; lateral margin complete on at least basal two-thirds; disk with a narrow longitudinal vitta; male head with anterior margin and an area mesad to each eye pale, a triangular medial area on frons dark; legs with femora black, tibia reddish to piceous or black; pronotum and elytra shiny, without evident reticulate sculpture; elytron punctation stronger; antenna 10-segmented; L = 2.0 to 2.7 mm. ..….. *Hyperaspis quadrivittata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*quadrivittata*	LeConte	1	1	0	1	0	1

H: A few scattered collections from Cypress Hills to Cree Lake. Most specimens collected in wash of Harris Reservoir, on N slope of Cypress Hills.

15’. Body not quite black, piceous and with margins of pale spots diffusely darkened; disk with a weak median vitta but infuscate and more or less broken medially, lateral pale margin also infuscate and broken behind shoulder; legs uniformly brownish; female head and pronotum dull with reticulate sculpture, elytra with irregular sculpture; elytral punctation finer; antenna 10-segmented; L = 2.0 to 2.3 mm. .....… *Hyperaspis brunnescens* (= *H. jasperensis*?)

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	brunnescens	Dobzhansky	1	0	0	0	0	0

H: Record based on 2 female specimens which appear to be poorly marked specimens of H. brunnescens or well marked H. jasperensis Belicek.

16(14). Elytron medially with an upside-down exclamation mark, i.e. a rounded basal spot with a more distal elongate dash; lateral margin extending full length of elytron; male with head yellow, pronotum yellow laterally; antenna 10-segmented; male genitalia with basal lobe subequal in length to parameres, apex broadly truncate and with a subapical blunt projection on right side; L = 2.3 mm. .....…… *Hyperaspis consimilis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*consimilis*	LeConte	0	0	0	0	1	0

H: Habitat unknown, one collection from boreal area (Wildcat Hills).

16'. Elytron with discal marks forming a normal exclamation mark with an anterior longitudinal dash and posterad a rounded subapical spot; lateral margin narrow and not extending into apical third; male head pale, pronotum pale laterally; female head black, pronotum pale laterally; antenna 10-segmented; male genitalia with basal lobe subequal in length to parameres, narrowed apically to a bluntly rounded asymmetrical point, right margin without an evident subapical projection; L = 2.0 to 2.5 mm. .... *Hyperaspis oregona*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hyperaspis	*oregona*	Dobzhansky	1	0	0	0	0	0

H: A western montane species, collected in Cypress Hills.

Key I. Species of *Anatis*

1. Elytron with lateral border broadly explanate, in dorsal aspect distinctly angulate anterior to middle …… 2

1'. Elytron with lateral border weakly explanate, in dorsal aspect more or less evenly curved and not angulate. ……..……..……. 3

2(1). Elytron without dark spots but lateral margin black; pronotum with lateral margin black; L = 7.7 to 10.5 mm. ..……..……..…… *Anatis lecontei*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Anatis	*lecontei*	Casey	0	0	0	0	0	0

H: A western species, recorded from S AB and BC. No SK records

2'. Elytron with dark spots; pronotum with pale lateral border; L = 7.5 to 10.2 mm. ……..……..……. *Anatis rathvoni*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Anatis	*rathvoni*	(LeConte)	0	0	0	0	0	0

H: Western species, east to SW Alberta. Recorded from SK by Bousquet 1989 but record needs confirmation.

3(1). Elytron with dark spots ringed with white or yellow; L = 7.3 to 10.0 mm. ……. *Anatis mali*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Anatis	*mali*	(Say)	1	1	1	1	1	1

H: Eyespotted Lady Beetle. Forest species, mainly on coniferous trees (swept from white spruce), but also in areas with only deciduous trees. Aphid predator.

3'. Elytron with dark spots not ringed; L = 7.2 to 10.2 mm. ……*Anatis labiculata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Anatis	*labiculata*	(Say)	0	0	1	1	1	0

H: Fifteenspotted Lady Beetle. Occurs on trees where it is a predator on aphids.

Key J. Species of *Myzia*

1'. Pronotum dark brown medially, laterally with a broad white border within which is a dark sublateral spot which may be connected to medial dark area; elytron with dark longitudinal maculations; L = 6.5 to 8.0 mm. ……... *Myzia pullata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Myzia	*pullata*	(Say)	0	0	1	1	1	1

H: On trees, usually conifers, and specifically those that stand alone; apid predator.

1'. Pronotum dark brown with broad whitish lateral border which lacks a dark sublateral spot; elytron with longitudinal maculations which may be highly reduced; L = 6.5 to 8.0 mm. ……. *Myzia subvittata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Myzia	*subvittata*	(Mulsant)	1	1	0	0	0	0

H: Species occurring w of Rocky Mtns. but also in Cypress Hills, 1 specimen from Maple Creek. Swept from lodgepole pine.

Key K. Species of *Hippodamia*

1. Mesepimeron black; elytron with a cross-shaped sutural band and basally a longitudinal median band which may be continuous with subapical spots or broken into two subapical spots; L = 4.4 to 5.1 mm. …...… *Hippodamia americana*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*americana*	Crotch	0	0	0	1	1	0

H: Boreal species, possibly associated with peatlands.

1'. Mesepimeron entirely yellow; elytron pattern various but without a cross-shaped sutural vitta, discal markings usually not longitudinal. …….. 2

2(1). Elytron longitudinally vittate, median vitta broken or notched on mesal side subapically; elytron dull, strongly alutaceous; L = 5.0 to 6.0 mm. ……..... .....*Hippodamia falcigera*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*falcigera*	Crotch	1	0	0	0	0	1

H: Collected in Carex marshes. There is an isolated population in the Cypress Hills .

2'. Elytron without longitudinal vittae; surface less strongly alutaceous, shinier. …...…… 3

3(2). Leg with femur black, tibia and tarsus orange or some specimens with tibiae variously infuscate medially; elytron with 7 discrete black spots (including the common scutellar spot); dark area of pronotum without a pair of convergent pale spots; male genitalia with alae of basal lobe deeply emarginated apically, paramere in lateral aspect ovate with point of maximum width at or distad of middle, sipho with subapical process backwardly hooked; L = 4.5 to 6.4 mm. ….....……..... ……. *Hippodamia tredecimpunctata tibialis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*tredecimpunctata*	(Say)	1	1	1	1	1	1

H: Thirteenspotted Lady Beetle. Species of marshes and wet meadows but also on cultivated grasses and crops.

3’. Legs mainly black; elytron usually with fewer black spots; pronotum with or without a pair of convergent pale spots on disc. ……..… 4

4(3). Pronotum with a pale median spot at base. ……..……..…… 5

4’. Pronotum with base black, lacking a pale median spot. ……...… 6

5(4). Elytron with sutural margin infuscate or black apically (infuscate area may be very small); male genitalia with basal lobe broad apically, dorsal surface flattened and short broad apex bent dorsally; L = 3.5 to 5.0 mm. ..…….……. ..... *Hippodamia expurgata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*expurgata*	Casey	1	1	1	1	0	0

H: Mainly prairie species, found regularly on sage. feeding on aphids.

5’. Elytron with sutural margin not darkened; male genitalia with basal lobe abruptly narrowed subapically, apex shaped like a small arrow-head; L = 3.7 to 5.6 mm. ……..... *Hippodamia parenthesis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*parenthesis*	(Say)	1	1	1	1	1	1

H: Throughout area, especially common in dry grasslands.

6(4). Black area of pronotal disc with a pair of convergent pale spots (sometimes reduced to a pair of small, rounded spots). ……..……. 7

6’. Pronotum lacking pale spots within black area of disc. ….…….. 11

7(6). Elytron usually with six small spots plus a scutellar spot but number of spots may be reduced (especially humeral and basolateral spots may be very small or absent) or elytra immaculate in some individuals; male genitalia with subapical lobes of sipho ovate and rounded apically, basal lobe subparallel medially, apically concavely narrowing to acute apex; L = 4.2 to 7.3 mm. ……..……. *Hippodamia convergens*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*convergens*	Guerin	1	1	1	1	1	0

H: Convergent Lady Beetle. Mainly on prairie and parkland.

7'. Elytron with larger spots or number of spots fewer either because some are fused or lacking. ……..…. 8

8(7). Elytron with 6 heavy spots plus a scutellar spot or spots variously enlarged and confluent sometimes forming irregular sub-basal and subapical bands; male genitalia with subapical lobes of sipho elongate and rounded apically, basal lobe tapering from near base to apex and apex with a small ventral hook; L = 5.0 to 7.5 mm. … *Hippodamia quindecimmaculata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*quindecimmaculata*	Mulsant	0	1	1	1	0	0

H: Species of moist grasslands and parkland.

8'. Elytron usually with fewer spots. …….. 9

9(8). Elytron with a transverse sub-basal band that is continuous with apex of the scutellar spot, with a transverse postmedial spot (may be reduced to two small spots on some specimens), and a subapical spot; male genitalia with sipho subapically lacking lobes and laterally widened with inner face concave; L = 4.0 to 7.0 mm. ..…….... *Hippodamia quinquesignata* (in part)

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*quinquesignata*	Kirby	1	1	1	0	0	1

H: Widespread but mainly on prairies; reported in aggregations in upland overwintering sites. The paired discal pronotal spots vary in this species, from being absent to well developed and large.

9'. Elytron without a transverse sub-basal band. …… 10

10(9). Elytron without basal spots, with a postmedial band and a subapical spot or these may be joined to form one large postmedial spot; male genitalia with sipho bearing a pair of elongate subapical projections, basal lobe narrower and more tapered apically; L = 3.6 to 5.6 mm.
..... *Hippodamia glacialis glacialis*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*glacialis*	LeConte	0	1	1	1	1	0

H: Prairie and parkland species. For eastern SK specimens, see comments under *H.g. Lecontei,* couplet 12. Gordon (1985) shows subspecies *g. glacialis* as occurring in W SK. However some specimens from this area have pale pronotal spots and the size of the elytral spots varies. Few SK specimens have been examined but it appears that *H.g. glacialis* and *H.g. lecontei* intergrade in the province and the recognition of two subspecies is not justified]

10'. Elytron with an elongate scutellar spot plus four spots (subhumeral, medial, apicolateral and subapical) which may be variously fused or rarely lacking making elytron immaculate; male genitalia with sipho subapically with a pair of broad, apically truncate projections, basal lobe very broad and obtusely angled apically; L = 4.3 to 5.8 mm. ……..... *Hippodamia sinuata crotchi*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*sinuata crotchi*	Casey	1	1	1	1	1	0

H: Widespread but not common in any particular habitat.

11(6). Elytron with a transverse sub-basal band that is continuous with apex of the scutellar spot, with a transverse postmedial spot (may be reduced to two small spots on some specimens), and a subapical spot; L = 4.0 to 7.0 mm .....*Hippodamia quinquesignata* (in part, couplet 9)

11'. Elytron without a subbasal band but usually with distinct scutellar spot; humeral spots, subapical and apical spots usually heavy, subapical spots usually forming a transverse band. 12

12(11). Elytron ground color orange; male genitalia with subapical lobes of sipho elongate and bluntly pointed apically, paramere in lateral aspect narrow and parallel-sided beyond basal bend; L = 5.0 to 7.0 mm. ……..... *Hippodamia glacialis lecontei* (in part, see couplet 10)

12'. Elytron ground color appearing faded, yellow to yellow-orange; male genitalia with subapical lobes of sipho ovate and broadly rounded apically, paramere in lateral aspect broader, ventral margin broadly arcuate; L = 6.0 to 7.5 mm. ……. *Hippodamia moesta*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Hippodamia	*moesta*	LeConte	0	0	0	1	1	1

H: Occurs west of the Rocky Mountains. Not known from AB but a species to watch for in the Cypress Hills. Central and northern SK, records need confirmation.

Key L. Species of *Mulsantina*

1. Elytron with a medial longitudinal stripe which is usually connected to a mesal spot near middle and separate from a subapical lateral spot; pronotum with median, black M-shaped mark broken into a number of irregular spots with a transverse dash above each lateral leg near anterior margin; elytron more coarsely punctate with an obvious mixture of coarse and fine punctures; L = 3.5 to 5.0 mm. ……..…. *Mulsantina hudsonica*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Mulsantina	*hudsonica*	(Casey)	1	0	1	1	1	1

H: Associated with trees, including conifers. Collected from lodgepole pine in Cypress Hills.

1'. Elytron with longitudinal stripe connected with two transverse vittae which are usually continuous across suture; pronotum usually with dark M-shaped mark distinct and with a lateral dark spot which may be attached to its lateral leg, but some specimens with pattern broken into a number of component spots but anterior submarginal dash usually absent; elytron punctation finer with less obvious disparity in puncture size; L = 3.3 to 5.3 mm. ……..….. *Mulsantina picta*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Mulsantina	*picta*	(Randall)	1	1	1	0	0	0

H: Pine Lady Beetle. Collected from trees, including conifers, but also in prairie and parkland areas. Most specimens seen were collected in lake wash or at windows.

Key M. Species of *Coccinella*

1. Elytron with sutural margin narrowly dark brown or black, at least apically; head with a broad white bar between eyes; pronotum with anterior margin broadly white and connecting pale anterolateral spots; pronotum with ventral pale spot of anterolateral angle extending as far posteriorly as dorsal anterolateral pale spot; elytron usually with a scutellar and four small discal spots; male genitalia with basal lobe arrow-head shaped apically, constricted basad of acute lateral projections then sides straight and converging to narrowly rounded point, ventral alae about as long as deep; L = 4.7 to 7.0 mm. ……..…… *Coccinella novemnotata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	novemnotata	Herbst	1	1	1	1	1	1

H: Ninespotted Lady Beetle. Widespread but uncommon, possibly threatened by C. septempunctata

1’. Elytron with sutural margin red, not or only slightly darker than discal areas; head usually black with a pair of frontal spots, some specimens head largely white with a transverse posterior dark bar; pronotum with anterior margin black or only narrowly white medially; pronotal ventral pale spot and elytral pattern various. ……..…….…. 2

2(1). Head pale except a dark band across base (male), or dark with a pair of large, narrowly separated pale frontal spots (female); pronotum of most specimens with anterior margin narrowly pale and connecting anterolateral spots, ventral anterolateral pronotal spot as long as dorsal spot; elytra with three well developed transverse fasciae, scutellar fascia complete, median and subapical fasciae interrupted at suture; male genitalia with basal lobe rather short and broad with an elongate evenly narrowed point, alae rounded, slightly longer than high; L = 4.0 to 5.0 mm. ……..... *Coccinella trifasciata perplexa*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	*trifasciata perplexa*	Mulsant	1	1	1	1	1	1

H: On forbes and grasses, aphid predator. The nominate subspecies is Eurasian.

2’. Head black with two well-separated white spots on frons; pronotum of most specimens with anterior margin black medially, its pale anterolateral spots not connected, or if anterior pronotal margin narrowly pale, mesepimeron black (males of *C. hieroglyphica*); elytron pattern various, usually spotted but some specimens with spots transverse. …..... 3

3(2). Pronotum with ventral pale spot on each anterolateral angle small, extending posteriorly not more than half as far as dorsal pale spot. ……. 4

3’. Pronotum with ventral pale spot of each anterolateral angle subequal in size to dorsal pale spot (exception in some specimens where dorsal spot is narrowly extended to posterolateral angle) ……... 6

4(3). Elytron with some spots clearly transverse in shape. …….. 5

4’. Elytron with 3 rounded black spots and a rounded scutellar spot; male genitalia with basal piece more or less evenly narrowed from about middle to narrowly rounded apex, ventral alae small; L = 6.5 to 7.8 mm. .. *Coccinella septempunctata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	*septempunctata*	Linnaeus†	1	1	1	1	1	1

H: Sevenspotted Lady Beetle. An introduced species, recently colonizing the prairie. Now abundant on forbes and grasses throughout province. It has been postulated that this species is replacing native species - Acorn 2007 has a good discussion.

5(4). Elytron with a subbasal transverse fascia (in some specimens may be broken into several spots arranged in a transverse row) and usually with median and subapical spots which are clearly transverse; male genitalia with basal lobe notched on each side at about distal third, apically lateral margins slightly concave and narrowed to narrowly rounded apex, ventral alae large and deeper than long; widespread; L = 5.0 to 7.8 mm. ....*Coccinella transversoguttata richardsoni*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	*transversoguttata richardsoni*	Brown	1	1	1	1	1	1

H: Transverse Lady Beetle. Generalist, aphid feeding species, less abundant since arrival of *C. septempunctata*. *C.t. richardsoni* is the widespread North American form of this holarctic species.

5'. Elytron with scutellar spot rounded; median and subapical spots transverse or each may be broken into a transverse pair of small spots; male genitalia with basal piece short and broad basally, concavely narrowed to rounded point apically; species of taiga to low arctic; smaller, L = 4.5 to 5.6 mm. ..... *Coccinella fulgida*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	*fulgida*	Watson	0	0	0	0	0	0

H: This is a species of the low arctic and taiga. It is not known from SK, but is possible in extreme north.

6(3). Mesepimeron black; elytra with a broad subbasal transverse tricuspid band (band with anterior projections at scutellar and subhumeral levels), and a large transverse subapical spot; male genitalia with basal lobe in form of a narrow triangle narrowing evenly from base to blunt apex, ventral alae low and long; L = 3.7 to 4.7 mm. ....*Coccinella hieroglyphica kirbyi*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	*hieroglyphica*	Kirby	1	0	0	1	1	1

H: Gordon's (1985, Fig. 661) range map indicates the species occurs widely throughout SK but it probably does not occur in grasslands. Reported to be generally tree inhabiting; prey not known, possibly aphids, leaf-beetle larvae, caterpillars.

6'. Mesepimeron largely or entirely white; elytron never with a subbasal band. 7

7(6). Elytron usually with four small round spots in addition to a humeral and a scutellar spot, the two submedian spots sometimes joined, the outer apical or the humeral spots sometimes absent; male genitalia with basal lobe concavely narrowed apically and drawn out into a rather elongate but narrowly rounded point; L = 4.0 to 5.0 mm. ..... *Coccinella undecimpunctata*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	*undecimpunctata*	Linnaeus	0	0	0	0	0	0

H: Elevenspotted Lady Beetle. An introduced Eurasian species. Occurring in southern BC, ON and PQ, not known from the prairie provinces. Included here in case its range does expand.

7’. Elytral spots less numerous, with a scutellar spot, a large oblique spot near middle and a large subapical spot, humeral spot lacking; male genitalia with basal lobe evenly narrowed to a bluntly rounded point; L = 5.2 to 7.0 mm. ……..... *Coccinella monticola*

Genus	Species	Author	CU	DG	MG	PL	BP	BS
Coccinella	monticola	Mulsant	1	0	1	1	1	1

H: Possible association with Larix, but also from areas without larch; prey not recorded.

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FAMILY COCCINELLIDAE - checklist of Saskatchewan Species

† - introduced ? - status uncertain, record needs confirmation

Total Species = 77 + 7 uncertain status; Total Genera = 27 + 1 uncertain status

Subfamily Chilocorinae

Brumoides septentrionis (Weise)
Chilocorus hexacyclus Smith
C. stigma (Say)
Exochomus aethiops (Bland)

Subfamily Coccidulinae

Coccidula lepida LeConte

Subfamily Coccinellinae

Adalia bipunctata (Linnaeus)
Anatis labiculata (Say)
A. mali (Say)
A. rathvoni (LeConte)?
Anisosticta bitriangularis (Say)
A. borealis Timberlake
Calvia quatuordecimguttata (Linnaeus)
Coccinella hieroglyphica Kirby
C. monticola Mulsant
C. novemnotata Herbst
C. septempunctata Linnaeus†
C. transversoguttata richardsoni Brown
C. trifasciata perplexa Mulsant
Cycloneda polita Casey
Harmonia axyridris (Pallas) †
Hippodamia americana Crotch
H. convergens Guerin
H. expurgata Casey
H. falcigera Crotch
H. glacialis LeConte
H. moesta LeConte?
H. parenthesis (Say)
H. quindecimmaculata Mulsant
H. quinquesignata Kirby
H. sinuata crotchi Casey
H. tredecimpunctata tibialis (Say)
Macronaemia episcopalis (Kirby)
Mulsantina hudsonica (Casey)
M. picta (Randall)
Myzia pullata (Say)
M. subvittata (Mulsant)
Olla v-nigrum (Mulsant)?
Psyllobora vigintimaculata (Say)

Subfamily Scymninae

Brachiacantha albifrons (Say)
B. ursina (Fabricius)
Didon longulum Casey
D. punctatum (Melsheimer)
Diomus debilis (LeConte)
Hyperaspidius hercules Belicek
H. insignis Caseya
H. mimus Casey
H. vittigerus (LeConte)
Hyperaspis binotata (Say)?
H. brunnescens Dobzhansky
H. consimilis LeConte
H. conviva Casey
H. disconotata Mulsant?
H. fastidiosa Casey
H. inflexa Casey
H. lateralis Mulsant
H. lugubris (Randall)
H. octavia Casey?
H. oregona Dobzhansky
H. postica LeConte
H. proba (Say)
H. quadrivittata LeConte
H. signata (Olivier)?
H. simulatrix Dobzhansky
H. troglodytes Mulsant
H. undulata (Say)
Nephus ornatus naviculatus (Casey)
N. sordidus (Horn)
Scymnus (Scymnus) apicanus pseudapicanus Gdn
S. (S.) caurinus Horn
S. (S.) paracanus linearis Gordon
S. (S.) opaculus Horn
Scymnus (Pullus) aquilonarius Gordon
S. (P.) brullei Mulsant
S. (P.) carri Gordon
S. (P.) caudalis LeConte
S. (P.) iowensis Casey
S. (P.) lacustris LeConte
S. (P.) postpictus Casey
S. (P.) tenebrosus Mulsant
S. (P.) uncus Wingo
Stethorus punctillum Weise†
S. punctum (LeConte)

Subfamily Sticholotidinae

Coccidophilus marginatus (LeConte)
Microweisea misella (LeConte)